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Billie H. Hix
BILLIE H. HIX
Chief, Technical Systems Branch
The Albert F. Simpson Historical
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AFROTC PERSONNEL, 7 MAY 1949
(LTR FR CONAC TO HQ USAF)

5-2324-14

419.161-6
7 May 1949

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C O P Y
320.4

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

PP-R 320.4 7 May 1949

SUBJECT: AROTC Personnel

TO : Director of Training and Requirements, DCS/O, Headquarters USAF, Washington 25, D. C.

1. The present personnel space authorization for ARTOC military personnel includes 444 officer instructors and 416 airmen for the school year 1948-1949 for 110 units. The separation of the Air ROTC units from the Army ROTC units, as well as curriculum additions and improvements, renders it essential that the Air units receive an increased authorization to enable them to carry out an effective program. Your particular attention is invited to the fact that the University of Maryland has advised the Department of the Army that it desires to drop its Army ROTC program and give its entire support to the Air Force ROTC unit. Consequently, the ARTOC requirement at this institution alone is increased from six to nineteen officers with a proportionate increase of enlisted personnel to a total of sixteen.

2. Twenty-nine or thirty additional institutions are entering the ARTOCProgram in September 1949. Each of the new units requires a minimum authorization of four officers and four airmen, resulting in a total increased requirement of 120 officers and 120 airmen.

3. In substance the present space requirement for military personnel for the AROTC program 1949-1950 school year is for 744 officers and 747 airmen. This requirement is broken down (with the exception of the thirty new units) in the attached tables by Air Force, Unit, and SSN for officers and airmen. The requirement is based on a careful study of the curriculum to be offered at each institution and the anticipated student load. It is not possible at this time to identify by name the thirty new units to be activated this year. The estimated minimum space requirement for officer instructors by SSN and grade for the new units is as follows:

New Units	No. of Officers	SSN	Grade
30	6	0200	Major or Captain
	2	0600	" "
	66	2120	Col or Lt Col (30) Major or Captain (36)
	30	4000	Major or Captain

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Tab #15

Ltr, Hqs ConAC, SUBJECT: AROTC Personnel

(Cont'd)

New Units	No. of Officers	SSN	Grade
	3	4822	Major or Captain
	9	4823	" "
	2	6305	" "
	2	7025	" "

Total Number 120 Officers

4. It is regretted that it has been impossible to draft and forward a firm AROTC space requirement prior to this date. Administration of the ARTOC program is a major responsibility of this command. The success of the program is dependent primarily upon the provision of an adequate number of qualified officer and enlisted personnel. Failure to establish an adequate space authorization will cripple the program without question. Consequently, an urgent request is made that the personnel space authorization for the AROTC program be increased immediately to 744 officers and 757 airmen. It is important that this command be notified of the status of this request with the least delay.

FOR THE COMMANDING GENERAL:

s/ R. B. Travis
t/ R. B. TRAVIS
Colonel, USAF
Asst Adj Gen

1 Incl
List of Requirements

C O P Y
320.4

Basic Ltr fm Hq. ConAC, Mitchel AFB, N.Y., dated 7 May 49, subj: AROTC Personnel

AFOOR 1st Ind 24 May 1949

Department of the Air Force, Hq USAF, Washington 25, D.C.

TO: Commanding General, Continental Air Command, Mitchel Air Force Base, New York

1. Budgetary and program planning for FY 1950 contemplated the assignment of an average of 4 officers and 4 enlisted men for each Air ROTC unit. With 139 units planned for FY 1950 the total strength allowed for this function amounted to 556 officers and 556 enlisted men. Current restrictions on manpower resources, expecially officers, makes it impossible to authorize additional troop spaces.

2. It is suggested that if it is impossible to operate 139 ROTC units on the above personnel authorization that you submit your maximum capability within the authorization and recommendations as to future action.

FOR THE CHIEF OF STAFF:

s/ Allen R. Springer
t/ ALLEN R. SPRINGER
Colonel, USAF
Acting Chief, Organization Division
Directorate of Trng & Requrmnts

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Incl, Note 8, Subj: Ltr fr Maj Gen Anderston to Gen Stratemeyer (Proposed Composition of 9 Gps the Congress might approve), P&R To: DO, 7 March 1949

[redacted]

2-3293-8

419.161-7

7 Mar. 1949

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HEADQUARTERS
CONTINENTAL AIR COMMAND
CLASSIFIED INTEROFFICE ROUTING SLIP

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Suspended To			
Extended To			
AG-C			

FILE NO: EXTRACT COPY
322

SUBJECT: Ltr fr Maj Gen S E Anderson to Lt Gen G E Stratemeyer (Proposed Composition of 9 Gps the Congress might approve).

NO	DATE	FROM	TO	No person is entitled solely by virtue of his grade or position to knowledge or possession of classified matter. Such matter is entrusted only to those individuals whose official duties require such knowledge or possession.
*	*	*	*	* * * *
6	7 Mar	P&R	DO	1. Attached is chart showing locations and compositions of the Groups presently assigned, those in the 48 Group Program and those expected in a 57 Group Program. 2. Since no information is available in this hqs as to designation, assignment, location and composition of the 9 Groups listed in attached letter, this chart was prepared assuming that 2 Fighter Bomber Groups, 1 Troop Carrier Group (M) and 1 Bomb Group (L) will be assigned to ConAC. 3. The original 48 Group Program listedthe 31st Fighter Wing as being inactivated and the 20th Fighter Wing as moving to Kirtland AFB. A recent change in this plan replaced the 20th Wing with the 31st Wing but did not indicate that the 20th was to be inactivated. /s/PJI /t/P. J. Imig Ext 6132 /s/D E M /t/DOLF E. MUEHLEISEN Col, USAF Dir Plans & Req

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ConAC Form Hq-AG 11
22 July 1949

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PRESENT PROGRAM	PROPOSED 48 GROUP PROGRAM	PROPOSED 57 GROUP PROGRAM
14th Ftr Wing, Dow AFB 14th Ftr Group 37th Ftr Sq, Jet 48th " " " 49th " " "	Inactivated	
52d Ftr Wing, Mitchel AFB 52d Ftr Group 2d Ftr Sq, All Wea 5th " " " "	52d Ftr Wing, Mitchel AFB 52d Ftr Group 2d Ftr Sq, All Wea 5th " " " "	52d Ftr Wing, Mitchel AFB 52d Ftr Group 2d Ftr Sq, All Wea 5th " " " "
33rd Ftr Wing, Otis AFB 33rd Ftr Group 58th Ftr Sq, Jet 59th " " " 60th " " "	33rd Ftr Wing, Otis AFB 33rd Ftr Group 58th Ftr Sq, Jet 59th " " " 60th " " "	33rd Ftr Wing, Otis AFB 33rd Ftr Group 58th Ftr Sq, Jet 59th " " " 60th " " "
78th Ftr Wing, Hamilton AFB 78th Ftr Group 82d Ftr Sq, Jet 83rd " " " 84th " " "	78th Ftr Wing, Hamilton AFB 78th Ftr Group 82d Ftr Sq, Jet 83rd " " " 84th " " "	78th Ftr Wing, Hamilton AFB 78th Ftr Group 82d Ftr Sq, Jet 83rd " " " 84th " " "
1st Ftr Wing, March AFB 1st Ftr Group 27th Ftr Sq, Jet 71st Ftr Sq, Jet 94th " " "	1st Ftr Wing, March AFB 1st Ftr Group 27th Ftr Sq, Jet 71st Ftr Sq, Jet 94th " " "	1st Ftr Wing, March AFB 1st Ftr Group 27th Ftr Sq, Jet 71st Ftr Sq, Jet 94th " " "
67th Tac Rcn Wing, March AFB 67th Tac Rcn Group 11th Tac Rcn Sq, Night 12th Tac Rcn Sq, Photo	Inactivated	

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PRESENT PROGRAM	PROPOSED 48 GROUP PROGRAM	PROPOSED 57 GROUP PROGRAM
62d Trp Carr Wing, McChord AFB 62d Trp Carr Group 4th Trp Carr Sq, M 7th " " " " 8th " " " "	62d Trp Carr Wing, March AFB 62d Trp Carr Group 4th Trp Carr Sq, M 7th " " " " 8th " " " "	62d Trp Carr Wing, ~~McChord~~ March AFB 62d Trp Carr Group 4th Trp Carr Sq, M 7th " " " " 8th " " " "
325th Ftr Wing, Moses Lake AFB 325th Ftr Group 317th Ftr Sq, All Wea a 318th " " " "	325th Ftr Wing, Moses Lake AFB 325th Ftr Group 317th Ftr Sq, All Wea a 318th " " " " b 319th " " " "	325th Ftr Wing, Moses Lake AFB 325th Ftr Group 317th Ftr Sq, All Wea a 318th " " " " b 319th " " " "
316th Trp Carr Wing, Greenville AFB 316th Trp Carr Group 36th Trp Carr Sq, M 37th " " " " 75th " " " "	316 Trp Carr Wing, Smyrna AFB 316th Trp Carr Group 36th Trp Carr Sq, M 37th " " " " 75th " " " "	316th Trp Carr Wing, ~~Greenville~~ Smyrna AFB 316th Trp Carr Group 36th Trp Carr Sq, M 37th " " " " 75th " " " "
10th Tac Rcn Wing, Pope AFB 10th Tac Rcn Group 1st Tac Rcn Sq 15th " " "	Inactivated	
20th Ftr Wing, Shaw AFB 20th Ftr Group 55th Ftr Sq, Jet 77th " " " 79th " " "	Future status and location indefinite	
314th Trp Carr Wing, Smyrna AFB 314th Trp Carr Group 20th Trp Carr Sq, M 334th " " " "	c 314th Trp Carr Group 20th Trp Carr Sq, M 334th " " " "	c 314th Trp Carr Group 20th Trp Carr Sq, M 334th " " " "
31st Ftr Wing, Turner AFB 31st Ftr Group 307th Ftr Sq, Jet 308th " " " 309th " " "	31st Ftr Wing, Kirtland AFB d 31st Ftr Group 307th Ftr Sq, Jet 308th " " " 309th " " "	31st Ftr Wing, Kirtland AFB d 31st Ftr Group 307th Ftr Sq, Jet 308th Ftr Sq, Jet 309th " " "

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PRESENT PROGRAM	PROPOSED 48 GROUP PROGRAM	PROPOSED 57 GROUP PROGRAM
56th Ftr Wing, Selfridge AFB	56th Ftr Wing, Selfridge AFB	56th Ftr Wing, Selfridge AFB
56th Ftr Group	56th Ftr Group	56th Ftr Group
61st Ftr Sq, Jet	61st Ftr Sq, Jet	61st Ftr Sq, Jet
62d " " "	62d " " "	62d " " "
63d " " "	63d " " "	63d " " "
47th Bomb Wing, Barksdale AFB	e47th Bomb Wing, Barksdale AFB	e47th Bomb Wing, Barksdale AFB
47th Bomb Group	47th Bomb Group	47th Bomb Group
84th Bomb Sq, L, Jet	84th Bomb Sq, L, Jet	84th Bomb Sq, L, Jet
85th " " " "	85th " " " "	85th " " " "
86th " " " "	86th " " " "	86th " " " "
4th Ftr Wing, Andrews AFB	4th Ftr Wing, Langley AFB	4th Ftr Wing, Langley AFB
4th Ftr Group	4th Ftr Group	4th Ftr Group
334th Ftr Sq, Jet	334th Ftr Sq, Jet	334th Ftr Sq, Jet
335th " " "	335th " " "	335th " " "
336th " " "	336th " " "	336th F" " "
363d Tac Ron Wing, Langley AFB		
363d Tac Ron Group	f363d Tac Ron Group	f363d Tac Ron Group
160th Tac Ron Sq, Photo-Jet	161st Tac Ron Sq, Photo-Jet	161st Tac Ron Sq, Photo-Jet
161st " " " " "	162d " " " Night Photo	162d " " " Night Photo
162d " " " Night Photo	8th " " " Photo-Jet	8th " " " Photo-Jet
332d Ftr Wing, Lockbourne AFB	Inactivated	
332d Ftr Group		
99th Ftr Sq, SE		
100th " " "		
301st " " "		

2 Fighter Bomber Groups
1 Trp Carr Group, M
1 Bomber Group, L

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a. 318th Ftr Sq (All Wea) located at McChord AFB.
b. 319th Ftr Sq (All Wea) returning from overseas.
c. 314th Trp Carr Wing and all units except 314th Trp Carr Group, 20th Trp Carr Sq, M, and 334th Trp Carr Sq, M are to be inactivated.
d. One squadron of 31st Ftr Group to be deployed to Moses Lake AFB.
e. Squadrons of 47th Bomb Group will be deployed to FEAF. Will be replaced at Barksdale by elements of the 3d Bomb Group.
f. 363d Tac Rcn Wing and all units except 363d Tac Rcn Group, 161st Tac Rcn Sq, Photo-Jet and 162d Tac Rcn Sq, Night Photo are to be inactivated. 162d Tac Rcn Sq is to be deployed to Barksdale AFB. 8th Tac Rcn Sq returning from overseas.

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Selected Classified Air National Guard
Documents for ConAC - 1 Dec 48 - 31 Dec 49

2-3293-9A

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HEADQUARTERS FOURTH AIR FORCE
Office of the Commanding General
Hamilton Air Force Base
Hamilton Field, California

CA-325/

7 March 1948

SUBJECT: Air National Guard Field Training Sites

TO : Commanding General, Continental Air Command, Mitchel AFB, New York

* * * * *

3. Victorville Air Force Base was approved as the best Field Training site for the 61st and 62nd ANG Wings by the State Adjutants General of California, Arizona, Nevada and Utah and by the Commanding General of this headquarters at the conference held on 4 March 1949. It is believed that with the selection of Moses Lake Air Force Base and Victorville Air Force Base, excellent Field Training will be accomplished by the three Air National Guard Wings of this Air Force. The Adjutants General of the various states are in complete accord with this final plan.

FOR THE COMMANDING GENERAL:

s/ William A. Lanford
t/ WILLIAM A. LANFORD
Lt Colonel, USAF
Deputy for Reserve Forces

16 Incls
1. Ltr, Hq USAF 1 Oct 48
2. Ltr, Hq 4 AF 12 Nov 48
3. TWX, Hq 4 AF 20 Dec 48
4. TWX, Hq ConAC, 29 Dec 48
5. TWX, AG, Calif, 4 Jan 49
6. Ltr, Hq USAF, 15 Jan 49
7. Ltr, Hq 4 AF, 27 Jan 49
8. TWX, Hq 4 AF, 27 Jan 49
9. Ltr, Hq 4 AF, 28 Jan 49
10. TWX, Hq ConAC, 28 Jan 49
11. TWX, Hq 4 AF, 28 Jan 49
12. Ltr, AG, Clif., 3 Feb 49
13. Report Conference., 19 Feb 49
14. TWX, Hq ConAC, 26 Feb 49
15. TWX, Hq ConAC, 1 Mar 49
16. TWX, Hq 4 AF, 4 Mar 49

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Log 16 xvi - 24 - WRH - ANG-1

2-3293-9A

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C O P Y
325

Combat Effectiveness of Air National Guard Fighter Units
O&T 325 (9 Sep 49) 1st Ind 10 Sep 49

HQ CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Chief of Staff, Headquarters, United States Air Force, Washington 25, D.C.

1. Based on the Air National Guard Operational Readiness Tests processed to date, it is estimated that it would take an average of 86.6 days for Air National Guard fighter units to attain one hundred percent combat effectiveness.

2. Upon receipt of all Air National Guard Operational Readiness Tests, your Headquarters will be furnished a revised combat effectiveness estimate.

FOR THE COMMANDING GENERAL:

Log No XVII-24 WRH - ANG-8

Classified SECRET
By Auth: CG ConAC
JHB 9 Nov 49

HEADQUARTERS
CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

IN REPLY REFER TO [illegible] 322

8 NOV 1949

SUBJECT: Designation of Missions for Air National Guard Combat Units

TO : Special Assistant for Reserve Forces, Headquarters United States Air Force, Washington 25, D. C.

1. Reference 2d indorsement, this headquarters, 29 August 1949, to Secret letter, this headquarters, 28 June 1949, subject, "ConAC Regulation [illegible]-3".

2. Information is requested as to the date concurrence and/or comments on the recommendations included in paragraph 1, referenced indorsement, may be expected by this headquarters.

3. It is considered essential that primary and secondary missions for Air National Guard combat units be designated as soon as possible so that these units can train in accordance with the appropriate Continental Air Command training standards.

FOR THE COMMANDING GENERAL:

JH Bloss

CRF
F1307

File

11-7-10

39

Subj: Designation of Missions for Air National Guard Combat Units

AFCRF-2

1st Ind.

Department of the Air Force, Hq USAF, Washington 25, D. C. [illegible]

TO: Commanding General, Continental Air Command, Mitchel Air Force Base, Hampstead, Long Island, New York

On 3 November 1949 this headquarters forwarded the Chief, National Guard Bureau, instructions concerning the redesignation and reequipping of Air National Guard units. The Chief, National Guard Bureau was instructed to initiate conversion to the ultimate program immediately, the conversion to be completed not later than 1 July 1950 in accordance with the attached "ANG Aircraft Conversion Plan" (Incl. #1). The designation of primary and secondary missions for the units of the Air National Guard will be announced by the Chief, National Guard Bureau.

BY COMMAND OF THE CHIEF OF STAFF:

X322 Units ANG

1 incl.

C. W. Schott

C. W. SCHOTT
Colonel, USAF

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ANG AIRCRAFT CONVERSION PLAN

GROUP	LOCATION	NO. OF SQS	DESIGNATION & PRIMARY MISSION	SECONDARY MISSION
111th Bomb Gp	Pa.	2	All Weather Ftr	Interceptor Ftr
121st Ftr Gp	Ohio	4	"	"
146th Ftr Gp	Calif.	3	"	"
127th Ftr Gp	Mich.	3	"	"
126th Bomb Gp	Ill.	4	"	"
•106th Bomb Gp	N.Y.	2	"	"
113th Ftr Gp	D.C.	4	Interceptor Ftr	Fighter-Bomber
142nd Ftr Gp	Ore.	4	"	"
133rd Ftr Gp	Minn.	4	"	"
112th Ftr Gp	Pa.	3	"	"
116th Ftr Gp	Ga.	4	"	"
123rd Ftr Gp	Ky.	2	"	"
128th Ftr Gp	Wis.	2	"	"
140th Ftr Gp	Colo.	3	"	"
117th Ftr Gp	Ala.	3	Penetration/Ftr Bomber	Interceptor
118th Ftr Gp	Tenn.	3	"	"
136th Ftr Gp	Texas	3	"	"
131st Ftr Gp	Mo.	2	"	"
108th Ftr Gp	N.J.	2	"	"
144th Ftr Gp	Calif.	3	"	"
101st Ftr Gp	Me.	3	"	"
102nd Ftr Gp	Mass.	2	"	"
103rd Ftr Gp	Conn.	2	"	"
107th Ftr Gp	N.Y.	3	"	"
137th Ftr Gp	Okla.	4	"	"
122nd Ftr Gp	Ind.	2	"	"
132nd Ftr Gp	Iowa	3	"	"
198th Ftr Sq	Peurto Rico		Interceptor	Ftr Bomber
199th Ftr Sq	Hawaii		"	"

• 137th Ftr Sq White Plains, N.Y. reassigned to 106th Ftr GP (All Weather)

Separate Squadrons (Tow-target)

102nd Lt Bomb Sq N.Y.
115th Lt Bomb Sq Calif.
122nd Lt Bomb Sq La.

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17 Dec 49

HEADQUARTERS
CONTINENTAL AIR COMMAND
Inter-Office Routing Slip

File OA 325

Subject: Reorganization of ANG Day Fighter Units

* * * * *

7 17Dec AirD ANG * * * *

2. A re-study of the original recommendation by this office on the conversion of ANG fighter squadrons to all-weather fighter squadrons indicates that it may be unwise to reduce the number of aircraft from the present authorization of 25 for the penetration squadron to 12 or 13 for the all-weather squadron. This would seriously reduce the flying training capability of the unit. It appears therefore that a compremose between the present organization and complete reorganization into the all-weather T/O should be requested. That is, the units should be redesignated all-weather fighters, and should train under all-weather training standards insofar as possible. Further, if equipment becomes available, the units should be authorized sufficient electronos personnel to maintain wing tip or wing tank radar installation on the conventional fighter.

* * * *

t/ E. F. CAREY
Lt Col., USAF
Ext 5247

s/ B. K. Holloway
t/ B. K. HOLLOWAY
Colonel, USAF
Vice Commander
Ext 1112

Log No XVI-24-WRA-ANG-14

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C O P Y
325

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

PO&R 325 8 December 1949

SUBJECT: Schedule for Jet Conversion of Air National Guard Units

TO : Commanding General, First Air Force, Mitchel Air Force Base, New York

(Same Letter to the CG's, Fourth, Ninth, Tenth and Fourteenth AF's)

1. Recently an Air National Guard Jet Conversion list was drawn up by this headquarters in conjunction with Headquarters, United States Air Force and the Air Force Division, National Guard Bureau. This list was based on the air defense needs and the capability of existing facilities to handle jet aircraft (where construction had actually been initiated it was construed that the improved facilities existed). Further, this list is predicated on the 48 Group Program for the regular USAF.

2. The new list supersedes the listing included in the "USAF Equipping and Conversion Program", Seventh Edition, 30 June 1949. Inclosure No. 1 is that portion of the Air National Guard jet conversion list that pertains to the units in your Air Force area.

3. The above information is forwarded for planning purposes only and to preclude confusion resulting from the conversion schedule set forth in the "USAF Equipping and Conversion Program," Seventh Edition, 30 June 1949.

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

1 Incl
ANG Jet
Conversion List
(Partial)

s/ James W. Smith
t/ JAMES W. SMITH
Cptin, USAF
Asst Adj Gen

Log No. XVI-24 WPN-ANG-13

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

P&O 325 8 November 1949

SUBJECT: Air National Guard Jet Conversion Priority List

TO : Special Assistant to the Chief of Staff for Reserve Forces
Headquarters, USAF, Washington 25, D.C;

1. Pursuant to a directive from your office, a conference was held at this headquarters, 12 October 1949, for the purpose of revising the existing Air National Guard jet priority list. This conference was attended by a representative of your office, a representative of Operations, Headquarters, USAF and a representative of the Air Force Division, National Guard Bureau. The list attached as Inclosure No. 1 is the result of this conference.

2. The factors used in the formulation of the list were the requirements of air defense and existing runway facilities (where construction was under way to extend runways it was construed that the lengthened runways actually existed). The limitation of existing runway facilities precluded the inclusion of certain units in key air defense areas, i.e., Van Nuys, California; Bradley Field, Connecticut and Grenier Air Force Base, New Hampshire. Considering the scheduled jet aircraft flow this list should hold until the end of Fiscal Year 1951, with the addition of three stations not yet determined.

3. The attached priority list is made up in four columns. Column I includes those stations which have runways sufficiently long to accommodate the F-84 aircraft, as well as the F-80, F-86 and F-94 aircraft. Column II includes those stations which can accommodate the F-80, F-86 and F-94, but cannot handle the F-84. Column III includes those units which are to be reequipped with the F-94 aircraft when this equipment becomes available; these units are All Weather Fighter Squadrons. Column IV includes those units which are to be reequipped with the F-86 as soon as this equipment becomes available this list was dictated by air defense needs. The F-80 and F-84 aircraft which became available as a result of the reequipped indicated in Columns III and IV should then be used to equip other Air National Guard Fighter Squadrons in the priority indicated in Columns I and II.

FOR THE COMMANDING GENERAL:

1 Incl
ANG Conversion
Priority List

s/ Neal J. O'Brien
t/ NEAL J. O'BRIEN
Colonel, USAF
Adjutant General

Dog Ra. XVI-34-WAH-ANG-10

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HEADQUARTERS
CONTINENTAL AIR COMMAND
INTEROFFICE ROUTING SLIP

FILE:

SUBJECT: ANG Jet Conversion Priority List

REGISTER NO				
SUSPENDED TO				
EXTENDED TO				
CLASS	ADM	MISC	HIST	PERS

NO	DATE	FROM	TO	Number and date each entry - show date of dispatch. Show staff division or office in FROM-TO columns. Sign each entry legibly - show actual signer. Draw a line across the page under each entry. Use full width of page for long entries.
1	27 Oct	Plans	Requirements ~~P&C~~ C&T DC DM (Plans) P&O	Initiated by: G.S. Geart Major, USAF X-6125

1. Plans call for the gradual conversion of Air National Guard Fighter Units from conventional fighter aircraft to jet type aircraft. To implement these plans this command formulated a priority listing for converting Air National Guard Fighter units to jet type aircraft based on air defense needs; the existing priority list which was last revised in February, this year, has become antiquated through the availability of additional information relative to existing runway lengths (information on runway lengths was furnished by the Air Force Division, National Guard Bureau). In light of the foregoing, Headquarters USAF directed that a conference be held at this headquarters, 12 October 1949, for the purpose of revising the existing priority list. This conference was attended by representatives of the Office of the Special Assistant to the Chief of Staff for Reserve Forces, the Operations Division, of Headquarters USAF; and Air Force Division National Guard Bureau. This headquarters was represented by members of C&T, Air Installations, Air Defense Plans and War Plans of P&O.

2. At the present time 6 Air National Guard Squadrons have Jet Fighters of the F-80 type:

126th Ftr Sq (JP)	Gen Mitchell Fld	Milwaukee, Wis
132d Ftr Sq (JP)	Dow AFB	Bangor, Me.
158th Ftr Sq (JP)	Hunter Field	Savannah, Ga.
159th Ftr Sq (JP)	Thomas Imerson Fld	Jacksonville, Fla.
173d Ftr Sq (JP)	Municipal Apt	Lincoln, Neb.
196th Ftr Sq (JP)	San Bernardino AFB	San Bernardino, Calif.

This disposition is satisfactory and will not be altered by the following priority list. Information available based on the initiation of the 48 group program for the United States Air Force indicates that during the present fiscal year the Air National Guard will receive F-80 aircraft for 1 additional squadron and F-84 for 12 additional squadrons. During Fiscal Year 1951 the Air National Guard

This is in reply to correspondence bearing AG Register No.________
which was suspended to (date)________

ConAC FORM HQ-AG 1
10 December 1948

Do not detach from correspondence

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U-49-66

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FILE:

SUBJECT: [illegible] Conversion Priority List

HEADQUARTERS
CONTINENTAL AIR COMMAND
INTEROFFICE ROUTING SLIP

REGISTER NO
SUSPENDED TO
EXTENDED TO

CLASS	ADM	MISC	HIST	PERS

NO	DATE	FROM	TO	Number and date each entry - show date of dispatch. Show staff division or office in FROM-TO columns. Sign each entry legibly - show actual signer. Draw a line across the page under each entry. Use full width of page for long entries.
1	(Continued)			

is scheduled to receive F-80 aircraft for 8 squadrons; F-84 aircraft for 3 squadrons, F-86 aircraft for 5 squadrons and F-94 aircraft for 6 squadrons; thus making a total of 41 jet equipped squadrons for Air National Guard by the end of Fiscal Year 1951.

3. Since the flow of jet aircraft to the Air National Guard will as indicated above be fairly rapid, it was decided that the new conversion list should be based realistically on air defense factors in conjunction with existing air field facilities (where contracts have actually been let to extend runways it was construed that these facilities existed). Thus certain areas which need air defense units are not included in this list because of the lack of suitable runway facilities i.e. Van Nuys Airport, Los Angeles and Bradley Field, Windsor Locks, Conn. It was agreed that this list will hold until the end of FY 1951 with exception of 2 additional stations not yet determined; at that time another list will be necessary to establish priorities for reequipping the remainder of the National Guard Squadrons.

4. It will be noted on the priority list that Columns III and IV (F-94 and F-86 conversion) include units already equipped with jets. (See Columns I and II). This second reequipping was dictated by air defense needs and by the fact that certain of the units are to be All Weather, thus would logically get the F-94. On reequipment of these squadrons the aircraft (F-80 and F-84) they had formerly utilized will be reassigned to other Air National Guard squadrons based on the priority list in Column I and II.

5. The air fields listed under Column I will handle any type of the four jet aircraft mentioned (F-80, F-84, F-86, F-94); whereas the air fields listed under Column II will not accommodate the F-94 but will accommodate the F-80, F-84 and F-94.

This is in reply to correspondence bearing AG Register No. ____
which was suspended to (date) ____

ConAC FORM HQ-AG 1
10 December 1948

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L-49-66

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SECRET

HEADQUARTERS
CONTINENTAL AIR COMMAND
INTEROFFICE ROUTING SLIP

FILE:

SUBJECT: ANG Conversion Priority List

REGISTER NO	
SUSPENDED TO	
EXTENDED TO	

CLASS	ADM	MISC	HIST	PERS

NO	DATE	FROM	TO	Number and date each entry - show date of dispatch. Show staff division or office in FROM-TO columns. Sign each entry legibly - show actual signer. Draw a line across the page under each entry. Use full width of page for long entries.
1	(Continued)			6. Attached is the priority list for Air National Guard Jet Conversion. This list will be forwarded to USAF with a cover letter setting forth the above mentioned factors, after final approval this headquarters. Request your concurrence and/or comments. N. J. McKinney N. J. McKINNEY Colonel, USAF Chief, Plans Div Ext. 2143 JAMES H. PRICE Colonel, USAF D/P&O Ext. 7244
2	2 Nov49	O&T	DO	Concur. [illegible] Ext. 8142 Edward H. Nichols for Concur H.T.J.
3	7 Nov	[illegible]	[illegible]	[illegible]

ConAC FORM HQ-AG 1
10 December 1948

3

Do not detach from correspondence

This is in reply to correspondence bearing AG Register No.________ which was suspended to (date)________

L-49-66

37

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EXTRACT COPY
. 325

[redacted]

·30 Jan 1949

HEADQUARTERS
CONTINENTAL AIR COMMAND
CLASSIFIED INTEROFFICE ROUTING SLIP

SUBJECT: 1st Ind, fr Hq USAF, 22 Jun 49, on B/ltr Hq ConAC, 5 Jan 49, subj: "Redesignation of Certain ANG Ftr, Sqdns, as All Weather Sqdns".

* * * * *

5 30 Jun DTAO LOTAO at ConAC

1. Information in this hq indicates that the Air Natl Guard is to have three light bomb wing hq & 12 light bomb squadrons. It is believed that the three light bomb wing headquarters & 12 light bomb squadrons should remain in the National Guard Program until such time as the Hq USAF has decided to eliminate light bombardment from the Air Force Program. This has not been decided as yet. It is believed in this hq that the light bombardment acft will have a useful purpose in air operations of the future.

2. Pertaining to the designation of the 11 fighter squadrons specified in basic communication as all-weather squadrons, it is recommended that the designation of all fighter squadrons in the Air National Guard program be studied by representatives of the Air Defense Command, the Tactical Air Command, & the Continental Air Command Headquarters. The object of the study should be to make conclusions & appropriate recommendations to Hq USAF for proper numbers of interceptor, all-weather, & penetration fighter units in the Air National Guard, based on M-Day requirements. The penetration fighter is currently considered the proper acft for tactical air type operations when working in conjunction with Ground Forces and Amphibious Forces. Based on the conclusions of this study, recommendations to USAF Hq should include specific Air National Guard fighter squadrons to be designated interceptor, all-weather, and penetration fighter units.

3. Concur with recommendations of Hq USAF for the replacement of B-26 aircraft with fighter type for towing purposes in the utility squadrons.

FOR THE DEPUTY FOR TACTICAL AIR OPERATIONS:

[redacted]

s/ R. H. Thom
t/ R. H. THOM
Lt Col, USAF - Adj Gen

Log No XVI-24-WPH-ANG-6

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325

SECRET

30 June 1949

HEADQUARTERS
CONTINENTAL AIR COMMAND
CLASSIFIED INTEROFFICE ROUTING SLIP

SUBJECT: 1st Ind. fr Hqs USAF, 22 Jun 49, on B/ltr Hq ConAC, 5 Jan 49, subj: "Redesignation of Certain ANG Ftr. Sqdns as All Weather Sqdns"

* * * *

7	15Jul	DO	VC	Our indorsement recomds the conversion of NG Lt Bomb Units: 8 to All W, (2) to Ftr Bomb and (2) as day Fighters. TAC feels that there is still a need for Lt Bomb Units in War. I recomd this reqmt be met by the Reg AF light Bomb units and the light Bomb Units, and that you concur in proposed 2nd Ind. s/ JES
8	20Jul	DO	AG	(Cl. Dispatch) Memo for Record This corresp was held after VC approved to discuss with Asst for Programming the impact of the recomds contained in our indorsement upon current Emergency War Plans. Gen Smith felt that our recomds were sound and that the current Emer War Plan's projected reqmts should not be allowed to influence this proposed action. Accordingly this indorsement is being dispatched to USAF. s/ JES

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325

SECRET

2 Sep 1949

HEADQUARTERS
CONTINENTAL AIR COMMAND
Inter-Office Routing Slip

File: OA 325

Subject: Reorganization of ANG Day Fighter Units

1 2 Sep AirD DO Civ ATT: Col Kyle

1. In a plan recently received, ADC is assigned the task of reorganizing certain Air National Guard day fighter units into all-weather units. As with the task of reorganizing ANG into the wing-base T/O, reorganization of selected fighter units will also require considerable time before the unit may be considered operational. The requirements for these all-weather units will exist on D-Day. The units, however, will not be effective for a considerable period after D-Day. It is logical then that this reorganization should be completed prior to D-Day and that Air Defense Command should make a request to have this reorganization initiated immediately.

2. The only real objection which the people in USAF have expressed to this proposal is the fact that USAF will be unable to furnish all-weather fighter aircraft for this project for several years. However, the advantages of having the unit working and training under the all-weather T/O and flying under all-weather training directive, outweigh the disadvantage of not having all-weather aircraft. The unit would be partially effective, particularly in night operations with conventional fighters. Later conversion to all-weather fighter aircraft could be accomplished much more rapidly and would make the unit available for operations at an earlier date. The units could begin procurement and training of the electronics personnel immediately. There also exists the possibility of installing wing tip or wing tank radar installations on conventional fighter aircraft and employing them in the all-weather role.

3. The Directorate of Air Defense is presently preparing a recommendation to USAF for the employment of different ANG units from those listed in the present plan. Until this recommendation is approved by USAF and the necessary changes made in this plan, it is not feasible to specify which ANG units should be converted to all-weather.

4. This project should have the same priority as the reorganization of the Air National Guard into the wing-base T/O. It is requested that your division take the action to prepare and forward the necessary recommendation to Hq USAF.

t/ E. F. CAREY, Jr.
Lt Col., USAF
Chief, Plans & Requirements
Ext 3247

s/ E. F. Rector
t/ E. F. RECTOR
Lt Colonel, USAF
Actg Director of Air Defense
Ext 7143

Sup No XVI-24, WPH-ANG-7

SECRET

0032

EXTRACT COPY
381(S)

CONFIDENTIAL

HEADQUARTERS
FIRST AIR FORCE
Fort Slocum, New York

DO 381

29 April 49

SUBJECT: Initial Tactical Operations in Air Defense

TO : Commanding General, 67th Wing, Massachusetts National Guard, Commonwealth Armory, Boston 15, Mass

* * * *

3. The final deployment of air units of the National Guard in the air defense of the United States is being studied by the Air Defense Command, Headquarters United States Air Force, and the National Guard Bureau. Until such time as the M-Day deployment of those units has been determined by higher headquarters, all fighter units of your Wing should be prepared to participate in air defense operations at their home stations on M-Day. M-Day assignments of National Guard aircraft control and warning units to specific location in the Aircraft Control and Warning System for the United States, which was recently approved by Congress, will be made at a later date, as authorized and directed by higher headquarters.

* * * *

FOR THE COMMANDING GENERAL:

s/t/ R. J. BRICKSON
Colonel, USAF
Adjutant General

Log to XVI - 24, WRH, ANG-4

CONFIDENTIAL

SECRET

CA 325

SUBJECT: Redesignation of Certain Air National Guard Fighter Squadrons as All Weather Fighter Squadrons

TO : Chief of Staff, United States Air Force, Washington 25, D. C.
ATTN: Office of Special Ass't. to the Chief of Staff for Reserve Forces

1. Current Air Defense planning in this Headquarters visualizes the eventual utilization of a number of Air National Guard Fighter Squadrons as All Weather Fighter Squadrons. While the requirement for these All Weather Fighter units will exist on "D" day, it is realized that Air National Guard Squadrons so designated will not be operationally effective in the All Weather role for a considerable period after "D" day. It is logical that the initial steps in accomplishing this reorganization from Day Fighter to All Weather Fighter be accomplished as early as possible in order that All Weather designated units will have specific and realistic training objectives.

2. This Headquarters is aware of the fact that the United States Air Force will be unable to furnish All Weather Fighter aircraft for the Air National Guard for several years. However, the advantages of having a unit working and training under United States Air Force All Weather Training Directives outweigh the disadvantages of not having All Weather aircraft. The unit would be partially effective, particularly in night operations with conventional fighters. Later, conversion to All Weather Fighter aircraft could be accomplished more rapidly and would make the unit available for operations at an earlier date. The units could begin procurement and training of the electonics personnel immediately. There also exists the possibility of installing wing tip or wing tank radar installations on conventional fighter aircraft and employing them in the All Weather role.

3. Based on current Air Defense plans it is recommended that the following Air National Guard units be redesignated All Weather Fighters but left under present T/O/E's. It is further recommended that training be initiated under United States Air Force All Weather Training Standards insofar as possible.

CG
VC
IG
A Insp
PM
PIO
AG
Comp
Aud
Budg
Fin
Chap
JA
Pers
Surg
AC
Air D
Mat
Engr
QM
Trans
Others

①

Opr #2131

SECRET

ADC FORM HQ-AG 5
17 May 1948

Adjutant General's Central File Copy

SECRET

Redesignation of Certain Air National Guard Fighter Squadrons As All Weather Fighter Squadrons

171st Fighter Sq., Michigan Air National Guard
138th Fighter Sq., New York Air National Guard
131st Fighter Sq., Massachusetts Air National Guard
105th Fighter Sq., Tennessee Air National Guard
121st Fighter Sq., District of Columbia Air National Guard
172nd Fighter Sq., Michigan Air National Guard
127th Fighter Sql, Kansas Air National Guard
128th Fighter Sq., Georgia Air National Guard
120th Fighter Sq., Colorado Air National Guard
187th Fighter Sq., Wyoming Air National Guard
186th Fighter Sq., Montana Air National Guard

FOR THE COMMANDING GENERAL:

[illegible]
[illegible]
[illegible]

CG________
VC________
IG________
A Insp________
PM________
PIO________
AG________
Comp________
Aud________
Budg________
Fin________
Prog________
Stat________
DPA________
Chap________
JA________
Pers________
Surg________
WAC________
Welf________
DO________
Air D________
Civ________
Cml________
Int________
Ops________
DM________
A Mat________
Engr________
Ord________
QM________
Trans________
DCE________
Comm________
Elect________
Rad________
Others________

SECRET

ADC FORM HQ-AG 5
17 May 1948

Adjutant General's Central File Copy

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39

Redesignation of Certain Air National Guard Fighter Squadrons
as All Weather Fighter Squadrons
AFCRF-2 1st Ind.

Department of the Air Force, Hq. USAF, Washington 25, D. C. JUN 28 1949

TO: Commanding General, Continental Air Command, Mitchel AFB, New York

1. Following receipt of basic communication and conferences with the National Guard Bureau, the latter conducted staff studies to determine the most appropriate recommendation regarding the reorganization of the Air National Guard units. As a result of these studies, the Air Force Division, National Guard Bureau has recommended as follows:

a. The present Light Bomb Squadrons, equipped with B-26 aircraft be converted to All-Weather Fighter Squadrons and, in addition, the B-26 aircraft presently assigned to Fighter Squadrons Utility Flights, for towing targets be replaced by fighter type aircraft, in order to ease maintenance difficulties and costs.

2. Your headquarters recommended that fighter type aircraft be substituted for B-26 aircraft for towing targets in fighter squadron utility flights in letter of 15 November 1948, subject, "Tow Equipment for Air National Guard Units" an in basic communication recommended that certain units of the Air National Guard be redesignated All-Weather Fighters.

3. As a result of the above studies and recommendations this headquarters recommends as follows:

a. That Continental Air Command designate the squadrons of the Air National Guard to be converted to All-Weather Fighter Squadrons. These squadrons to retain their present organization and aircraft until All-Weather aircraft becomes available.

b. The remainder of the Light Bomb Squadrons be converted to either Fighter or Fighter-Bomber Squadrons as soon as practical with an additional number of Fighter Squadrons to be redesignated as Fighter Bombers sufficient in number to maintain a total of three Group Headquarters and 12 Fighter-Bomber Squadrons. These units are to be equipped with conventional type fighter aircraft commonly assigned in their geographical area.

c. That all B-26 aircraft presently assigned to Fighter Squadron Utility Flights for towing targets be replaced with fighter aircraft of the type assigned the parent squadrons, as soon as the parent organization is equipped with jet type aircraft.

Redesignation of Certain Air National Guard Fighter Squadrons to All Weather Fighter Squadrons

1st Ind. (Cont'd)

4. Your comments and/or concurrence in recommendations contained in paragraph 3 above are requested at the earliest practical time. A re-study of the units to be converted to All-Weather, if deemed desirable, should be made and final firm recommendations submitted. Recommendations are also desired for conversion of other units as recommended in paragraph 3b above. Upon receipt of these recommendations, authorization will be submitted to the National Guard Bureau for implementation of same at the earliest practical time.

BY COMMAND OF THE CHIEF OF STAFF:

C. W. SCHOTT
Colonel, USAF
Deputy Spec. Asst. for Reserve Forces

4-39

Redesignation of Certain Air National Guard Fighter Squadrons As All Weather Fighter Squadrons.

PR 325 (5 Jan 49) 2d Ind. PR/GSW/80
HQ. CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Special Assistant to the Chief of Staff for Reserve Forces, Headquarters United States Air Force, Washington 25, D.C.

1. The arbitrary conversion of all the Air National Guard Bomb Squadrons (Light) to Fighter Squadrons (All Weather) would result in a scattering of these units throughout the United States just as the Light Bomb Squadrons are now dispersed. It is believed far more satisfactory to organize the various squadrons geographically into groups similar to the present Air National Guard Fighter Group organization. Therefore eight (8) Light Bomb Squadrons are recommended for redesignation as All Weather, two (2) are recommended for redesignation as Fighter Bomber, and the remaining two (2) are recommended for redesignation as Day Fighter. The Light Bomb Group Headquarters would logically be redesignated in accord with the redesignation of assigned Squadrons, thus two (2) Groups would be All Weather and one (1) Group Day Fighter. The proposed unit redesignation is shown in Inclosure No. 1.

2. To augment the total All Weather Fighter strength of the Air National Guard nine (9) Fighter Squadrons plus four (4) Fighter Group Headquarters are recommended for redesignation to All Weather. The ANG All Weather Fighter strength would then be six (6) groups composed of seventeen (17) squadrons. The squadrons would be organized into groups geographically as stated above (See Inclosure No. 1).

3. To meet the Fighter Bomber requirement for three (3) Group Headquarters and twelve (12) Squadrons, it is proposed to designate the Fighter units of the Twelfth and Fourteenth Air Force Areas as Fighter Bomber (See Inclosure No. 1). This proposal would make a total of four (4) Group Headquarters and fourteen (14) Squadrons available for this mission. These units are geographically located in the South where the bulk of the Ground and Joint maneuvers are conducted.

4. It is recommended that the B-26 aircraft now assigned to Fighter Squadron Utility Flights to accomplish the tow target mission be replaced as soon as possible by appropriately equipped Fighter Aircraft.

FOR THE COMMANDING GENERAL:

JACOB E. SMART
Colonel, USAF
Deputy for Operations

1 Incl.
Proposed ANG
AW and Fighter
Bomber Organization

CG
VC
IG
PM
PIO
AG
Comp
Aud
Budg
Fin
Prog
Stat
DPA
Chap
JA
Pers
Surg
WAC
Welf
DO
Air
Cml
Int
Ops
A Mat
Engr
Ord
QM
Trans
DCE
Comm
Elect
Others

NOTE: *The handling of classified correspondence in this headquarters is governed by ADC Staff Memo 80-18 and AR 380-5.*

Register No. 173
Date Mailed 21 July
By [illegible]

ADC FORM HQ-AG 9
17 May 1948

Adjutant General's Classified File Copy

SECRET

PROPOSED ANG AW AND FIGHTER BOMBER ORGANIZATION

CONVERT TO ALL WEATHER

111 Bomb Group (L) to AW Ftr Group
    103 Bomb Sqdn (L) to AW Ftr Sqdn
    117 Bomb Sqdn (L) to AW Ftr Sqdn

126 Bomb Group (L) to AW Ftr Group
    108 Bomb Sqdn (L) to AW Ftr Sqdn
    168 Bomb Sqdn (L) to AW Ftr Sqdn

121 Ftr Group to AW Ftr Group
    112 Bomb Sqdn (L) to AW Ftr Sqdn
    162 Ftr Sqdn to AW Ftr Sqdn
    164 Ftr Sqdn to AW Ftr Sqdn
    166 Ftr Sqdn to AW Ftr Sqdn

127 Ftr Group to AW Ftr Group
    171 Ftr Sqdn to AW Ftr Sqdn
    172 Ftr Sqdn to AW Ftr Sqdn
    107 Bomb Sqdn (L) to AW Ftr Sqdn

131 Ftr Group to AW Ftr Group
    110 Ftr Sqdn to AW Ftr Sqdn
    180 Bomb Sqdn (L) to AW Ftr Sqdn

146 Ftr Group to AW Ftr Group
    115 Bomb Sqdn (L) to AW Ftr Sqdn
    195 Ftr Sqdn to AW Ftr Sqdn
    196 Ftr Sqdn (JP) to AW Ftr Sqdn (JP)
    197 Ftr Sqdn to AW Ftr Sqdn

CONVERT TO FIGHTER BOMBER

116 Fighter Group
    128 Ftr Sqdn
    157 Ftr Sqdn
    158 Ftr Sqdn (JP)
    159 Ftr Sqdn (JP)

117 Fighter Group
    153 Ftr Sqdn
    160 Ftr Sqdn
    106 Bomb Sqdn (L) to Ftr Sqdn

13

4.39

136 Fighter Group
    161 Ftr Sqdn
    111 Ftr Sqdn
    182 Ftr Sqdn
    122 Bomb Sqdn (L)

118 Fighter Group
    105 Ftr Sqdn
    155 Ftr Sqdn
    156 Ftr Sqdn

CONVERT TO DAY FIGHTER

106 Bomb Group (L) to Fighter Group
    102 Bomb Sqdn (L) to Fighter Sqdn
    114 Bomb Sqdn (L) to Fighter Sqdn

Y-39

Ltr, Department of the Air Force, Subj: Highlights by the Sec'y of Defense Concerning 1951 Budget, 22 August 1949 with 1 Incl Cy of SECRET ltr dtd 15 Aug 49 fm Sec'y of Defense to the Pres

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419.161-9
22 Aug 1949

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USAF

Vol #10

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SECRET
Auth: CS, USAF
Date: 22 Aug 49

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON

DECLASSIFIED
EO 11652

22 August 1949

AFCAG 111

SUBJECT: Highlights by the Secretary of Defense Concerning 1951 Budget

TO: Commanding Generals, Major Air Commands, Zone of Interior and Overseas

The inclosed copy of a SECRET letter dated 15 August 1949, from the Secretary of Defense, to the President, on the subject of the fiscal year 1951 budget for the military functions of the Department of Defense is forwarded for information.

L L Judge
L. L. JUDGE
Colonel, USAF
Air Adjutant General

1 Incl
Copy of SD ltr

DECLASSIFIED
EO 11652

Log No. XVI-25

L-4.

2-3293-10

~~SECRET~~

C50-958, AF

0044

August 15, 1949

Dear Mr. President,

In accordance with the oral commitment which I gave you some time ago, I am submitting herewith pertinent highlights of the Fiscal Year 1951 Budget for the Military functions of the Department of Defense. The complete budget in detail will be forwarded to the Bureau of the Budget as required by existing regulations. The estimates of the operating agencies have been held to amounts below the ceiling which you have set, so as to make provision for anticipated legislation deficiencies that are now under study, and contingencies that might arise.

Although the military strength provided for is approximately 100,000 less than are now in service under the 1950 budget program, this reduction is partially offset by the modernization of materiel, better trained regular and reserve forces, and efficiencies growing out of the unification process which are expected to be attained. Other offsetting factors are the achievements of our occupation forces in maintaining their rightful position in overseas areas despite provocative pressures exerted by a nation whose policies and objectives are opposed to our own, the ratification of the North Atlantic Pact, and our program of assistance to friendly nations. Aside from the above factors, the Department of Defense recognizes the overriding necessity of keeping military costs within limits which will not endanger the fundamental soundness of our economy-- one of our primary military assets.

Maintenance of the following forces is presently contemplated:

Department of the Army: 630,000 officers and men will be organized into 9 Divisions, with auxiliary combat and supporting forces in proper proportion; the National Guard and Organized Reserves are provided a strength of 635,000, and it is planned that all will participate in part-time drills and training. This program represents a decrease, from present strength, of 29,000 in the regular forces and the deactivation of one infantry division. The civilian components are, however, being increased by 150,000.

Incl to ltr AFCAG 111

C50-958, AF

situation will be under continuous evaluation so that at the time of your budget message to the Congress, there may be presented the soundest possible plan for maintenance of the military forces within the budget ceiling.

The allocation of new obligational authority for fiscal year 1951 is $12,981,800,000. This includes:

For the Dept. of the Army (Military Functions)	$3,993,000,000
For the Dept. of the Navy	3,821,700,000
For the Dept. of the Air Force	4,205,100,000
For the retired pay of all Services	300,000,000
For the Office of the Secretary of Defense and its associated boards and agencies	12,400,000
For military public works which must of necessity be submitted after the passage of legislation to authorize programs of facilities construction for the Military Departments. It is now considered that the amount required for this purpose is	300,000,000
For anticipated legislation such as the currently considered Civilian Reclassification Bill, for deficiencies which are under study, and for contingencies that always arise in a large and fluid program and that usually result in numerous supplemental requests	350,000,000

Since there is, as yet, no appropriation for fiscal year 1950, the amounts listed for individual cost categories can only be set tentatively. The necessary changes will be made as soon as definitive action can be taken.

There are certain other activities not included in these estimates which are the responsibility of the Department of Defense. These include the Civil Functions of the Department of the Army, for which a separate submission is to be made; and the program for critical materials under the Strategic Stockpiling Act. Stockpiling estimates will be prepared in collaboration with the General Services Administration for inclusion as part of the budget of the Bureau of Federal Supply.

Respectfully,

signed
Louis Johnson

The President

The White House

THIS PAGE IS UNCLASSIFIED

SECRET

August 15, 1949

Dear Mr. President,

In accordance with the oral commitment which I gave you some time ago, I am submitting herewith pertinent highlights of the Fiscal Year 1951 Budget for the Military functions of the Department of Defense. The complete budget in detail will be forwarded to the Bureau of the Budget as required by existing regulations. The estimates of the operating agencies have been held to amounts below the ceiling which you have set, so as to make provision for anticipated legislation deficiencies that are now under study, and contingencies that might arise.

Although the military strength provided for is approximately 100,000 less than are now in service under the 1950 budget program, this reduction is partially offset by the modernization of materiel, better trained regular and reserve forces, and efficiencies growing out of the unification process which are expected to be attained. Other offsetting factors are the achievements of our occupation forces in maintaining their rightful position in overseas areas despite provocative pressures exerted by a nation whose policies and objectives are opposed to our own, the ratification of the North Atlantic Pact, and our program of assistance to friendly nations. Aside from the above factors, the Department of Defense recognizes the overriding necessity of keeping military costs within limits which will not endanger the fundamental soundness of our economy-- one of our primary military assets.

Maintenance of the following forces is presently contemplated:

Department of the Army: 630,000 officers and men will be organized into 9 Divisions, with auxiliary combat and supporting forces in proper proportion; the National Guard and Organized Reserves are provided a strength of 635,000, and it is planned that all will participate in part-time drills and training. This program represents a decrease, from present strength, of 29,000 in the regular forces and the deactivation of one infantry division. The civilian components are, however, being increased by 150,000.

Incl to ltr AFCAG 111

C50-958, AF

SECRET

Department of the Navy: For the Navy and the Marine Corps, 447,000 officers and men will be on full time active duty at the end of the year. 648 active ships will be operated, including 234 major combatant vessels; 5,454 active aircraft are provided for the regular forces, organized into 6 groups, 19 combat squadrons, 20 patrol squadrons and necessary supporting elements. Organized reserves in a drill-pay status, for the Navy and Marine Corps, will be increased to 220,000 and 51,000 respectively. This plan contemplates the reduction of 85,000 Naval and Marine personnel from present strength, reduces the number of active combatant ships by 38, and decreases the number of aircraft by 3,600.

Department of the Air Force: 416,000 officers and airmen will be organized to man and support 48 groups and 13 separate squadrons in the combat forces. For the regular Air Force, 8,798 aircraft will be operated and maintained. In addition, there will be maintained 27 National Guard Groups and over 71,000 reservists. Training rates of both will be stepped up, and strengths will be modestly increased. These proposals represent an increase in military personnel strength of about 6,000 from the number now in service, while active aircraft are reduced by 238.

With reference to civilian employment in the Department, I have already directed the three Secretaries to make substantial reductions in the current year and the estimates for fiscal year 1951 reflect the projection of these lower rates of employment.

The planned forces outlined above, together with the supporting establishments are undergoing searching examination, not only by the agencies of the Department of Defense regularly established for this purpose, but also by a special task force which I have just set up for the purpose of finding ways to provide maximum security at minimum cost. On the basis of such studies, it may be desirable to make certain changes in the planned forces or support within the next few weeks.

Furthermore, the plans of the Department of Defense must be somewhat fluid in view of the uncertainty of Congressional action on matters vitally affecting our armed forces and our national security. For example, the outcome of the military assistance legislation may require some changes. The military appropriation has not been passed and the action of Congress on it may not be known for some time. When it is enacted, it may well direct general reductions without specifying where and how they are to be made. Such action by Congress may require extensive reprogramming in 1950 which, in turn, will affect the forces and plans for 1951. These factors plus developments in the international situation will be under continuous evaluation so that at the time of your budget message to the Congress, there may be presented the soundest possible plan for maintenance of the military forces within the budget ceiling.

The allocation of new obligational authority for fiscal year 1951 is $12,981,800,000. This includes:

For the Dept. of the Army (Military Functions)	$3,995,000,000
For the Dept. of the Navy	3,821,700,000
For the Dept. of the Air Force	4,205,100,000
For the retired pay of all Services	300,000,000
For the Office of the Secretary of Defense and its associated boards and agencies	12,400,000
For military public works which must of necessity be submitted after the passage of legislation to authorize programs of facilities construction for the Military Departments. It is now considered that the amount required for this purpose is	300,000,000
For anticipated legislation such as the currently considered Civilian Reclassification Bill, for deficiencies which are under study, and for contingencies that always arise in a large and fluid program and that usually result in numerous supplemental requests	350,000,000

Since there is, as yet, no appropriation for fiscal year 1950, the amounts listed for individual cost categories can only be set tentatively. The necessary changes will be made as soon as definitive action can be taken.

There are certain other activities not included in these estimates which are the responsibility of the Department of Defense. These include the Civil Functions of the Department of the Army, for which a separate submission is to be made; and the program for critical materials under the Strategic Stockpiling Act. Stockpiling estimates will be prepared in collaboration with the General Services Administration for inclusion as part of the budget of the Bureau of Federal Supply.

Respectfully,

signed
Louis Johnson

The President

The White House

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Ltr, Department of the Air Force, General McConnell to General Whitehead, 22 August 1949

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22 Aug. 1949

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

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Lt. General Ennis C. Whitehead
Continental Air Command
Mitchel Air Force Base, New York

Dear General Whitehead:

I transmit herewith Copy 14 of Phase III, Category V of Air Force Budgetary Presentations before the Joint Chiefs of Staff. This entire document was made-up in my office and reflects the programming for 1951 for the Air Force Reserve, the Air National Guard and the Air ROTC, in terms of the following categories:

Personnel Costs
Maintanance and Operation Costs
Major Procurement Costs
Public Works Construction

121.2 FY 1951
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You will note on the fly leaf that the budget figures do not necessarily agree with the official budget submissions. They will, moreover, not agree with the adjusted budget submissions which we will present to the Bureau of the Budget on 1 January 1950. However, this book does represent substantially the category programming and budgetary support planned for Fiscal Year 1951, and we do not estimate any substantial change.

Pages 17 to 37, together with the charts preceding Page 17, constitutes our formal presentation to the Budget Advisory Committee of the Joint Chiefs of Staff. The balance of the book constitutes back-up data, detailed budgetary presentations and categorized programming data for all three components. It appears now that of the total budget requirements established within these programs we will go to the Bureau of the Budget with a proposal for approximately $6,900,000 less than envisaged by this study. This $6,900,000 decrease, imposed by the Budget Advisory Committee of the Joint Chiefs of Staff, if sanctioned by the Secretary of Defense will have substantially the following effects:

a. Reduce slightly the total number of people entitled to receive active duty and inactive duty pay, both in the National Guard and the Air Force Reserve.

b. Reduce the number of aircraft hours available to Air National Guard pilots from 125 to 110 per year per pilot.

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In addition to the reduction in aircraft hours, the number of pilots has been reduced from 4200 to 3800 who will receive 110 hours per year.

c. Reduce major procurement in the Reserve by $1.2 million.

Of course, adjustments may be made either up or down and it is not at all final as yet.

Outside of these adjustments the book, as it stands, is rather firm as far as our programming for 1951; Subject, of course, to changes which may be introduced to it either by the Bureau of the Budget or by the Congress.

The least we could say about it is that it is by far the best guide we have ever had to a program this far in advance.

I have other copies available and will be glad to dispatch them to anyone in your command whom you suggest. You will also receive copies to your Headquarters only, from Air Force Comptroller sources.

Sincerely,

JPMcConnell

J. P. McCONNELL
Brigadier General, USAF
Deputy, Special Asst for Reserve
Forces

Incl.
As stated in
Par 1 above

in self file

Binder 353 for 1949 - 1st Ind., Sub: Recommendations for ANG Field Training for Calendar Year 1950, 25 Nov 49

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OTR-353NG, 12 November 1949
Subjedt: Recommendations for Air National Guard Field Training for Calendar Year 1950

RBL/mfn
O&T 325 (12 Nov 49) 1st Ind 25 Nov 1949

HQ CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Special Assistant for Reserve Forces, Headquarters United States Air Force, Washington 25, D.C.

1. The following comments are offered to the reisions for the Fourth Air Force's Air National Guard field training plan originally submitted to your headquarters with Headquarters ConAC Letter, "Air National Guard Field Training Sites and Cost Estimates, Calendar Year 1950 as Altered by Conference Held at Headquarters USAF on 20 October 1949", 19 October 1949:

a. Reference is made to paragraph 4 of the basic letter. This headquarters has no objection to the use of Walla Walla County Airport by the 60th Fighter Wing, Washington Air National Guard. This was the original field training site recommendation of the Fourth Air Force but was deleted in a conference conducted by the Special Assistant for Reserve Forces when National Guard Bureau representatives pointed out that the use of Air National Guard facilities at Boise, Idaho, should be used for the entire 60th Fighter Wing for reasons of economy. As a result of that decision, this headquarters has recently requested Fourth Air Force to survey Boise Air Terminal to determine its adequacy and develop cost estimates to the National Guard Bureau for its use. Apparently the basic letter was prepared before this request was received. In view of the feelings of the Commanding General, 60th Fighter Wing, it may be necessary for the National Guard Bureau to take directive action if the Boise and Mountain Home facilities are to be utilized.

b. Refernce is made to paragraph 7 of the basic letter. During a recent conference in this headquarters between Brig Gen McConnell, of the Office of the Special Assistant for Reserve Forces, and Maj Gen Myers, it was agreed that your headquarters would determine from the Strategic Air Command whether the use of Victorville Air Force Base can be considered. This headquarters has subsequently queried the Air Materiel Command and the Air Training Command concerning the possibility of using McClellan Air Force Base or Mater Air Force Base respectively. It is anticipated that either of these bases will be used in conjunction with Hamilton Air Force Base.

2. This headquarters recommends that Air National Guard organizations train at home stations only as a last resort and after all other field training site possibilities have been exhausted.

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Recommendations for Air National Guard Field Training for Calendar Year 1950
O&T 325

3. This headquarters concurs with the aircraft control and warning field training plan as submitted in the basic letter. Air National Guard cost estimates for aircraft control and warning training were included with the letter cited in paragraph 1 above.

4. It is requested that this headquarters be advised of the final decision of your headquarters and/or the National Guard Bureau concerning the utilization of Walla Walla County Air-port or the Boise-Mountain Home Air Force Base area for the 60th Fighter Wing, Washington Air National Guard.

FOR THE COMMANDING GENERAL:

st/ J. H. BLOSS
Lt. Col., AGD (USAF)
Asst Adj Gen

Info cy sent to Fourth Air Force.
Cy retained for O&T files.

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Binder 353 for 1949 - Ltr, Hq ConAC to CG, TAC, Sub: Specialized Training for ANG Units, Field Training Calendar Year 1949, 15 April 1949

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

15 April 1949

RG 353

SUBJECT: Specialized Training for Air National Guard Units, Field Training Calendar Year 1949

TO : Commanding General, Tactical Air Command, Langley Air Force Base, Virginia

1. The georgraphical location of certain Air National Guard field training sites for calendar year 1949 makes it possible to give certain fighter groups specialized training in air defense or tactical air support operations. In order not to interfere with the other training required of the Air National Guard, the specialized training will be conducted through the four-day Operational Readiness Test.

2. In order to implement this provision for specialzied training:

a. The Air Defense Command will write the Operational Readiness Test problems for the following units:

Unit	Location	Date
First Air Force Area		
101st Ftr Gp, Me. ANG	Dow AF Base, Me	20 Aug - 3 Sep
102nd Ftr Gp, Mass. ANG	Grenier AF Base, N.H.	" "
103d Ftr Gp, Conn. ANG	Bradley Fld, Conn	" "
108th Ftr Gp, N.J. ANG	McGuire AF Base, N.J.	23 Jul - 6 Aug
107th Ftr Gp, N.Y. ANG	Dover AF Base, Del	" "
Fourth Air Force Area		
142nd Ftr Gp, Ore. ANG	Moses Lake AF Base, Wash	11 - 25 June
Ninth Air Force Area		
113th Frt Gp, D.C. ANG (to include the 148th) (Ftr Sq, Pa. ANG)	Dover AF Base, Del	13-27 Aug
Tenth Air Force Area		
127th Ftr Gp, Mich. ANG	Camp Grayling, Mich.	30 Jul - 14 Aug
131st Ftr Gp, Me. ANG	Camp Williams, Wisc	14 - 28 Aug
133d Ftr Gp, Minn. ANG	Camp Williams, Wisc	14 - 28 Aug

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Specialized Training for Air National Guard Units, Field Training Calendar Year 1949

b. The Tactical Air Command will write the Operational Readiness Test problems for the following units:

Unit	Location	Date
Fourteenth Air Force Area		
116th Ftr Gp Ga. ANG	Eglin AF Base, Fla.	17-31 Jul
117th Ftr Gp Ala. ANG	Eglin AF Base, Fla.	"
118th Ftr Gp Tenn ANG	Eglin AF Base, Fla.	"

3. The Continental Air Command Air Forces will prepare the Operational Readiness Tests for all other Air National Guard units to be so inspected during field training.

4. This directive does not conflict with the requirements of this headquarter's letter, subject: "Air National Guard Field Training Objective - Calendar Year 1949", 15 December 1949.

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

s/ CHARLES N. STEWART
Captain, USAF
Asst Adj Gen

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Binder 326 for 1949 - Ltr, Sub: USAF Reserve Aircraft Program and Flying Hour Program, 27 Jun 1949

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27 June 1949

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RETURN TO
RESEARCH STUDIES
INSTITUTE
U.S.A.F.
HISTORICAL DIVISION
ARCHIVES BRANCH

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

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27 Jun 1949

SUBJECT: USAF Reserve Aircraft Program and Flying Hour Program

TO : Commanding General, Continental Air Command, Mitchel
Air Force Base, Hempstead, New York

1. Attached hereto is the USAF Reserve Aircraft Program and Flying Hour Program, dated 1 June 1949, which has also been forwarded to the Air Materiel Command.

2. This document will be used for all planning purposes relating to any of its contents. It is also being used for all FY 1950 and FY 1951 budget and fiscal, supply and equipment and aircraft and flying time programming by this headquarters.

3. Any changes to the established information will automatically be forwarded.

BY COMMAND OF THE CHIEF OF STAFF:

s/t/ F. H. SMITH, JR.
Major General, U. S. A. F.
Assistant for Programming

1 Incl.
USAFR aircraft program &
flying hour program (dup)

326 - Air Reserve
Reg. No. XVI-31

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USAF RESERVE
AIRCRAFT PROGRAM
AND
FLYING HOUR PROGRAM

Consisting of:

Inclosure

1 - AF Reserve Aircraft Inventory Schedule FY 1949 and FY 1950.

2 - Programmed AF Reserve Aircraft Flying Hours FY 1950.

3 - Seasonal Adjustment of Programmed AF Reserve Aircraft Hours - FY 1950.

4 - Seasonal Adjustment of Air Force Reserve Aircraft Hours - FY 1950.

5 - AF Reserve Aircraft Out-Processing Schedule.

6 - Estimated Schedule for Release of T-6 Aircraft from USAF Reserve to USAF - FY 1950.

7 - AF Reserve Aircraft Inventory Schedule - FY 1951.

8 - Seasonal Adjustment of AF Reserve Aircraft Hours - FY 1951.

9 - AF Reserve Aircraft Flying Hours - FY 1951.

As of 1 June 1949

Prepared by:

Logistics Branch, Services Division,
Office of Special Assistant for
Reserve Forces

C9-7487, AF

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AIR FORCE RESERVE AIRCRAFT INVENTORY SCHEDULE FISCAL YEAR 1949 AND FISCAL YEAR 1950

(1 June 1949)

Type of Aircraft	1 Inventory 30 Jun 48	2 Inventory 30 Jun 49 (No Attrition)	3 Inventory 30 Jun 49 (Attrition Added) (d)	4 Out-processed from 1949 funds Delivered 1950	5 Total a/c Available for FY 1950	6 Requirements 1 Jul 49 (No Attrition	7 Estimated Attrition (d)	8 Requirements 30 Jun 50 (Attrition Added)
T-6	906	907	895	0	895 (a)	280	13	267
T-7	14	12	12	135	147	143	7	136
T-11	285	303	300	78	378	359	16	343
C-46	0	130	128	149 (b)	277 (c)	287	15	272
C-47	0	47	47	1	48 (c)	50	2	48
B-26	11	91	90	0	90	84	4	80
	1,216	1,490	1,472	363	1,835	1,203	57	1,146

NOTES:

a. Excess T-6 aircraft will be returned to the regular establishment in accordance with the schedule shown in Incl #6.

b. This reflects a reduction of ten (10) C-46 aircraft. In review of the FY 1949 Air Force Reserve funding program, the Comptroller, Air Materiel Command, advised that sufficient aircraft is not available from Z. I. storage to meet the total requirement.

c. Twelve (12) additional aircraft of suitable type (C-46 or C-47) will be acquired from regular Air Force stock as they become available to the Air Force Reserve by either free issue or by out-processing from storage utilizing AF Reserve funds.

d. Estimated attrition indicated above is based on the rated indicated in AFL 150-10, which are as follows:

Aircraft Model	Quarterly Attrition Rates FY 1949	FY 1950	FY 1951
T-6	1.2	1.2	1.2
T-7	1.6	1.2	1.2
T-11	1.2	1.2	1.2
C-46	1.5	1.5	1.5
C-47	0.9	0.9	0.9
B-26	1.4	1.4	1.4

Incl #1

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PROGRAMMED AIR FORCE RESERVE AIRCRAFT FLYING HOURS FY 1950

(1 June 1949)

Type of Aircraft	Average Aircraft Utilization During FY 1950		Annual Aircraft Hours	Total Aircraft Hours	Pilot Hours	Total Pilot Flying Hours
T-6	267	x	420	112,140	1	112,140
T-7	136	x	420	57,120	2	114,240
T-11	343	x	420	144,060	2	288,120
C-46	272	x	600	163,200	2	326,400
C-47	48	x	600	28,800	2	57,600
B-26	80	x	300	24,000	1 and (12 dual)	27,600
	1,146			529,320		926,100

NOTE: The above illustrates the method employed in computing aircraft hours and pilot flying hours for use in establishing the FY 1950 program.

Incl #2

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SEASONAL ADJUSTMENT OF PROGRAMMED AIR FORCE RESERVE AIRCRAFT HOURS - FISCAL YEAR 1950

Type of Aircraft	Total Aircraft Hours	Average Aircraft Hours Per Quarter	Seasonal Adjusted Aircraft Hours per Quarter				
			1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
T-6	112,140	28,035	31,399	26,073	24,110	30,558	112,140
T-7	57,120	14,280	15,994	13,280	12,281	15,565	57,120
T-11	144,060	36,015	40,337	33,494	30,973	39,256	144,060
C-46	163,200	40,800	45,696	37,944	35,088	44,472	163,200
C-47	28,800	7,200	8,064	6,696	6,192	7,848	28,800
B-26	24,000	6,000	6,720	5,580	5,160	6,540	24,000
	529,320	132,330	148,210	123,067	113,804	144,239	529,320

Factors for seasonal adjustment of Air Force Reserve FY 1950 aircraft flying hours were obtained from AFL 160-10:

Quarter:	1st	2nd	3rd	4th
Factor:	1.12	0.93	0.86	1.09

See Inclosure No. 4 for seasonal adjusted aircraft hours based on the aircraft estimated to be available to the AFRTC Program in FY 1950, in view of the delivery schedule shown in Inclosure No. 5.

Incl. #3

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(1 June 1949)

SEASONAL ADJUSTMENT OF AIR FORCE RESERVE AIRCRAFT HOURS - FISCAL YEAR 1950

Type of Aircraft	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Total	
	Required	Available	Required	Available	Required	Available	Required	Available	Required	Available
T-6	31,399	32,811	26,073	26,951	24,110	24,621	30,558	30,787	112,140	115,170
T-7	15,994	3,214	13,280	10,579	12,281	12,946	15,565	16,176	57,120	42,915
T-11	40,337	36,652	33,494	35,577	30,973	33,291	39,256	41,736	144,060	147,256
C-46	45,696	30,072	37,944	35,666	35,088	34,658	44,472	43,273	163,200	143,669
C-47	8,064	8,064	6,696	6,649	6,192	6,063	7,848	7,630	28,800	28,406
B-26	6,720	7,532	5,580	6.185	5,160	5,655	6,540	7,085	24,000	26,457
	148,210	118,345	123,067	121,607	113,804	117,234	144,239	146,687	529,320	503,873
1/ T-6		29,865 a/		1,460 b/		3,430 c/		2,448		25,447
	148,210	148,210	123,067	123,067	113,804	113,804	144,239	144,239	529,320	529,320

Factors that are applicable to the above schedule:

a. Seasonal adjustment of hours FY 1950 (AFL 150-10)

Quarter:	1st	2nd	3rd	4th
Factor:	1.12	0.93	0.86	1.09

b. Annual flying hours FY 1950 (AFL 150-10)

T-6	T-7	T-11	C-46	C-47	B-26
420	420	420	600	600	300

1/ In view of the delivery schedule as shown in inclosures 1 and 5 and the above programmed schedule of seasonal adjusted flying hours, the following comments are applicable:

a/ An average of 255 additional T-6's are required for the months of July, August and September, over and above program requirements of 280 to provide for the deficiency in flying hours required for the first quarter FY 1950 as indicated.

b/ Of the above 255 additional T-6's required for the first three (3) months, 240 become available for release during October. The remaining 15 T-6's are required for the months of October, November and December to provide for the deficiency in flying hours required for the second quarter FY 1950 as indicated.

Incl #4 /

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Seasonal Adjustment of AF Reserve Acft Hours - FY 1950 (Cont'd)

c/ Release of 15 additional T-6's become available in January due to the excess of available flying hours in comparison with program requirements. It is believed by this office that, if processed aircraft on order are delivered on schedule, it will be possible to release additional T-6's prior to the ending of FY 1950.

Incl #4

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AIR FORCE RESERVE AIRCRAFT OUT-PROCESSING SCHEDULE

Type of Aircraft	Out-processing from 1948 funds Delivered 1949	Out-processed by USAF for free issue at no cost to USAF Reserve FY 1949	Out-processed from 1949 funds Delivered '49	Out-processed from 1949 funds Delivered '50	Total out-processed from 1949 funds
T-6	0		0	0	0
T-7	0		0	135	135
T-11		13*	0	78	78
C-46	66		78	135	213
C-47			47	1	48
B-26	67		24	0	23
	133	13	149	349	498

*13 T-11's being out-processed from storage for USAFR in exchange for 25 T-6 aircraft transferred to USAF.

AIRCRAFT DELIVERY SCHEDULE - USAF RESERVE

Type of Aircraft	Delivered to date	May	June	July	August	September	October	November	December	January 1950
T-7					13	20	28	36	37	1
T-11					10	19	24	25		
C-46	71	31	22	22	30	30	30	24	14	
C-47	22	16	9	1						
B-26	80	7	4							

Incl #5

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ESTIMATED SCHEDULE FOR RELEASE OF T-6 AIRCRAFT FROM USAF RESERVE TO USAF - FISCAL YEAR 1950 (1 June 1949)

Available Inventory, T-6, 30 June 1949		895
Programmed Requirements	280	
Additional Requirements (See remarks a/, Incl #4)	255	535
Available for release		360
Requested and Available for transfer prioe to 30 Jun 49		302
Available for release - 1 Jul 49		58
Requested and Available for transfer for month of July		21
Available for release - 1 Aug 49		37
Requested for transfer for month of Aug (53), available for transfer for month of August		37
Available for release - 1 Sep 49		0
Requested for transfer for month of Sep (59), available for transfer for month of September		0
		0
Additional T-6 aircraft to become available after 1 Oct 49 (See remarks b., Schedule #4)		1/ 240

Requests indicated above are in reference to teletype CONAC MS 10907, 12 May 49, (AFIN 657)

1/ Of the above aircraft available as indicated for release 1 October, in the amount of 240, the deficiency that existed in requested release of T-6 aircraft for months of August (16), September (59) and October (34) may be met at this time.

Due to the uncertainty of the present out-processing schedule of aircraft, it is felt that a further schedule of release of T-6 aircraft would not be practical at this time.

This office will make a monthly review of the reserve aircraft situation to insure rapid release of all T-6's.

NOTE: This schedule is based on the assumption that all aircraft being out-processed for the USAF Reserve willbe delivered in accordance with the delivery schedule shown in Inclosure #5. In the event that the delivery schedule is not met, it will be necessary to withhold (2) T-6's for each twin-engine aircraft not delivered in order to perform the number of flying hours (pilot) in the program.

Incl #6.

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AIR FORCE RESERVE AIRCRAFT INVENTORY SCHEDULE - FISCAL YEAR 1951

(1 June 1949)

Type of Aircraft	Inventory 30 June 1950	Requirements 1 July 1951 (No Attrition)	Estimated Attrition	Requirements 30 June 1951 (Attrition Added)
T-6	267	255	12	243
T-7	140 a	143	7	136
T-11	362	359	16	343
C-46	272 b	288	16	272
C-47	48 c	50	2	48
B-26	86	84	4	80
	1,175	1,179	57	1,122

The Fiscal Year 1951 budget estimates will contain funds to out-process the following aircraft as noted above:

a. 3 T-7 aircraft.
b. 16 C-46 aircraft - assuming that 10 additional C-46, or suitable type aircraft willbe made available during FY 1950
c. 2 C-47 aircraft - assuming that 2 additional C-47, or suitable type, aircraft will be made available during FY 1950.

It is requested action be taken to earmark these aircraft for USAF Reserve to meet Fiscal Year 1951 requirements.

If these aircraft cannot be made available to meet USAF Reserve Fiscal Year 1951 requirements, it is assumed that suitable substitutions will be made. As soon as a determination is made indicating how this particular requirement will be met, it is requested that this office be informed so that necessary Fiscal Year 1951 budget estimates can be developed accordingly.

Incl #7.

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SEASONAL ADJUSTMENT OF AIR FORCE RESERVE AIRCRAFT HOURS - FISCAL YEAR 1951 (1 June 1949)

Type of Aircraft	Total Aircraft Hours	Average Aircraft Hours Per Quarter	Seasonal Adjusted Aircraft Hours per Quarter				Total
			1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
T-6	102,060	25,515	28,577	23,730	21,942	27,811	102,060
T-7	57,120	14,280	15,994	13,280	12,281	15,535	57,120
T-11	144,060	36,015	40,337	3,494	30,973	39,256	144,060
C-46	163,200	40,800	45,696	37,944	35,088	44,472	163,200
C-47	28,800	7,200	8,064	6,696	6,192	7,848	28,800
B-26	24,000	6,000	6,720	5,580	5,160	6,540	24,000
	519,240	129,810	145,368	120,724	111,636	141,492	519,240

Factors for seasonal adjustment for Air Force Reserve FY 1951 aircraft flying hours, were obtained from AFL 150-10:

Quarter:	1st	2nd	3rd	4th
Factor:	1.12	0.93	0.86	1.09

Incl #8.

~~Log No VII-32-14A~~
Log No XVI-31a

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AIR FORCE RESERVE AIRCRAFT FLYING HOURS FISCAL YEAR 1951

(1 June 1949)

Type of Aircraft	Average Aircraft Utilization During FY 1951		Annual Aircraft Hours	Total Aircraft Hours	Pilot Hours	Total Pilot Flying Hours
T-6	243	x	420	102,060	1	102,060
T-7	136	x	420	57,120	2	114,240
T-11A	343	x	420	144,060	2	288,120
C-46	272	x	600	163,200	2	326,400
C-47	48	x	600	28,800	2	57,600
B-26	80	x	300	24,000	1 and (12 dual)	27,600
	1,122			519,240		916,020

Incl #9.

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USAF RESERVE AIRCRAFT HOUR AND PILOT FLYING HOUR PROGRAMS - FY 1950
AS REVISED 1 OCTOBER 1949

Prepared by: Services Division, Office of Special Assistant for Reserve Forces

Aircraft Type		1ST QUARTER S.I. Seasonal Factor 1.12 Required	 Available	 Actual 2 Mos. + Est. for Sept	2ND QUARTER S.I. Seasonal .093 Required	 Available	3RD QUARTER S.I. Seasonal .086 Required	 Available	4TH QUARTER S.I. Seasonal 1.09 Required	 Available	RECAPITULATION Required	 Available
T-6	267 Aircraft Program			41,500								
	A/C Hours - Orig. Program	31,399	32,810		26,073	26,951	24,110	24,562	30,558	30,787	112,140	115,110
	A/C Hours - Rev. Program	28,035	29,295		23,229	24,012	21,627	22,032	27,234	27,438	100,125	102,777
	Pilot Hours - Orig. Program	31,399	32,810		26,073	26,951	24,110	24,562	30,558	30,787	112,140	115,110
	Pilot Hours - Rev. Program	28,035	29,295		23,229	24,012	21,627	22,032	27,234	27,438	100,125	102,777
	Average A/C per Quarter	279			276		272		269			
T-7	136 Aircraft			1,600								
	A/C Hours - Orig. Program	15,994	1,411		13,280	4,687	12,281	12,191	15,565	16,595	57,120	34,884
	A/C Hours - Rev. Program	14,280	1,260		11,832	4,176	11,016	10,935	13,872	14,790	51,000	31,161
	Pilot Hours - Orig. Program	31,988	2,822		26,560	9,374	24,562	24,382	31,130	33,190	114,240	69,768
	Pilot Hours - Rev. Program	28,560	2,520		23,664	8,352	22,032	21,870	27,744	29,580	102,000	62,322
	Average A/C per Quarter	12			48		135		145			
T-11	343 Aircraft			24,000								
	A/C Hours - Orig. Program	40,337	35,633		33,494	31,634	30,973	33,321	39,256	42,347	144,060	143,135
	A/C Hours - Rev. Program	36,015	31,815		29,641	28,362	27,763	29,689	34,986	37,740	128,625	127,806
	Pilot Hours - Orig. Program	80,674	71,266		66,988	63,668	61,946	66,642	78,512	84,694	288,120	286,270
	Pilot Hours - Rev. Program	72,030	63,630		59,682	56,724	55,566	59,778	69,972	75,480	257,250	255,612
	Average A/C per Quarter	303			326		369		370			
C-46	272 Aircraft			22,500								
	A/C Hours - Orig. Program	45,696	32,256		37,944	36,828	35,088	36,378	44,472	45,453	163,200	150,915
	A/C Hours - Rev. Program	40,256	28,416		33,456	32,472	31,008	32,148	39,440	40,310	144,160	133,346
	Pilot Hours - Orig. Program	91,392	64,512		75,888	73,656	70,176	72,756	88,944	90,906	326,400	301,830
	Pilot Hours - Rev. Program	80,512	56,832		66,912	64,944	62,016	64,296	78,880	80,620	288,320	266,692
	Average A/C per Quarter	192			264		282		278			
C-47	48 Aircraft			6,000								
	A/C Hours - Orig. Program	8,064	8,064		6,696	6,696	6,192	6,192	7,848	7,848	28,800	28,800
	A/C Hours - Rev. Program	7,248	7,248		6,048	6,048	5,568	5,568	7,056	7,056	25,920	25,920
	Pilot Hours - Orig. Program	16,128	16,128		13,392	13,392	12,384	12,384	15,696	15,696	57,600	57,600
	Pilot Hours - Rev. Program	14,496	14,496		12,096	12,096	11,136	11,136	14,112	14,112	51,840	51,840
	Average A/C per Quarter	48			48		48		48			
B-26	80 Aircraft (12 dual)			10,000								
	A/C Hours - Orig. Program	6,720	7,644		5,580	6,347	5,160	5,805	6,540	7,276	24,000	27,072
	A/C Hours - Rev. Program	6,000	6,825		4,960	5,642	4,560	5,130	5,840	6,497	21,360	24,094
	Pilot Hours - Orig. Program	13,440	15,288		11,160	12,694	10,320	11,610	13,080	14,552	48,000	54,144
	Pilot Hours - Rev. Program	6,900	7,725		5,704	6,386	5,244	5,814	6,716	7,373	24,564	27,298
	Average A/C per Quarter	91			91		90		89			
TOTALS	A/C Hours - Orig. Program	146,210	117,618		123,067	113,343	113,804	118,449	214,239	150,306	529,320	499,916
	A/C Hours - Rev. Program	131,834	104,859		109,366	100,712	101,562	105,702	128,428	133,831	471,190	445,104
	Pilot Hours - Orig. Program	265,021	202,826		220,061	199,735	203,498	212,336	257,920	269,825	946,500	884,722
	Pilot Hours - Rev. Program	230,533	174,498		191,287	172,514	177,621	184,926	224,658	234,603	824,099	766,541

Deficiencies Old Prog.	 Rev. Prog.
29,404	
	26,086
61,778	
	57,558

DEFICIENCIES	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	TOTAL
Pilot Hours - Orig. Program	17,298	14,363	13,282	16,835	61,778
Pilot Hours - Rev. Program	16,116	13,382	12,375	15,685	57,558

NOTE: Deficiency in aircraft hours are not broken down by quarters since utilization of T-6 aircraft to cover the deficiency in pilot hours indicated above will result in increased aircraft hours; i.e. available aircraft hours (445,104) plus T-6 aircraft hours required to cover deficiency (57,558) equals an aircraft hour requirement of 502,662 hours versus a revised program requirement of 471,190 hours. The 502,662 aircraft hours will generate 824,099 pilot hours.

**AVERAGE AIRCRAFT REQUIRED PER QUARTER - FY 1950

Aircraft Type				
T-6	279	276	272	269
T-7	12	48	135	145
T-11	303	326	369	370
C-46	192	264	282	278
C-47	48	48	48	48
B-26	91	91	90	89
*T-6	230	155	155	155

AIRCRAFT HOUR FACTORS - REVISED PROGRAM - FY 1950 - SEASONALLY ADJUSTED

T-6, T-7, T-11	105	87	81	102	375
C-46	148	123	114	145	530
C-47	151	126	116	147	540
B-26	75	62	57	73	267

T-6 on hand 30 Sept 1949		511
T-6 Required and Programmed	276	
*T-6 Additional	155	
Total Required 30 Sept 1949		431
Excess & Available for Release		80

* Required to cover deficiency in pilot hours. Includes Attrition.

** Represents minimum quarterly aircraft requirements, which will not be reduced or increased pending review of USAF Reserve aircraft requirements to be made 20 January 1950.

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Binder 353 for 1949 - Summary of Conference with General Devers, 19 January 1949

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419.161-14
11 Jan 1949

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DECLASSIFIED AFTER 12 YEARS.
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Col. Brown JSR
Col. Muehleisen (S.S.)
Please note and send to AG for file
JES
31 Jan

24/1/49
To - Dothrov. e.
For inf. & guidance
JES

SUMMARY OF CONFERENCE WITH GENERAL DEVERS

0915 - 1015, 19 January 1949

SUBJECT: USAF resources for joint operations and tactical air operations with the Army during the coming year.

Organization and Functions of TAC Headquarters under the present organization.

1. Units and type of aircraft to be available for work with the Army during the coming year were outlined to General Devers. Projects, particularly those pertaining to reviewing of tactical air operations doctrine and any method of determining characteristics for suitable aircraft and evaluating present aircraft, were outlined to General Devers. General Devers expressed concern over the following matters in the Tactical Air Command's field:

a. Command structure of airborne operations. He stated that he would like to set up an airborne center at Ft. Bragg with General Byers or anyone else suitable to the Air Force in command with an integrated Army-Air Force Staff. The purpose of this would be to get the troop carrier and airborne people together so that they could solve more adequately some of their problems. He would not propose to move the jump training from Ft. Benning as he feels it would require additional facilities at Ft. Bragg and, further, he feels that the jump school should have the leveling influence of the Infantry Center as it now exists at Ft. Benning. He believes that troop carrier units should work more closely with the 82d Airborne Division. He is not sure whether a unit should be stationed there but, if not, a unit should be there more frequently than they have been in the past in order that more training could be obtained. I pointed out to General Devers that a system currently exists for obtaining unit training by troop carrier units and airborne units. It is necessary to obtain definite requirements of the Airborne Division in order for this system to work. It is my intention to give greater emphasis to this in order that maximum utilization of troop carrier units available may be made for airborne training. Nevertheless, the positive and reasonable requirements must emanate from the Airborne Division.

b. Ability of the Air Force to conduct towing missions. General Devers has had not too many complaints from Ft. Bliss. The Tow Target Squadrons there have been taking very good care of the Anti-Aircraft

337-Conferences
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Center's requirements. He was particularly concerned over the ability of the Air Force during the fiscal year 1950 to meet the requirements of the increased activities of the Anti-aircraft Center at Bliss as well as the summer training of the National Guard and Reserve anti-aircraft units. He stated that if the Army is unable to obtain towing requirements from the Regular or National Guard Air Force, they will be forced to consider forming their own towing units or obtaining it from the Navy. He stated that they had already gone to the National Guard Bureau to attempt to have some of the National Guard units go to their summer training at the same time and in the same location as the National Guard and Reserve Anti-aircraft units in order that they may accomplish some of the towing. I pointed out to General Devers that the TAC Headquarters would assist in any way possible in coordinating with the National Guard for this purpose and outlined the proposed method of furnishing towing requirements for the Anti-aircraft Center in the Ft. Bliss-Biggs Field area. (Base unit or element of wing structure with appropriate personnel and equipment.)

c. General Devers then outlined his directive to prepare a presentation for General Vandenberg which will outline the Army's opinion of his capability of doing his job with the support which the Air Force is able to furnish. In General Devers' words, he is required to tell General Vandenberg whether or not he thinks the Air Force can render the support which he thinks necessary with the weapons which the Air Force has or contemplates. I told General Devers that this fits in closely with the project which we have which includes the review of our doctrine, determination of whether or not our weapons are suitable, and expression of the way in which we think the job should be done. I told him that I felt that his staff, in preparing his presentation, should work closely with our Plans Division which is working on the TAC project. General Devers agreed wholeheartedly and further stated that it was his intention to resolve any controversial points at this level. In his presentation, he has no intention of undercutting TAC Headquarters and it is his desire to show that Field Forces Headquarters and TAC Headquarters have made every effort to solve the problem. He would like to have the Commanding General, TAC, present at his presentation to General Vandenberg. It was pointed out to General Devers that one of the desirable reasons for having TAC Staff work with Field Forces Staff on this project was to insure that the presentation reflected the latest thought of the TAC on how to accomplish the Air Force support to the Army. We are getting new ideas every day and our current studies will develop changes in our thoughts. If there is a problem which appears without a solution at the moment, we may have some project for evaluation of equipment or techniques which may produce the answers. General Devers agreed. It was agreed to have our staffs work closely on our projects. I asked General Devers what the time element was on the completion of his project. He stated that Colonel Lynch was working on the project and he would have to give him some little time to finish a complete report as he desired. No specific suspense date was given.

Gen Strat indicated tht He too would be Present JS

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2. The organization of the Tactical Air Command [illegible], its mission and current projects were then [illegible]. General Devers expressed the opinion that the [illegible] should be such that it should be able to work closely [illegible] our mutual problems. He also expressed the opinion that [illegible] should get more people into the Tactical Air [illegible] operations who have war experience, for example, General [illegible].

Robert M. Lee
ROBERT M. LEE
Major General, U.S.A.F.
Commanding

Binder 353 for 1949 - Ltr, Sub: Field Training for ANG Units, 4th Quarter Fiscal Year 1949 and 1st Quarter Fiscal Year 1950, 15 January 1949. 15 January 1949

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15 Jan 1949

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C O P Y

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON

15 January 1949

SUBJECT: Field Training for Air National Guard Units, 4th Quarter Fiscal Year 1949 and 1st Quarter Fiscal Year 1950

TO : Commanding General
Continental Air Command
Mitchel Air Force Base
New York

1. In order to minimise the expense to be incurred in opening and closing additional Air Bases for Air National Guard Field training, during the summer of Calendar Year 1949, it is desired that your command formulate plans for this training based upon the following:

a. A minimum number of additional air bases (suggested maximum of 15) will be opened and operated to accommodate the Air National Guard field training program. A suggested list of bases and the units using these bases is attached hereto as Tab A. This list may be modified or changed according to the availability of air bases to suit the desires of the States' Adjutants General, or the Numbered Air Force commanders.

353 - Training
326 - Air Reserve

b. All units assigned to an Air National Guard Wing will attend field training simultaneously. Separate light bomb squadrons may attend field training with the fighter group to which they are assigned. The Wing commanders will be responsible for the formulation of training policies and directives. The Numbered Air Force commanders of the area in which field training will be conducted will be responsible for the selection of the training bases and for the arrangements for the use of suitable gunnery ranges.

c. Aviation Engineer units may attend field training with either the Air National Guard or the Army National Guard. Aircraft Control & Warning groups and their assigned squadrons may perform field training with USAF Control & Warning Group similar to the field training of the 113th Control & Warning Squadron at Greenville Air Force Base during 1948. No recommended stations for Aircraft Control & Warning Group field training have been included in Tab A.

d. Schedules for occupancy of these bases by the various groups will be so arranged that there will be no appreciable time lag between the departure of one group and the arrival of the succeeding one. This will eliminate the need for funds to prepare bases for subsequent units or to close and reopen these fields between periods of occupancy.

(1-2) 2-607

2. Specifically, it is desired that your command initiate the necessary action to accomplish the following:

a. Determine the availability of the subject air bases or suitable alternates for the field training period.

b. Establish a field training schedule utilising these bases. It is requested that this Headquarters and the National Guard Bureau be advised of this schedule not later than 1 February 1949.

c. Estimate the amount of funds required for opening, operating and closing the selected air bases for field training periods.

(1) Funds for opening, operating and closing State-owned or leased bases will be requested by the State in which located, regardless of whether or not units of that State participate in training at the base. Detailed instructions regarding these funds will be issued to the States by the National Guard Bureau.

(2) When field training is conducted at a regular USAF base which is not already in operation, the funds required for opening, operating, and closing the base will be allocated by the National Guard Bureau to USAF upon request.

✓ (3) Where such training is conducted at a regular USAF base which is presently in operation, the Air National Guard will pay a pro-rata share of the cost of operation of the base during periods of occupancy by the Air National Guard units and such funds will be allocated by the National Guard Bureau to the USAF upon request.

BY COMMAND OF THE CHIEF OF STAFF:

/s/ & /t/ J. P. McCONNELL
Brigadier General, USAF
Deputy Spec. Asst. for Reserve
Forces

1 Incl
Tab A- Suggested list
of bases

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Field Training for Air National Guard Units, 4th Quarter Fiscal Year 1949 and 1st Quarter Fiscal Year 1950

CA 353 (15 Jan 49) 1st Ind. 19 JAN 1949
HQ, CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Commanding General, Fourth Air Force, Hamilton Air Force Base, Calif.

1. Reference is made to letter, Headquarters, USAF, subject: "Field Training Bases for Air National Guard Units", 1 October 1948 with Headquarters, ADC 1st Indorsement, 6 October 1948, thereto; and to letter, Headquarters, Continental Air Command, subject: "Air National Guard Field Training Objective - Calendar Year 1949", file CA 353, 15 December 1948.

2. The basic correspondence outlines the broad concept of Field Training for Calendar Year 1949. Tab "A" lists proposed training sites for all units other than Aircraft Control and Warning.

3. This Headquarters has requested the use of Kirtland Air Force Base, New Mexico for Field Training for the 62d Fighter Wing, California Air National Guard and the 137th Fighter Group, Oklahoma Air National Guard; as yet, no decision has been made. In the interim it is desired that plans be made on the basis of utilizing Kirtland Air Force Base or Reno Air Force Base for the 62d Fighter Wing. In any event, the Aircraft Control and Warning organizations so designated (Tab "B") will utilize the site at Albuquerque, New Mexico.

4. Tab "B" (Inclosure No. 2), added by this Headquarters, lists the only available United States Air Force sites on which Air National Guard Aircraft Control and Warning units may train. Generally, there will be no housing available, therefore plans must include provisions for tentage. If it is not possible to adhere to the proposed site list, then the unit will have to be trained with its parent Wing utilizing its own electronic equipment and simulating operations where necessary to insure realistic training.

5. Coordination between numbered Air Forces is necessary where units from one Air Force are utilizing sites in another Air Force. The scheduling of units into the available sites must be carefully formulated to prevent overloading or conflict at any one facility.

6. The deadline established in paragraph 2 b, of the basic letter has been changed to 1 March 1949. In order that this information may be

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Field Tng of ANG Units, 4th Qtr FY 49 & 1st Qtr FY 50 (Cont'd)

adequately compiled by this Headquarters, it is desired that the schedules be at this Headquarters no later than 22 February 1949.

BY COMMAND OF LIEUTENANT GENERAL STRATEMEYER:

19/1/49
Gen. Upston
Here is
your rec.
information.
Stratemeyer

TRAVIS

2 Incls:
  1 - n/c
    Added 1 Incl
  2 - Tab "B" - Pro. List of A/C&W Bases

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TAB A

PROPOSED AIR FIELDS TO BE UTILIZED
FOR
ANG FIELD TRAINING SUMMER 1949

UNIT		FIELD TRAINING STATION
60th Wing (Washington)	✓	Moses Lake AFB, Washington
61st Wing (California)	✓	Reno AFB, Nevada
62nd Wing (California)	✓	Reno AFB, Nevada or ag-
86th Wing (Colorado)		Casper AFB, Wyoming
63rd Wing (Texas)		Brooks AFB, Texas Ellington AFB, Texas
71st Wing (Missouri)		Camp Williams, Wisconsin Camp Grayling, Michigan
66th Wing (Illinois)		Camp Williams, Wisconsin Camp Grayling, Michigan
55th Wing (Ohio)		Camp Grayling, Michigan Oscoda AFB, Michigan
53rd Wing (Penn)		Dover AFB, Delaware
52nd Wing (New York)		Wheeler Sack AFB, New York Dover AFB, Delaware
67th Wing (Boston)		Otis AFB, Massachusetts Dow AFB, Maine
54th Wing (Georgia)		Eglin AFB Satellites (2), Georgia

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TAB B

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PROPOSED TRAINING STATIONS TO BE UTILIZED
FOR
ANG AC&W FIELD TRAINING SUMMER 1949

SECTION I: AC&W GP, HQS AND AC SQ

UNIT	FIELD TRAINING STATION
151st AC&W Gp, Hq, Mass. ANG 101st AC Sq, Mass. ANG	Roslyn, N.Y.
152nd AC&W Gp, Hq, N.Y. ANG 106th AC Sq, N.Y. ANG	Roslyn, N.Y.
154th AC&W Gp, Hq, Ga. ANG 116th AC Sq, Ga. ANG	Orlando AF Base, Fla.
155th AC&W Gp, Hq, Ohio ANG 121st AC Sq, Ohio ANG	Selfridge AF Base, Mich.
156th AC&W Gp, Hq, Ill. ANG 126th AC Sq, Ill. ANG	Selfridge AF Base, Mich.
157th AC&W Gp, Hq, Mo. ANG 131st AC Sq, Mo. ANG	Selfridge AF Base, Mich.
158th AC&W Gp, Hq, Tex. ANG *134th AC Sq, Tex. ANG	Albuquerque, New Mexico
159th AC&W Gp, Hq, Colo. ANG 137th AC Sq, Colo. ANG	Albuquerque, New Mexico
160th AC&W Gp, Hq, Wash. ANG ✓ 141st AC Sq, Wash. ANG	Silver Lake, (Arlington) Wash. ✓
161st AC&W Gp, Hq, Calif. ANG ✓ 144th AC Sq, Calif. ANG	Silver Lake, (Arlington) Wash. ✓
162nd AC&W Gp, Hq, Calif. ANG ✓ 147th AC Sq, Calif. ANG	Albuquerque, New Mexico

SECTION II: AC&W SQS

UNIT	FIELD TRAINING STATION
102nd AC&W Sq, R.I. ANG	Camp Edwards, Mass.
107th AC&W Sq, N.Y. ANG	Twin Lights, N. Y.
117th AC&W Sq, Ga. ANG	Orlando AF Base, Fla.
122d AC&W Sq, Ind. ANG	Selfridge AF Base, Mich.
127th AC&W Sq, Mich. ANG	Selfridge AF Base, Mich.

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Incl #2

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UNIT	FIELD TRAINING STATION
132nd AC&W Sq, Minn. ANG	Selfridge AF Base, Mich.
135th AC&W Sq, La. ANG	Orlando AF Base, Fla.
138th AC&W Sq, Colo. ANG.	Albuquerque, New Mexico
142nd AC&W Sq, Ore. ANG ✓	Pacific Beach, Ore. ✓
145th AC&W Sq, Calif. ANG ✓	Half Moon Bay, Calif. ✓
148th AC&W Sq, Calif. ANG ✓	Albuquerque, New Mexico
103d AC&W Sq, Conn. ANG	Camp Edwards, Mass.
108th AC&W Sq, N.Y. ANG	Buffalo, N.Y.
113th AC&W Sq, D.C. ANG	Palermo, N. J.
118th AC&W Sq, N.C. ANG	Orlando AF Base, Fla.
123d AC&W Sq, Ohio ANG	Selfridge AF Base, Mich.
128th AC&W Sq, Wisc. ANG	Selfridge AF Base, Mich.
133d AC&W Sq, Iowa ANG	Selfridge AF Base, Mich.
*136th AC&W Sq, Tex. ANG	Albuquerque, New Mexico
139th AC&W Sq, Colo. ANG	Albuquerque, New Mexico
143d AC&W Sq, Wash. ANG ✓	Moses Lake AF Base, Wash. ✓
146th AC&W Sq, Calif. ANG ✓	Half Moon Bay, Calif. ✓
149th AC&W Sq, Calif. ANG ✓	Half Moon Bay, Calif. ✓

* UNITS NOT YET FEDERALLY RECOGNIZED.

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Binder 353 for 1949 - Ltr, Hq 9th AF to CG, ConAC, Sub: Training of National Guard Units, 9 April 1949

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C O P Y
353

HEADQUARTERS NINTH AIR FORCE
Langley Air Force Base, Virginia

9 April 1949

9AF 325

SUBJECT: Training of National Guard Units

TO : Commanding General, Continental Air Command, Mitchel Air Force Base, New York
ATTN: ADC

1. Reference is made to the forthcoming summer training encampments of the following Air National Guard organizations from within the Ninth Air Force Area at Dover Air Force Base, Delaware, during the periods indicated below:

55th Fighter Wing, Ohio National Guard	9-23 July 1949
53d Fighter Wing, Pennsylvania NG	14-27 August 1949

In connection with the above, certain units of the Aircraft Control and Warning Group assigned to each Fighter Wing are to undergo training with established detachments of the 503rd Aircraft Control and Warning Group. This Aircraft Control and Warning Group is an organization of the First Air Force and has its headquarters at Roslyn, New York. In conjunction with this training program, the Air National Guard AC&W organization concerned will establish a temporary Tactical Air Control Center (TACC) at Dover AFB, which will operate in close coordination with the reporting stations of the 503rd Aircraft Control and Warning Group at Indiantown Gap, Pennsylvania, and Palermo, New Jersey.

2. To provide maximum training for all units concerned, particularly the fighter and light bombardment squadrons, it is desired to utilize the Aircraft Control and Warning facilities in the vicinity of the Dover encampment for conducting ground controlled intercept missions; ground controlled tactical sweeps; and practice penetrations of defended areas. To obtain optimum benefits from such training missions, it is necessary that operational control of the TACC and reporting stations concerned be vested in the Commanding Officer of the Fighter Wing involved, who will function under the supervision of Hq Ninth Air Force. It is realized such a training program will restrict the normal operation of the Aircraft Control and Warning reporting unit concerned; therefore, it is requested your headquarters establish a schedule of operation which will pass operational control of the reporting stations to the Wing Commander concerned for specified periods daily during the summer encampment.

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9AF 325
Subject: Training of National Guard Units

3. The schedule established should provide for a minimum of four operation hours daily, and, if practicable, should also provide for a minimum of four night problems of three hours duration for each Fighter Wing. It is intended the ANG personnel will perform the actual functions of GCI Control during these periods and that the regular Air Force personnel of the 503rd Group will act as instructors and observers and will continue to pass all data to the appropriate USAF ADCC so as to provide for continuous surveillance of the metropolitan areas. It is understood, of course, that should an emergency arise, the USAF ADCC will immediately assume full control functions.

4. It is further requested that during the encampment periods, and sufficiently prior thereto to allow issuance of necessary warning and travel orders, so much of the plans for the National Guard summer encampment as pertains to the movement and location of personnel of the ANG AC&W units be declassified from SECRET to CLEAR.

5. This headquarters has initiated action to expedite the security clearance of all National Guard personnel who will require access to classified documents, equipment, and/or areas in connection with the summer training encampment (see copy of TWX attached, marked Inclosure No. 1).

s/ WILLIAM D. OLD
Major General, USAF
Commanding

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TWX, Hq 9AF, 9AFOC 1230
dtd 30 Mar 49

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C O P Y
353

25 Apr 49

Training of National Guard Units
RG 353 (8 Apr 49) 1st Ind

HQ CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Commanding General, First Air Force, Fort Slocum, New York

1. This headquarters and the Air Defense Command concur in the proposal of paragraph 2 and 3 of the basic correspondence. It is desired that you in conjunction with the Ninth Air Force conclude the detailed arrangements for the control of the Aircraft Control and Warning net. It is to be noted that the same arrangements that are necessary for the 53d and 55th Fighter Wings, Air National Guard, should likewise be necessary for the 52nd Fighter Wing, New York Air National Guard.

2. Action has been initiated by this headquarters to make possible the declassification of Aircraft Control and Warning sites to be used for the Air National Guard.

3. Reference in paragraph 1 of basic to Tactical Air Control Center (TACC) should read Air Defense Control Center (ADCC).

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

1 Incl:
n/c

/s/ NEAL J. O'BRIEN
Colonel, USAF
Adjutant General

Info cy to:
CG, Ninth AF

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Binder 353 for 1949 - Ltr, Hq USAF to CG, ConAC, Sub: Establishment of Air Force Policy on Mobilization Planning of Flying Training Activities, 3 March 1949

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USAF

3 MAR 1949

SUBJECT: Establishment of Air Force Policy on Mobilization Planning of Flying Training Activities

TO: Commanding General
Continental Air Command
Mitchel Air Force Base
Hempstead, New York

1. This headquarters is at present attempting to establish a sound and clear cut Air Force policy with regard to mobilization planning of flying training activities. It is recognized that the training aspect of any mobilization plan will have a profound effect, either directly or indirectly, on the wartime activities of Strategic Air Command, Continental Air Command, Air Training Command and Military Air Transport Service. Therefore, it is felt apropos at this time, to request the comments of your command on the items enumerated below.

a. In which command(s) should the responsibility of conducting operational unit training be assigned?

b. Are replacement training centers necessary? If so, in which command(s) should the responsibility of conducting this type of training be assigned?

c. In which command(s) should the responsibility of conducting combat crew training be assigned?

d. To what extent will the Air Training Command be required to conduct transition pilot training?

e. Is there a requirement for a separate Personnel Command? If not, should this activity be assigned to the Continental Air Command or the Air Training Command?

2. This headquarters has recently conducted a staff study on this subject and a copy is inclosed for your information. It is to

353 - Training

(44)

14

3 MAR 1949

SUBJECT: Establishment of Air Force Policy on Mobilization
Planning of Flying Training Activities

TO: Commanding General
Continental Air Command
Mitchel Air Force Base
Hempstead, New York

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353 - Training

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Ltr to CG, ConAC, Subj., "Establishment of Air Force Policy on Mobilization Planning of Flying Training Activities"

be pointed out that this staff study is in no way intended to bias or influence the comments of your headquarters, but rather to present the approach used by this headquarters in appraising the problem.

3. It is requested that your comments be returned to this headquarters no later than 28 March 1949.

BY COMMAND OF THE CHIEF OF STAFF:

1 Incl.
 1 - Staff Study

KENNETH P. McNAUGHTON
Major General, USAF
Director of Training and Requirements

Establishment of Air Force Policy on Mobilization Planning of Flying Training Activities
DO 381 (3 Mar 49) 1st Ind 28 MAR 1949

HQ CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Director of Training and Requirements, DCS/O, Headquarters United States Air Force, Washington 25, D. C.

1. Reference paragraph 1a:

a. Recommendation: That OTU's be established and that responsibility for such training should be placed respectively under Strategic Air Command, Continental Air Command, and Military Air Transport Service.

b. Comments:

(1) Concur in conclusion contained in paragraph 12 and recommendation contained in paragraph 17 of attached United States Air Force staff study.

(2) Establishment within any single major command of the responsibility for all OTU training would extend the pipeline flow of personnel from induction or entry upon active duty, to their ultimate assignment in a tactical command.

(3) Initially, personnel and other logistical considerations will require Continental Air Command's training functions to be closely allied or integrated with operational functions.

(4) Personnel who are completely familiar with type units in peacetime would be more readily available to immediately initiate OTU training with cadres which undoubtedly come within their command.

(5) Continental Air Command, Strategic Air Command, and Military Air Transport Service will be in a position where they can quickly and correctly incorporate training changes or methods brought about by unforeseen events occurring in operations.

(6) In spite of the above-listed factors which indicate the wisdom of requiring each operational command to conduct its own operational training units, it must be recognized that as war progresses the Strategic Air Command and the Military Air Transport Service might well desire that

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Register No. 3684
Date Mailed 29 MAR 1949
By

ADC FORM HQ-AG 9
17 May 1948

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Adjutant General's Classified File Copy

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Para 1(6) of 1st Ind to DCS/O, Hq USAF, to ltr "Establishment of Air Force Policy on Mobilization Planning of Flying Training Activities," from Hq USAF, 3 Mar 49 continued.

they be freed of responsibility for the conduct of operational training. It is believed, therefore, that plans should be made for the transfer of this responsibility from the Strategic Air Command and Military Air Transport Service to the Continental Air Command at sometime after the commencement of hostilities. We think that three (3) to six (6) months of operations would indicate whether or not this transfer of responsibility is an urgent requirement or might be further delayed.

2. Reference paragraph 1b:

a. Recommendation: That no replacement training centers be established.

b. Comment:

(1) Concur in conclusion contained in paragraph 13 and recommendation contained in paragraph 18 of attached United States Air Force staff study.

3. Reference paragraph 1c:

a. Recommendation: That CCTS be established for crew training and that the responsibility for such training should, depending on the type of training, be placed respectively under Strategic Air Command, Continental Air Command, or Military Air Transport Service.

b. Comments:

(1) Concur in conclusion contained in paragraph 14 and recommendation contained in paragraph 19 of the attached United States Air Force staff study.

(2) Comments made in paragraphs 1b(2) through 1b(5) first indorsement concerning OTU's are applicable to CCTS.

(3) As in the case of operational training units, we feel that Strategic Air Command and Military Air Transport Service should be relieved of responsibility for CCTS after hostilities commence.

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Date Mailed______
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ADC FORM HQ-AG 9
17 May 1948

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Para 3a(3) of 1st Ind to DCS/O, Hq USAF, to ltr "Establishment of Air Force Policy on Mobilization Planning of Flying Training Activities," from Hq USAF, 3 Mar 49 continued.

> Responsibility for this type of training might well be transferred to the Continental Air Command at the same time as responsibility for operational training units is transferred.

4. Reference paragraph 1d:

a. Recommendation: That the Air Training Command not be required to conduct transition pilot training.

b. Comment: The operational commands (Strategic Air Command, Military Air Transport Service, and Continental Air Command) will in all probability be the only commands possessing operational type aircraft on M-Day, therefore, these will be the only commands capable of conducting transition training. It is, of course, desirable to have all pilot entrants into combat crew training centers qualified in the type of aircraft that they will be required to fly. It is doubted, however, that this desirable feature justifies the maintenance of operational type aircraft in the Air Training Command as well as in the operational commands. It is believed that more efficient utilization of aircraft and simplified logistic procedures would be possible if operational type aircraft were retained exclusively in the OTU's, CCTS, and operational units.

5. Reference paragraph 1e:

a. Recommendation: There should be no Personnel Command. This responsibility should be assigned to the Continental Air Command.

b. Comments:

(1) The organization, war mission, and residual functions (after Air Defense Command and Tactical Air Command are provided for) of Continental Air Command provide a good basis for Personnel Command work. Continental Air Command can be expended for the remainder much more conveniently than a new command can be established.

(2) In a protracted war it is entirely possible that the personnel functions will reach such proportions that a separate command will be required to carry them out. Such a command will in many features resemble the existing Continental Air Command. Duplication of headquarters and of geographic functions will naturally result if a Personnel Command is created. This action

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17 May 1948

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Para 5b(2) of 1st Ind to DCS/O, Hq USAF, to ltr "Establishment of Air Force Policy on Mobilization Planning of Flying Training Activities," from Hq USAF, 3 Mar 49 continued.

should, therefore, be delayed as long as is possible. We feel that the functions of a Personnel Command should, at least in the initial stages of a war possibly for the first year or longer, be made the responsibility of the Continental Air Command.

(3) This question is currently under discussion between the Director Personnel Planning, United States Air Force, and the Director of Personnel, Continental Air Command.

FOR THE COMMANDING GENERAL:

1 Incl:
n/c

Cy furnished:
OP

JACOB E. SMART
Colonel, USAF
Deputy for Operations

28Mar'49
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ADC FORM HQ-AG 9
17 May 1948

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HEADQUARTERS
CONTINENTAL AIR COMMAND
CLASSIFIED INTRA-OFFICE ROUTING SLIP

FILE NO.

SUBJECT: C/Ltr Hq USAF, 3 Mar 48, Subj: Est. of AF Mobilization Plan of Flying Training Activities

NO.	DATE	FROM	TO	No person is entitled solely by virtue of his grade or position to knowledge or possession of classified matter. Such matter is entrusted only to those individuals whose official duties require such knowledge or possession.
[illegible]	[illegible] Mar	Pers	[illegible]	With reference to [illegible] attached letter, the following is submitted: Believe [illegible] Comd [illegible] Personnel Command. [illegible] CTS [illegible] CCTS [illegible] instructors. Major [illegible]

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CONAC Form No. 11 (Revised)

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HEADQUARTERS
AIR DEFENSE COMMAND
CLASSIFIED INTER-OFFICE ROUTING SLIP

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Secretary [illegible]	

FILE:

SUBJECT: 1/Ltr Hq USAF, 1 Nov 49, subj: Est. of AF Reorganization Plan of Flying Training Activities

NO	DATE	FROM	TO	No person is entitled solely by virtue of his grade or position to knowledge or possession of classified matter. Such matter is entrusted only to those individuals whose official duties require such knowledge or possession.
1.	[illegible]	[illegible]	[illegible]	1. Concur in recommendations contained in attached study with these variations: a. ConAC should take over [illegible] for all purposes as soon as possible, and therefore should [illegible] relieve [illegible] and [illegible] of this responsibility as soon as possible. b. There should be no Provisional Command. This responsibility should be assigned to ConAC [illegible] between [illegible] ConAC and [illegible] c. The organization [illegible] and [illegible] provided for [illegible] this activity [illegible] be [illegible] [illegible] conveniently [illegible] [illegible]

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1st Ind., Hq ConAC to C/S, Hq USAF, Sub: USAF Reserve Mobilization Assignment Program, B/Ltr 7 Dec 1949

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7 Dec 1949

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Hq USAF, AFCRF-1 735
Subject: USAF Reserve Mobilization Assignment Program

PFM-R 210.4551 (7 Dec 49) 1st Ind.

HQ CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Chief of Staff, Headquarters, USAF, Washington 25, D. C.

1. This headquarters has taken action to comply with certain portions of basic letter. Prior to taking further action your reconsideration is requested of other portions of this letter which conflict with hitherto accepted views and principles concerning mobilization assignments.

2. This headquarters concurs in the actions discussed in paragraphs 3a, 3b, and 3c. These actions have been and will continue to be carried out within the Continental Air Command.

3. Our mobilization assignment program must be based upon a troop basis which in turn is based on a war plan. The numbers of mobilization assignees by grade and SSN must be determined from this troop basis and should include as many as possible of those individuals whose services are required on M-Day. These are requirements and only by basing our planning on them can we have a successful mobilization assignment program. The proposals stated in paragraphs 2c and 3d are actually retrogression from these principles in that they will permit funds and individual participation in training to determine our requirements. In paragraph 3d there is an implicit reversal from the sound approach of AF Reg 45-3 wherein mobilization designations are established as a device to maintain an active Reserve connection of especially qualified personnel. The action proposed can result in the degeneration of this category into a group of inactive and ineffective personnel.

4. Paragraph 4, basic letter, is regarded as an unsound approach. No estimates are valid until and unless they are related to specific war and mobilization plans. Our requirements must be established, and then it would be a reasonable action to authorize a given portion of these requirements to be filled on a pay status by and within each of the major commands. I can provide such estimates on the basis of my current war plans insofar as ConAC is concerned. However, from correspondence which I have recently had with the other major commands, it is quite evident that they cannot do so pending certain advices from your headquarters. Until requirements are established for all commands on a firm and meaningful basis, I regard any such estimates as valueless.

5. Since I cannot agree with so many of the tenets of basis letter, I request that the following actions be taken:

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a. Basid letter be withdrawn;

b. Careful reconsideration be given to these actions which I regard as a threat to our mobilization capacity and potential;

c. Thinking which ties our Reserve Program first to funds and individual participation rather than our predictable requirements be finally discarded;

d. Positive and prompt action be taken to establish a proper war plan, troop basis, and mobilization plan. These must be made known to the major commands. Estimates based on such facts would lend our Reserve Program a new and much needed assurance.

ENNIS C. WHITEHEAD
Lieutenant General, United States Air Force
Commanding

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Ltr, Hq ConAC to Deputy C/S, USAF, Sub: Airmen as Mobilization Assignees, 30 March 1950

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30 Mar 1950

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

PFM-R 220.3 30 March 1950

SUBJECT: Airmen as Mobilization Assignees

TO : Deputy Chief of Staff, Personnel, Headquarters United States Air Force, Washington 25, D. C.

1. It is essential that ConAC have a specific plan and program for bringing its tactical units to war strength. The feasible means of accomplishing this is through the earmarking and, where practicable, the training of Reserve personnel who will fill specific positions within the tactical units. Present controls permit the accomplishment of this action for officer personnel, but they do not permit such action for the enlisted personnel who will be as immediately required as will the officers.

2. Air Force Regulation 45-3, 5 August 1949, authorized officer mobilization assignees. Other supplemental publications authorize training and pay for these mobilization assignees and for enlisted members of Reserve T/O&E units. I considere it essential that Air Force Regulation 45-3 authorize enlisted mobilization assignees and that as soon as budgetary arrangements permit, both training and pay be also authorized for this personnel. It is recognized that this latter action will not be capable of immediate implementation but programming should be adjusted to allow for its accomplishment at the earliest practicable date.

3. This does not solve the immediate problem which faces ConAC, that of earmarking airmen to fill M-Day requirements in tactical units. I propose to take prompt action to assign airmen as mobilization designees to the ConAC tactical units. This will have limited practical affect except that it will identify individuals to fill known requirements. It will permit contact to be maintained by the unit with the individual concerned. It will administratively improve the readiness of these units. Training of these mobilization designees cannot be required because of inability to provide inactive duty pay. Similarly, recruiting of this personnel will be inhibited by this same lack of funds. However, any gain that can be realized is one of significance. ConAC Air Force Commanders have been directed

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to determine the airman mobilization requirements in tactical units, to screen records of members of the Volunteer Air Reserve and to query those individuals selected to determine their interest in and willingness to accept this status. Assuming acceptance by the individual, necessary action will be taken to assign these airmen as mobilization designees of the appropriate unit.

4. It is requested that the program whichhas been established be approved, that specific authority be granted for the utilization of Reserve airmen in a mobilization designee status and that early action be taken to permit full development of an airman mobilization assignment program. When the determination of airman mobilization requirements referred to in paragraph 3 above has been completed, information to assist in your fiscal planning will be furnished.

CHARLES T. MYERS
Major General, U. S. Air Force
Vice Commander

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Ltr, Hq ConAC - General Whitehead to Hq Ninth AF - General Hale - Mobilization - 21 March 1950

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

21 March 1950

14 March 1950

Dear Willis,

It is my desire that every regular T/O&E Unit in the Continental Air Command determine the number of mobilization assignees or designees to bring the unit from its present authorized strength to its full war strength in officers and enlisted personnel.

Determining our mobilization positions, in accordance with AF Regulation 45-3, for our combat units is a relatively simple matter. All Wing Base Unit T/O&Es have both a peace and war strength column except the Wing Base Medical Group T/O&E (1-9012), and the Wing Base Food Service Squadron T/O&E (1-8015). For all except these two, personnel requirements by SSN necessary to bring Wing Base Units to war strength, are established. War strengths for the Wing Base Medical Groups will be computed on a basis of 1 x column 6, T/O&E 1-9012 for Fighter Wings, and 1 x column 7, T/O&E 1-9012 for Troop Carrier Wings. War strength for Food Service Squadrons will be computed on a basis of 1 x column 40, T/O&E 1-8015 for Fighter Wings, and 1 x column 46, T/O&E 1-8015 for Troop Carrier Wings. Mobilization positions will be computed on the difference between present authorizations and those established above.

Other T/O&E Units not having peace and war columns are Aircraft Control and Warning Units (1-600), Signal Battalion, Separate TAC (1-335), Reconnaissance Technical Squadron (1-2313), Radio Relay Squadron (1-2214), Engineer Aviation Battalion (5-415), and Shoran Beacon Unit (1-1017). These now operate under personnel modification lists. These personnel modification lists are in essence peace strengths. Personnel requirements necessary to bring the units to full T/O&E strength will be determined for all PML units. Radar calibration unit (1-727) and Motor Transport Squadron (1-998R) will be considered as operating at war strength and will not be authorized additional mobilization positions. Communications Squadrons (1-1037) will be considered as having a war-time authorization as listed under 1 x column 9, T/O&E 1-1037; and mobilization positions will be computed on the difference between that 1 x comumn 5 (present authorization).

Sup to XVI-38

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After these requirements have been determined, I want action taken to screen personnel records to select the individuals to fill these positions. This applies to both officers and airmen.

In so are as the officers are concerned, we can proceed at once and complete the procedure by making them mobilization assignees or mobilization designees. Officers so assigned or designated must become a part of their unit. They must be trained to assume their M-Day jobs. That training will not be limited by our own lack of well directed effort, but rather only by the willingness of the individual to be so trained and by the availability of funds to pay the individuals. Present procedures governing the pay of these officers remain unchanged.

For the airmen, our action at this time must be different. Right now the rules prohibit our having airmen as mobilization assignees or designees. When this situation is corrected it is not practicable to have them as mobilization assignees because the current budget will now allow them to be paid. In my proposal to the Chief of Staff, I have requested that we be permitted to have airmen as Mobilizationassignees. Actually, this means that I am proposing as our current action that with the concurrence of the individual, we select and earmark Reserve airmen now to move into place as members of specified units on M-Day. Since we cannot offer them pay, we cannot require them to participate in scheduled training; however, contacts can be maintained and some training offered on a no-pay basis for those who will accept it.

Specifically, what I want done right now is for you to screen those individuals who can properly fill these determined vacancies. In so far as possible, these individuals should come from as near the geographical location to the regular unit as possible. Place the officers so selected on mobilization assignment now. Contact the Reserve airmen through an individual and personnel questionnaire and determine their willingness to acdept the status of mobilization designee. For those who are willing, issue orders assigning them in this status to the appropriate regular unit. I want this program completed, in so far as your local reserve personnel resources permit, not later than 1 June 1950; and not later than 5 June, I desire that you submit a list by SSN, unit and station of these positions which you cannot fill from personnel available within your Air Force area.

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The Volunteer Air Reserve will be the primary source of individuals for those assignments. Personnel presently assigned to units of the Organized Air Reserve may be selected to fill mobilization positions under this program with the concurrence of both the individual and the Reserve Unit Command concerned.

Publicity releases will not be initiated on this program. Questions by news media may be answered factually stating this is a part of the implementation of the Air Force Reserve Program. Earmarked personnel will be indoctrinated that this is an essential part of this program. They should consider themselves as a reserve member of the unit for which they are earmarked, and may expect to report to that unit immediately in the event of an emergency. Unit commanders will maintain current, accurate lists of reservists allotted to them. Air Force Headquarters will be furnished copies of thse unit lists and will plan to take immediate action to order these personnel to extended active duty with the unit for which they are earmarked in the event of an emergency, or at the direction of higher headquarters.

Official directives implementing this program will follow in time. Action to implement this program will be initiated at once. Administrative blocks which may occur will be resolved without delay at the lowest level. You will insure this program's completion on the time schedule above.

I would like a letter from you not later than 15 April giving me a progress report. Problems which come up in the interim will be resolved, or referred here.

Sincerely,

t/ ENNIS C. WHITEHEAD
Lieutenant General, United States Air Force
Commanding

Major General William H. Hale, USAF
Commanding General
Ninth Air Force
Langley Air Force Base, Va.

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Letter, Reserve, General Whitehead to General Johnson, 6 June 1950

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6 June 1950

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

6 June 1950

Dear Harry,

As of 25 May the manning of Reserve Wings at our AFRTCs in airmen was as follows:

Over 80% manned in Airmen - 15 Wings
" 70% " " " - 16 "
" 60% " " " - 20 "
Under60% " " " - 5 "
" 50% " " " - 2 "

All wings in the First, Fourth and Twelfth Air Force areas are manned over 30% in airmen.

Of the 5 Wings manned, lessthan 60% in airmen, 4 are yours. These 4 Wings are:

Wing	Location	Airmen Auth	Airmen Assigned	Percent Manned
440th TC Wing	Wold-Chamberlain	1082	612	56.5
437th TC Wing	O'Hare Intl Apt	1082	492	45.5
441st TC Wing	O'Hare Intl Apt	1082	581	53.5
438th TC Wing	Offutt AFB	1082	623	57.5

While the Wings as Scott and Olathe still have a long way to go to reach 80%.

From 25 April to 25 May 1950, Wold-Chamberlain gained 54 airmen; 437th at O'Hare 42 airmen; 441st at O'Hare 127, and 438th at Offutt 29. Unless real recruiting is carried out now, the above Wings are not going to "make the grade".

Wold-Chamberlain. Husted has been away at school. I believe that he is at least an average Wing Commander. Wilhelm has faults in administration and maintenance, but at such things as promoting he is superior; he should be of more assistance in recruiting than most of your AFRTC Commanders.

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At Offutt, I feel that the AFRTC Commander is well above average. I do not know about the Wing Commander.

At Chicago, Strahm is sour on the world. He had not done anything about assisting the Reserve Wings in getting the recruiting office downtown to sign up Reserve airmen. I now feel that the sooner Strahm is replaced the better. Palmer can find out in a week about plans for summer camps and carry these plans out.

Summarizing, it appears that it is doubtful that Chicago can recruit enough airmen to man more than one Wing at over 80%; that Offutt and Wold-Chamberlain are both doubtful. I feel that ConAC and the Tenth Air Force must inspect these AFRTCs and Wings, formally, to see what we can do to assist in making these units worth the cost to the taxpayer. Chicago runs over 6 million a year.

Taking $2,500,000 as an average, if a Wing is filled up; if it has 1500 officers and men, the annual cost (less Reserve pay) is $1667 per man available for training. The annual cost rate for your poorly manned wings is:

Wing	Location	Assigned Officer	Airmen	Total	Annual Unit Cost
438th TC	Offutt AFB	366	623	989	$ 2540
437th TC	O'Hare Intl Apt	370	492	862	$ 2900
441st TC	O'Hare Intl Apt	391	581	972	$ 2575
440th TC	Wold-Chamberlain	386	612	998	$ 2500

By comparison, the 439th TC Wing at Selfridge (1332 officers and men) would cost annually per individual available for training $1875. It might help to point out to the unsatisfactorily manned units that they are costing the taxpayer too much for what he is getting in return.

Copy of 25 May report is inclosed.

Sincerely,

t/ ENNIS C. WHITEHEAD
Lieutenant General, United States Air Force
Commanding.

1 Incl.

Brig General Harry A. Johnson
Commanding General, Tenth Air Force
Selfridge Air Force Base, Michigan.

CONFIDENTIAL

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Letter, Reserve, General Hoag to General Whitehead, 12 June 1950

2-3293-23

LOG NO.
XVI - 42

419.161-22
12 June 1950

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
Washington 25, D. C.

12 June 1950

Lt General Ennis C. Whitehead
Commanding General
Continental Air Command
Mitchel Air Force Base, New York

Dear Ennis:

Please refer to your personal letter to me of 1 June 1950.

I agree with your comments regarding:

(1.) All-Weather Fighter Corollary Units;

(2.) Movement of the 4th Troop Carrier Squadron.

(3.) Inability to recruit a Reserve Wing in the Puget Sound area. All services are having difficulty in recruiting in this area.

As you know, we had intended, and you had a directive, to inactivate the Troop Carrier Corollary Units at McChord (less the Tactical Corollary Squadron) and to activate comparable All-Weather Fighter Corollary Units as of 12 June. Subsequent to issuance of the directive, it appeared desirable, for political reasons, to delay the inactivation and activation until some later date, preferably after the units had completed their summer training. Consequently, after consultation with officers of your Staff, a further directive was issued, to delay compliance with the original inactivation and activation directive until further notice from Air Force Headquarters. I think we will have a final line of action adopted on this matter within the next two to three weeks. Meanwhile, nothing is sacrificed through the delay.

I am glad to see that you are making changes at Chicago. I think the situation there will improve. McConnell tells me he has talked to you about our relations there with the Air National Guard. While the Guard people are probably as much to blame as we are, I feel there is also room for improvement on our part in this area. I am not entirely in agreement with you as to the impracticability of recruiting airmen for two wings at Chicago. I think, with good wing commanders and a good base commander, the job can be done.

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Lt General Ennis C. Whitehead 12 June 1950

O'Hare is an expensive facility, as you well know and I think we would find it uneconomical to operate it for only one Wing.

I believe action with respect to the rest of your letter, at least action we can take at this time, is included in the proposed regulation we drew up as a substitute to the letter you proposed. Your Staff's suggestions as to modification of this regulation have been accepted, and the regulation is in process of final revision at this time. If we can secure a high enough priority on publication, I think we will have it out by 1 July. At least we will have sufficient copies of it to give to your Staff and yourAir Force Commanders on 30 June at the Conference here when we discuss the VARTU Program. We should also be able to announce the policy at that time.

I think we should start the Conference at 0900 hours. The number of the Conference Room has not yet been determined, but when your representatives arrive, if they will get in touch, either with my office or with Miss Root, that information will be available to them.

Sincerely,

s/t/ EARL S. HOAG
Major General, U. S. Air Force
Special Assistant to the Chief of Staff
for Reserve Forces

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Letter, Reserve, General Whitehead to General Hoag, 1 June 1950

2-3293-24

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1 June 1950

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HEADQUARTERS
CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

IN REPLY
REFER TO:

1 June 1950

Dear Earl,

Inclosed is copy of Upston's letter of 25 May to Thatcher and extract of Upston's 18 May letter to me both reference Air Reserve situation in the Puget Sound area are self-explanatory and factual.

I do not concur in any plan which envisages Corollary flying units using our all-weather fighters. Our permanent pilots will do well to operate F-94s, F-89s, and F-95s. Those are certainly not "one week end per month" aircraft.

I want, next September, to move the 4th Troop Carrier Squadron from McChord to Kelly. The 62nd Troop Carrier Group, less the 4th Troop Carrier Squadron, is now at Kelly. When that occurs, we can no longer have a Troop Carrier Corollary Squadron at McChord.

Also, when the 4th TC Squadron moves, we shall have maintenance space for a Reserve Wing and its accompanying AFRTC at McChord. I am not at all certain that the Air Reserve in the Puget Sound area can recruit up to 80% strength in airmen. The status of the Corollary Wing (302nd TC Wing (H) less 2 TC Squadrons) on 25 April was:

	Officer	Airmen
Authorized	132	682
Assigned	114	381
Short	18	301

In percentage, the Corollary Wing is only 56% manned as of 25 April 1950. To recruit a Reserve Wing up to 865-870 airmen (80% of T/O of 1082) would be a task which I doubt could be done.

On the other hand, of our 25 Wings at AFRTCs on 25 April 1950, 6 had less than 600 airmen each. These are:

Location	Officers Auth	Officers Asgd	Airmen Auth	Airmen Asgd
New Castle	429	368	1082	479
Wold Chamberlain	429	390	1082	558
O'Hare, 437th TC Wing	429	359	1082	450
O'Hare, 441st TC Wing	429	397	1082	454
Offutt	429	370	1082	594
Miami	429	327	1082	505

Hist 302 TCG (Jan-Jun 50)

Sup Doc XVI - #3

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We need have no illusions that all the above will reach 70% of airmen strength. New Castle may do it in six months since they are out of Reading. Miami is discouraging. We have a good AFRTC and a good Wing Command yet it does not "go".

Strahn is being replaced by Ivan Palmer at O'hare as soon as summer camp ends. I doubt, however, that Chicago can ~~M~~recruit airmen for two wings.

Wold-Chamberlain is not making much progress.

Earl, I believe that following the T/O&E Wing (both Corollary and AFRTC) summer camps we should eliminate all which do not have over 60% manning in airmen. I further believe that USAF must now decide on a policy along these lines and make a press release on that policy.

If such a policy is announced, ConAC can then document each doubtful Reserve Wing showing among other things the following:

a. Number of aircraft available each week-end and utilization.

b. Extent of which other facilities were available.

c. Monthly and annual cost of operating the AFRTC.

d. Unit cost per Reserve Officer and airman who came out for training.

e. Visits made to the AFRTC concerned by the numbered Air Force Commander, by myself, and by General Officers of my staff.

In addition, Earl, I will have a special IG inspection made of each below 60% airmen Reserve Wing (Corollary or AFRTC) by the numbered Air Force with an IG representative of ConAC present if USAF announces a policy. In that inspection we will try to find out what we can do to help the units.

I believe that all of the above is a minimum before units can be eliminated.

Let me know what action you are taking on the above subjects.

Sincerely,

t/ ENNIS C. WHITEHEAD
Lieutenant General, United States Air Force
Commanding

cc: Gen Myers (VC)
Col Kyle (DP)
1 cy routed to:
DO, DM, IG, AG(CG) file

Maj General Earl S. Hoag
Spec Asst for Reserve Forces, USAF
Washington 25, D. C.

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Letter, Reserve, General Upston to General Thatcher, 25 May 1950

2-3293-25

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25 May 1950

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OFFICE OF THE
COMMANDING GENERAL
HEADQUARTERS FOURTH AIR FORCE
Hamilton Air Force Base
Hamilton, California

25 May 1950

Brig. General Herbert B. Thatcher, USAF
Acting Vice Commander, Continental Air Command
Mitchel Air Force Base, New York

Dear Herb:

This is in reply to your similarly classified letter of 8 May, with inclosures. I am grateful to you for sending me copies of your exchange of correspondence with USAF on this subject. The information contained therein is of great value to me as well as to my staff.

While I subscribe wholeheartedly to the logic of General Whitehead's personal letter to General Fairchild dated 2 November 1949, and his official letter of the same date, I know from experience that there will be severe political repercussions from reserve pilots if the units to which they are now assigned are converted to non-flying unitss. Consequently, I feel that, before announcing any such change, Hq USAF must develop a defense of its action so strong that it will not find it necessary to retreat in the face of vigorous political opposition. In this connection, I am happy to note from the 3rd Indorsement, dated April 21, 1950 and signed by General Lynch, that a study of the entire corollary program is being made. I have recommended to General Whitehead that we not make any drastic changes in the Puget Sound area until a nation-wide revision of the corollary program is approved. As you know, the Air Force was placed in an unfavorable light prior to announcement of the Reserve Porgram for FY 1950 because of the absence of a clear out Reserve Program. I feel that until the first year's trial of that program has been fully evaluated, we are asking for trouble by taking piece-meal action. The Puget Sound Reservists feel that they have logical reasons for complaint because -

(1st) we transferred their AFRTC to Portland and substituted a Reserve Wing Corollary to the 62nd Troop Carrier Wing;

(2nd) while the new wing was getting organized, we changed the equipment of the 62d from C-82's to C-54's, thereby delaying the qualification of their combat crews; and

(3rd) we moved the 62d Wing leaving them without a parent unit after they had initiated an intensified recruiting program.

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I realize that it is my job to make them understand that what we do is in the interests of the service at large and shall continue to do so to the extent of my ability. I can't however keep the ARA Chapter from going to their congressmen with their complaints which I am unable to satisfy, and that is why I counsel having a defense which will withstand political attack on the Washington level. Just in case you haven't seen my letter to General Whitehead, dated 18 May, I am inclosing an extract of that portion pertaining to the McChord Corollary units.

Sincerely,

t/ JOHN E. UPSTON
Major General, USAF
Commanding

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Extract of Ltr, Reserve, General Upston to General Whitehead, 18 May 1950

419.161-25

18 May 1950

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Extract from personal letter
General Upston to General Whitehead
dated 18 May 1950

"8. We have discussed your proposal regarding corollary units at McChord with the Base Commander and key officers of the corollary units in the Pacific Northwest. Their reaction is that we should not redesignate the corollary troop carrier wing as fighter-all weather, but that we should maintain the 302d Troop Carrier Wing Headquarters, an air base group, an M&S group with its squadrons, and a troop carrier group, with all of them attached to the 325th Fighter-All Weather Wing for training. The 355th Troop Carrier Squadron (Cor) to remain in status quo and corollary to the Fourth Troop Carrier Squadron. I have just received a letter from General Thatdher, dated 8 May 1950, concerning the corollary program and inclosing copies of corrêspondence between your Headquarters and Hq USAF. In the light of that cooreespondence, especially the factors for consideration expressed in 3rd Indorsement from Hq USAF to your basic letter, Subject: "Readjustment of USAFR Corollary Program", dated 2 November XXXX 1949, it is recommended that:

a. All units except the tactical squadron of the 302nd Troop Carrier Wing (Cor) be redesignated and reorganized as a fighter-all weather wing.

b. The 355th Troop Carrier Sq (Cor) be retained as a troop carrier unit until such time as Hq USAF has completed its evaluation of the Corollary Program and a firm decision is reached on the future of corollary tactical squadrons. If, at that timw, a corollary tactical squadron is to be located at McChord AFB, and if a runway thereat is extended as now contemplated, it is recommended that 355th Troop Carrier Sq. be inactivated and replaced by a fighter-all weather squadron.

c. The 722nd AC&W Sq Cor recently activated at Silver Lake, Washington, be redesignated a corollary squadron of the 636th XAC&W Sq. XXXX at McChord AFB. This recommendation is made because of the planned future move of the regular 634th AC&W Sq. from Silver Lake to McChord AFB. This subject is being covered in a sparate letter to your headquarters."

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IRS, Corollary Reserve Program at McChord, DO to CG, 1 June 1950

411 161-26

13 June 1950

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FILE: COPY (312)

SUBJECT: Corollary Reserve Program at McChord

HEADQUARTERS
CONTINENTAL AIR COMMAND
INTEROFFICE ROUTING SLIP

[redacted]

REGISTER NO				
SUSPENDED TO				
EXTENDED TO				
CLASS	ADM	MISC	HIST	PERS

NO	DATE	FROM	TO	Number and date each entry - show date of dispatch. Show staff division or office in FROM-TO columns. Sign each entry legibly - show actual signer. Draw a line across the page under each entry. Use full width of page for long entries.
1	1 June	DO	CG	1. Your note attached to General Upston's letter to General Thatcher dealing with the Corollary Reserve Program at McChord asked the following question: Has the 355th Troop Carrier Squadron, Corollary, been retained at McChord? 2. The 355th Troop Carrier Squadron (H), Reserve, is to be inactivated on 1 September 1950 after completion of their active duty training this summer. Hq USAF has advised us that the activation of an additional unit to replace the 355th at McChord will be held in abeyance pending the results of an over-all appraisal of the Corollary Program. 3. After the close of the ROTC Camp at Kelly AFB, there will be space at that station to accommodate the 4th Troop Carrier Squadron (H), and in the event that the squadron is moved to Kelly and rejoins the 62d Group there will, of course, be no Troop Carrier Squadron at McChord to serve as a parent unit for the 355th. t/ GEORGE S. BROWN Colonel, USAF Executive - DO - 1239

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This is in reply to correspondence bearing AG Register No.__________ which was suspended to (date)__________

CONAC FORM RQ-AG 1
10 December 1948

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Letter, Reserve, General Whitehead to General Fairchild, 20 Feb 50

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11 Jan 1950

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DEPARTMENT OF THE AIR FORCE
OFFICE OF THE VICE CHIEF OF STAFF
UNITED STATES AIR FORCE
Washington, D. C.

16 January 1950

Lt. General Ennis C. Whitehead
The Commanding General
Continental Air Command
Mitchel Air Force Base, New York

Dear Ennis:

You have, no doubt, received our reply of 21 December 1949 (copy attached) to your official letter, subject: Readjustment of USAFR Corollary Program.

I am inclined to agree with your suggestion that it would be more sound from the military and fiscal points of viewto place emphasis in the Corollary Program on non-flying units composed of specialists holding critical MOS's. Accordingly, we have authorized you to proceed with the activation of Corollary Aircraft Control and Warning Units, subject, of course, to a determination that the problems of training personnel and equipment can be solved.

Regarding deactivation of tactical Corollary Units, I am still uncertain as to what action should be taken. There is, as you know, a mobilization rerquirement for trained combat crew replacements of specific types. I know of no other source except the USAFR from which the requirement can be met. It may be that at a later date a portion of the requirement can be provided from the ANG. This possibility is now under study, as you know.

In addition, there are the political and morale problems with which we would be faced if tactical Corollary Units were deactivated. There would undoubtedly be protestations by Reservists concerned throught heir Congressional representatives if the tactical units were disbanded. We would probably be accused of failing to comply fully with the Presidential directive to utilize the resources of the Regular Establishment in the training of Reserves.

It is my sincere hope that the study which we have requested in our reply of 21 December will assist in solving this problem.

Sincerely,

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(Signed) Santy
st/MUIR S. FAIRCHILD
General, United States Air Force
Vice Chief of Staff

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MSIX 32d Units

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Ltr w/2nd Ind., Reserve, General Whitehead to General Fairchild, 20 Feb 50

417.161-28
20 Feb. 1950

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

20 February 1950

Dear Santy,

I appreciate the concern expressed in your 16 January letterover my proposal to eliminate the tactical corollary units. Admittedly there will be political repercussions and a lowering of morale in the affected units; however the continuance of these units will not only create a false picture of strength but also will act to reduce the efficiency of the parent unit out of all proportion to any eventual good that may be derived from the part-time unit.

The study you desired on this subject has resulted in a redommended unit for unit substitution which is detailed in the 2d Indorsement, PO&R 322, 8 February 1950, to DC/S O Hq USAF, (copy attached). To mitigate the reaction of the reserves and to round out the command and support echelons of the corollary program, units of other types are proposed as substitutes for the tactical units. Examination of the inclosure will disclose the detailed substitutions. It will be noted that at both Hamilton and Smyrna Air Force Bases a group of several units is proposed as a substitute for the tactical unit in these cases the ConAC air force has indicated previously that this load can be sustained.

I believe that the plan as proposed can meet the test of reserve criticism if prefaced with an explanation of the facts in each case.

Sincerely,

t/ ENNIS C. WHITEHEAD
Lieutenant General, United States Air Force
Commanding

General Muir S. Fairchild
Vice Chief of Staff
Hq. United States Air Force
Washington 25, D. C.

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Hq. ConAC (No file)
Subject: Readjustment of USAFR Corollary Program

POR 322 (2 Nov 49) 2d Ind. (8 Feb 50)

HQ. CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Deputy Chief of Staff, Operations, Headquarters, United States Air Force, Washington 25, D. C.

1. Referende is letter this headquarters, PO&R 326, subject: Activation of USAF Reserve Corollary Aircraft Control and Warning Units", 23 January 1950, to Director of Manpower and Organization, Headquarters, USAF, Washington 25, D. C. which requested activation authority for certain AC&W units.

2. Recommendations of this command as required in paragraph 3, 1st Indorsement are as follows:

a. The Corollary Unit Program, as the entire reserve program, must be predicated on National Defense requirements in consonance with reserve capabilities. The latter of these two factors largely eliminates the tactical units from the corollary program. The combat crews at present manning these tactical units are composed of World War II personnel, who as a group are rapidly becoming too old for jet fighter operation. These personnel can logically be utilized for cargo or troop carrier type operation as in the AFRTC program. It is not, however, logical or practical to continue the Corollary Troop Carrier Squadrons now organized at McChord Air Force Base and Smyrna Air Force Base because of the current and projected commitments of the parent units and because of the relatively high cost of operation of C-54 type aircraft at McChord.

b. It is proposed that the following type units be substituted for the tactical corollary units:

(1) Langley Air Force Base: a Fighter Wing H&HS or Fighter Group Hq for the 10th Fighter Squadron (Jet).

(2) McChord Air Force Base: The AC&W units proposed in the basic correspondence for the 355th Troop Carrier Squadron (H).

(3) McGuire Air Force Base: The AC&W unit proposed for activation at Mavesink Mil. Res., N.J., for the 496th Fighter Squadron (AW).

(4) Otis Air Force Base: A Fighter Wing Communications Squadron and a Motor Vehicle Squadron for the 81st Fighter Squadron (Jet).

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FOR 322 (2 Nov 49)

2d Ind. (Cont)

(5) Hamilton Air Force Base: A Fighter Group Hq, an M&S Group Hq, a Supply Squadron, and a Maintenance Squadron for the 52nd Fighter Squadron (Jet).

(6) Smyrna Air Force Base: A Troop Carrier Wing (M), H&HS, an Air Base Group H&HS, a Medical Group and a Communications Squadron, for the 376th Troop Carrier Squadron (M).

FOR THE COMMANDING GENERAL:

st/ CHARLES T. MYERS
Major General, USAF
Vice Commander

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Ltr, and Chart, Sub: Allocation of Flg Hours for Air Force Reserve Training Centers, Hq ConAC to Hq USAF, 3 Feb 50

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3 - FEB 1950

360.1 Alloc of Flying Hours

SUBJECT: Allocation of Flying Hours for Air Force Reserve Training Centers

TO: Headquarters, United States Air Force, Washington 25, D. C.
ATTENTION: Operations Division

1. Reference is made to the United States Air Force Reserve Aircraft Program and Flying Hour Program, dated 1 July 1949 and the revision dated 1 October 1949.

2. For your information, the following action has been taken by this headquarters to provide an equitable distribution of flying hours and to establish a system to insure that hours ceilings are not exceeded by Air Force Reserve Training Centers.

a. Time flown by Air Force Reserve Training Centers for first [illegible] months of fiscal year 1950 was consolidated by aircraft type.

b. This time was subtracted from the revised aircraft-by-type program and a figure of hours remaining available for the Air Force Reserve Training Centers by aircraft type was established.

c. This remaining time was then sub-allocated as indicated below on a seven month basis and represents both a performance goal and a limitation:

Each C-46 Troop Carrier Wing

C-46	6400
T-6	2100
T-7	1100
T-11	3775

Each C-47 Troop Carrier Wing

C-47	[illegible]
T-6	2100
T-7	1100
T-11	3775

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FOR DIRECTORATE USE
Prepared By Evans
Coordinated With

RECORD EVALUATION
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Permanent
Temporary
Until 1 April 50

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Rec'd in Dep for Ops
Time 0930
Date FEB 3 1950

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ConAC Form AAG 5
Revised 22 November 1949

Air Adjutant General's Central File Copy

L-49-1309

O&T CAPT W. S. EVANS/7126/mtb

Hq ConAC O&T 360.1
Subject: Allocation of Flying Hrs. for Air Force Res. Training Centers (Cont'd)

Each B-26 Light Bomb Wing	
B-26	[illegible]
T-6	[illegible]
T-7	[illegible]
T-11	[illegible]

3. It is pointed out that the allocation to Light Bomb Wings provides each TO&E pilot with only 2.7 B-26 hours per month as compared to a figure of six (6) hours for each TO&E Troop Carrier pilot. As this figure was recognized to be inadequate for normal transition and proficiency flying requirements, the possibility of conversion of time from C-46 and C-47 aircraft to B-26 aircraft was explored. Based on conversion factors established by your headquarters by reducing C-46 aircraft time by 16,000 hours and C-47 aircraft time by 2900 hours, an increase in B-26 aircraft time of 10,192 hours can be effected for allocation during the seven (7) month period (1 December 1949 - 30 June 1950). This conversion will provide all AFRTC TO&E pilots with five (5) total pilot hours per month on the respective tactical aircraft.

4. In order to meet this serious shortage of flying hours available to Air Force Reserve Training Centers equipped with B-26 type aircraft under the current allocation of hours, it is requested that either a supplemental allocation of 10,192 hours be granted or that the conversion outlined in paragraph 3 above be approved.

FOR THE COMMANDING GENERAL:

V. E. MURPHY
Lt. Col., USAF
Asst. Air Adj. Gen.

ROUTING	COORDINATION	STAFF ACTIVITY
		CG
		VC
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		HQ SQ

FOR DIRECTORATE USE

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Coordinated With ______

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ConAC Form AAG 8
Revised 22 November 1949

Air Adjutant General's Central File Copy

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Prepared by: Services Div.
Spec. Asst. for Reserve Forces

CONFIDENTIAL

USAF RESERVE AIRCRAFT FLYING HOUR PROGRAM - FY 1950-as revised 1 March 1950

	Accomplished A/C Flying Hrs				3rd Quarter			4th Quarter				
Type A/C	1st Qtr	2nd Qtr	1st Half	Aircraft Quarterly Utilization Factor	Seasonally Adjusted Utilization Factor	Av.No. A/C	Programmed A/C Flying Hours	Seasonally Adjusted Utilization Factor	Av.No. A/C	Programmed A/C Flying Hours	Total Programmed A/C Hrs 2nd Half	Total A/C Flying Hrs FY 1950
B-26	8,263	5,087	13,350	120	103.2	80	8,256	130.8	80	10,464	18,720	32,070
C-46	19,888	22,484	42,372	150	129.0	272	35,088	163.5	272	44,472	79,560	121,932
C-47	5,364	5,258	10,622	150	129.0	47	6,063	163.5	47	7,685	13,748	24,370
T-6	35,564	16,562	52,126	105	90.3	267	24,110	114.5	106	12,137	36,247	88,373
A-7	1,294	2,523	3,817	105	90.3	136	12,281	114.5	136	15,572	27,853	31,670
T-11	21,638	17,105	38,743	105	90.3	343	30,973	114.5	343	39,274	70,247	108,990
Totals	92,011	69,019	161,030			1,145	106,771		984	129,604	246,375	407,405

SUMMARY:

a. Sufficient aircraft are available in the USAF Reserve Program to accomplish the aircraft flying hours programmed above. This revision reflects the phasing out of T-6 aircraft from the USAF Reserve Program by 1 July 1950 and increasing the utilization of B-26 aircraft to provide each TO&E pilot in Light Bomb Wings with five (5) pilot hours per month on B-26 aircraft; also utilization of other type aircraft in accordance with the factors established in AFL 150-10 for the USAF Reserve.

b. As a matter of information, the Program, revised as of 1 October 1949, indicated a requirement of 471,190 A/C flying hours against an availability of 445,104 A/C hours. The deficiency of 57,558 pilot hours i.e. 824,099 pilot hours required vs 766,541 pilot hours available, was to be absorbed by utilization of additional T-6 aircraft thereby increasing available aircraft hours to 502,662. The USAF Reserve Aircraft Hour and Pilot Flying Hour Programs FY 1950, as revised 1 October 1949 are hereby replaced and superceded by this Program.

SCHEDULE FOR RELEASE OF T-6 AIRCRAFT FROM USAF RESERVE PROGRAM

Date of Release	31 March 1950	30 April 1950	31 May 1950	30 June 1950
Quantity to be Released	100	100	35	All remaining T-6 Aircraft

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Tactical Mission of ConAC

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MISSION NO. 2

MISSION--No. 2

AIR FORCE TACTICAL AIR COOPERATION WITH OTHER SERVICES

Provide for Air Force cooperation with land and/or amphibious forces in the United States and operational training therefor.

1. Responsibility: The Commanding General, Continental Air Command, exercises command jurisdiction over all units assigned or attached to the Continental Air Command. He is directly responsible to the Chief of Staff, USAF, for the following functions pertaining to this mission:

   a. Air Force cooperation with land and/or amphibious forces in the Continental United States. Tab 1

   b. Determination of the proper apportionment of the effort of assigned or attached units to the Tactical Air Command when required. Tab 2

   c. Timely allocation of a proper portion of the effort of units assigned or attached, or otherwise made available, to the Continental Air Command, to the operational command of the Tactical Air Command when required. Tab 3

   d. Coordination of the activities of the Tactical Air Command and numbered air forces for the most effective accomplishment of mission assigned the Continental Air Command. Tab 4

2. Responsibility: The Commanding General, Tactical Air Command, is responsible to the Commanding General, Continental Air Command, for the following specific functions in accomplishment of USAF tactical air cooperation with other services:

   a. Continue to plan and to prepare for the conduct of tactical air operations in conjunction with field forces of the Department of the Army and/or amphibious forces of the Department of the Navy in the defense of the United States. Tab 5

   b. In conjunction with designated elements of the Army, Navy, and the Air Force, train and indoctrinate personnel of the three services in joint operations by planning and participating in field exercises and maneuvers. Tab 6

c. Plan, supervise, and conduct tactical air operations in the Continental United States with the means specifically allocated by the Commanding General, Continental Air Command. Tab 7

d. Maintain continuous liaison with the Army Field Forces and designated Naval headquarters for the development of Air Force policies, plans, doctrine, organization, systems, materiel, tactics, techniques, and procedures applicable to the utilization and employment of tactical air power when acting in concert with land and/or amphibious forces and the timely submission of recommendations with tespect to those matters. Tab 8

e. Maintain liaison with the Army Field Forces in order to determine the requirements for the training of Army and Air Forces Units and personnel in joint air-ground operations and submit recommendations to the Commanding General, Continental Air Command, for the allocation of the necessary forces to fulfill this requirement. Tab 9

f. In accordance with approved plans, participate in joint exercises and maneuvers by utilizing and employing designated personnel and units from other components of the National Military Establishment as may be made available. Tab 10

g. Conduct systematic training of forces allocated by the Commanding General, Continental Air Command, in tactical air operations. Tab 11

h. Be prepared to provide cadres of personnel trained and indoctrinated in the employment of tactical air power for the timely formation of Tactical Air Command and/or air force headquarters for oversea deployment, as required. Tab 12

i. Recommend to the Commanding General, Continental Air Command, the allocation and deployment of available forces in preparation for the conduct of tactical air operations in conjunction with land and/or amphibious forces. Tab 13

j. Recommend to the Commanding General, Continental Air Command, the proficiency standards and desired capabilities of units to be employed in tactical air operations. Tab 14

k. Promote preogressive development of air-antiaircraft artillery coordination of techniques and doctrines as they pertain to the land battlefield. Tab 15

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TAB __

A. **FUNCTION:** Air Force cooperation with land and/or amphibious forces in the Continental United States.

B. **OBJECTIVE:** Prepare allocated combat units for Air Force participation in joint operations.

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C. **DIRECTIVE:** AFR 23-1, 11 Jan 1949.

D. **WHAT HAS BEEN DONE:** See Tabs 2 through 15.

E. **WHAT IS BEING DONE:** See Tabs 2 through 15.

F. **WHAT IS PLANNED:** See Tabs 2 through 15.

G. **MONITORING RESPONSIBILITY:** Deputy for Tactical Air Operations.

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TAB __

MISSION #2 2

A.	FUNCTION:	Determination of the proper apportionment of the effort of assigned or attached units between the several missions of the command.
B.	OBJECTIVE:	To provide flexibility in the utilization of existing resources and unity of command of assigned resources to accomplish the assigned tasks and missions of the ConAC.
C.	DIRECTIVE:	AFR 23-1, 11 Jan 49.
D.	WHAT HAS BEEN DONE:	The ADC and TAC have been organized as operating agencies to provide the agency required to control, plan for and fight with the resources allocated them by Hq. ConAC to accomplish any specific task dictated by the exigencies of the situation.
E.	WHAT IS BEING DONE:	Forces are allocated as required.
F.	WHAT IS PLANNED:	To continue.
G.	MONITORING RESPONSIBILITY:	Deputy for Operations.

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TAB __

A. FUNCTION: Timely allocation of a proper portion of the effort of units assigned or attached, or otherwise made available, to the Continental Air Command, to the operational command of the Air Defense Command and the Tactical Air Command, respectively.

B. OBJECTIVE: To anticipate the requirements of either command to permit accomplishment of their combat responsibilities.

C. DIRECTIVE: AFR 23-1, 11 Jan 1949.

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D. WHAT HAS BEEN DONE: The Commanding Generals of ADC and TAC and their staffs have been raised to the Deputy level on the Command General's, ConAC staff to provide the required planning agency and to advise the Commanding General, ConAC on the allocation of forces.

E. WHAT IS BEING DONE: Normal staff coordination with ADC and TAC.

F. WHAT IS PLANNED: To continue coordination.

G. MONITORING RESPONSIBILITY: Deputy for Operations.

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TAB __

A. FUNCTION: Coordination of the activities of the Air Defense Command, Tactical Air Command, and numbered air forces for the most effective accomplishment of the missions assigned the Continental Air Command.

B. OBJECTIVE: To provide unity of command and guidance to the subordinate echelons of the ConAC in the accomplishment of all of the several and diversified missions and tasks assigned by Hq., USAF.

C. DIRECTIVE: AFR 23-1, 11 Jan 49, Mission, Organization, Responsibilities of ConAC.

D. WHAT HAS BEEN DONE: Supervision of all activities through normal staff procedure

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E. WHAT IS BEING DONE: This is the daily function of this headquarters.

F. MONITORING RESPONSIBILITY: Deputy for Operations.

TAB ___

A. FUNCTION: Continue to plan and to prepare for the conduct of tactical air operations in conjunction with field forces of the Department of the Army and/or amphibious forces of the Department of the Navy in the defense of the United States.

B. OBJECTIVE: To prepare and maintain in current status existing war, mobilization, show of force, and protection plans involving tactical air power and the preparation for the conduct of tactical air operations incident to and in the event of emergency implementation of these plans.

C. DIRECTIVE:

1. Air Force Regulation 23-1, dated 11 January 1949.
2. ConAC Regulation 26-1, dated 31 January 1949.
3. Classified directives from Headquarters, United States Air Force.

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D. WHAT HAS BEEN DONE: In the past, upon directives from Headquarters United States Air Force, Headquarters Tactical Air Command would prepare the plans in conjunction with the other services involved. The plans might encompass the USAF participation, the Tactical Air Command participation, or a combination of both. Upon completion and approval by USAF, it was the Tactical Air Command's responsibility to continuously maintain the plans in an up-to-date status. Concurrently, it was the Tactical Air Command's responsibility to prepare for the conduct of tactical air operations in the event of emergency implementation of the plans by constant supervision and coordination with the other services and commands involved; special inspections, operational readiness tests; and the submission of timely recommendations to Headquarters United States Air Force pertinent to the plan. These responsibilities were occasionally delegated to the numbered air forces with the exception of special inspections and operational readiness tests.

E. WHAT IS BEING DONE: Under the present organization, Tactical Air Command has retained these responsibilities with the exception of special inspections and operational readiness tests which have been assumed by Headquarters Continental Air Command. Specific responsibilities include the recommendation of force allocations, continuous review and analysis to

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TAB __ (Cont'd)

maintain the plans in a current status, constant daily supervision and coordination with the other services and commands involved, and continuous liaison with the inspection section, Headquarters Continental Air Command on matters pertinent to the plans. At the present time, Headquarters Tactical Air Command is responsible for approximately nine (9) plans of this nature.

F. **WHAT IS PLANNED:** It is contemplated that, in general, the future course of action will be similar to that presently in effect with respect to this function. A staff study presently in the final stages of preparation will recommend the specific allocation of forces to the Tactical Air Command under the conditions of "emergency allottment" and will determine and recommend for ellimination any duplicity of effort and any procedures not in consonance with those currently acceptable, by review and analysis of all the existing plans of this nature that have been disseminated to this command.

G. **MONITORING RESPONSIBILITY:** Deputy for Tactical Air Operations.

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TAB ___

A. FUNCTION: In conjunction with designated elements of the Army, Navy and the Air Force, train and indoctrinate personnel of the three services in joint operations by planning and participating in field exercises and maneuvers.

B. OBJECTIVE: To achieve a high state of proficiency among Air Force personnel assigned duties connected with tactical air support operations, through the training and indoctrination of units and individuals in the principles and techniques applicable to air-ground operations, through the provision of amphibious training of appropriate Air Force personnel in the transfer of tactical air control from ship to shore.

C. DIRECTIVE: Air Force Regulation No. 23-1, 11 January 1949. This directive prescribes the specific functions for which the Commanding General, Tactical Air Command, is responsible to the Commanding General, Continental Air Command.

MISSION #2 C.

D. WHAT HAS BEEN DONE:

1. Armored School Demonstration, Fort Knox, Kentucky, 30 March 1949: Tank Battalion Attack, supporting 1 Squad 332d Fighter Group, 1 TACP, 502d Tactical Control Group employed for control.

2. Air General Plan for Exercise "TARHEEL," Fort Bragg, North Carolina, 5-21 May 1949 was published and distributed on 1 April 1949.

3. Outline Plans for:

   a. A second Armored School Demonstration, Fort Knox, Kentucky, 20 April 1949: Infantry Battalion Attack, supported by 1 Squadron, 332d Fighter Group with 1 TACP for air control.

   b. Spring "COMBINE", Fort Bragg, North Carolina, 11-12 April 1949; Fort Benning, Georgia, 13-14 April 1949, and Greenville Air Force Base, South Carolina, 15-16 April 1949: Battalion combat team in airborne assault supported by squadrons of conventional and jet aircraft with dontrol elements; Infantry-Artillery-Tank Team in the attack; demonstration of a Joint Operations Center and Tactical Air Control Center has been submitted to and approved by Headquarters, Continental Air Command.

4. Tentative, broad arrangements for the amphibious training of the 804th Aviation Engineer Battalion, 502d Tactical Control

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TAB __ (Cont'd)

Group, the 934th Signal Battalion, and the 817th Aviation Engineer Battalion have been made with ComPhibTraLant and ComPhibTraPac for Fiscal Year 1950.

5. Conferences have been held and a ten-day reconnaissance conducted with representatives of the Department of the Air Force, the Department of the Army, and the Canadian Army relative to a combined Artic exercise (Exercise "NORTH STAR") in Canada-Alaska during the winter of 1950. Draft of an Air Outline Plan for this exercise was prepared by this Headquarters. However, in conference on 5 April 1949, Department of the Air Force withdrew from participation in a similar exercise would probably be possible in Fiscal Year 1951.

6. Amphibious training requirements for Fiscal Year 1951 have been submitted to Headquarters, Continental Air Command.

E. WHAT IS BEING DONE:

1. An Outline Plan for Operation "COMBINE IV" is being studied in this headquarters prior to initial joint planning with Army Field Forces and the appropriate naval headquarters.

2. Outline Plans for participation in other joint exercises (CAMID IV, Caribbean Triphibious), Fiscal Year 1950, are being prepared for submission to Headquarters, Continental Air Command for approval. The content of these outline plans treats mainly the scope of the operation, forces required, and the detail necessary only to budget estimates.

3. Studies are being made of the proposed joint field exercises Fiscal Year 1951, as submitted by Department of the Army.

F. WHAT IS PLANNED:

1. When approval of the tentative arrangements for the amphibious training of Air Force units, Fiscal Year 1950, is received, firm provisions for such training will be made with ComPhibLant and ComPhibPac.

2. Preliminary conferences with ComPhibTraLant and ComPhibTraPac will be held in the near future relative to amphibious training of Air Force Units, Fiscal Year 1951.

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TAB ___ (Cont'd)

3. Preparation of general plans for CAMID IV, COMBINE IV and the Caribbean Triphibious Exercise in conjunction with the appropriate Army and Navy Headquarters.

4. Preparation and submission of outline plans for field exercises, Fiscal Year 1951, at the appropriate time.

G. MONITORING RESPONSIBILITY: Deputy for Tactical Air Operations.

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TAB __

A.	FUNCTION:	Plan, supervise and conduct tactical air operations in the continental United States with the means specifically allocated by the Commanding General, Continental Air Command.
B.	OBJECTIVE:	To attain a high degree of readiness through the unilateral training of allocated units in the tactics and techniques of air operations.
C.	DIRECTIVE:	Air Force Regulation No. 23-1, dated 11 January 1949.
D.	WHAT HAS BEEN DONE:	Since the reorganization of the Tactical Air Command, no tactical air operations have been planned, supervised, or conducted in the Continental United States as unilateral exercises. All such operations have been joint in nature and thus have been covered under other functions.
E.	WHAT IS BEING DONE:	Nothing.
F.	WHAT IS PLANNED:	During Fiscal Year 1950, a two-week rotation of one fighter group to Ramey Air Force Base, Puerto Rico, in conjunction with a limited tactical exercise.
G.	MONITORING RESPONSIBILITY:	Deputy for Tactical Air Operations.

MISSION #2
7.

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TAB __

A. FUNCTION: Maintain continuous liaison with the Army Field Forces and designated Naval headquarters for the development of Air Force policies, plans, doctrine, organization, systems, materiel, tactics, techniques, and procedures applicable to the utilization and employment of tactical air power when acting in concert with land and/or amphibious forces and the timely submission of recommendations with respect to those matters.

B. OBJECTIVE: To maintain the capability of designated units of the Air Force, appropriately equipped, properly trained, and effectively employed in accordance with up-to-date doctrine and techniques to conduct tactical air operations in conjunction with surface forces in the defense of the United States.

C. DIRECTIVE: Air Force Regulation No. 23-1, dated 11 January 1949.

D. WHAT HAS BEEN DONE:

1. The Tactical Air Command, acting as the responsible agency of the Air Force for the employment of Tactical Air Power in conjunction with the surface forces, has:

   a. Established liaison with the Department of the Army and the Department of the Navy through representation on joint agencies, boards, and committees, specifically constituted to recommend policies and organization to evaluate doctrine, tactics, and procedures on the joint aspects of tactical air support.

   b. Participated in joint planning for emergencies, mobilization, field exercises, and routine requirements.

   c. A Naval officer assigned to this headquarters for advisory and coordination purposes.

   d. Since 1946, conducted field exercises such as "Operations COMBINE," "Operations CAMID," cold weather tests in Alaska, and other special exercises. These exercises have been made possible a continuous, objective, and critical analysis of present concepts and equipment, tactics, techniques, and materiel.

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2. Great strides have been made in the tactics and techniques of troop carrier operations especially with respect to air transportable training and in the lift of large and heavy equipment. The Air Force now has either in development or operation, cargo type aircraft capable of fulfilling

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the primary requirements of the Army for both air transportability and airborne activities.

3. The fundamentals of Tactical Air Support of Ground Forces which were evolved in World War II were jointly assembled and published in Field Manual 31-35 in August 1946. This manual sets forth the current principles, doctrine, means, and procedures for the employment of tactical air power in support of a field army.

E. WHAT IS BEING DONE:

1. Headquarters Tactical Air Command and the Office, Chief of Army Field Forces are now jointly preparing a draft for the Joint Chiefs of Staff on Tactical Air Support of the Ground Forces. Upon approval by the Joint Chiefs of Staff, this paper will be incorporated into the document known as "Joint Action Armed Forces (JAAF)", which is a rewrite of the "Joint Action Army-Navy 1935 (JAAN)".

2. Drafts of the proposed Air Force position on the joint aspects of "Amphibious Operations," "Airborne Operations," "Tactical Air Support of Naval Forces," and "Mutual Support and Measures to Avoid Mutual Interference," were prepared and forwarded 18 March 1949 for use in connection with the "Joint Action Armed Forces."

3. A study is now in progress involving a re-examination of the concept, tactics, and techniques of employment of Tactical Air Power. This tudy specifically includes the jet fighter, light bombardment, troop carrier, reconnaissance, and liaison functions. That portion of this study concerning liaison squadrons was recently completed and forwarded to Headquarters Continental Air Command.

4. A proposed Joint Training Circular prepared by Headquarters Army Field Forces on the coordination of close air support with the fire of other supporting weapons is under study.

5. Tactical Air Force organizational studies are in the progress. Recommendations on the T/O&E for a mobile Tactical Air Force have been submitted to Headquarters Continental Air Command.

6. The entire field of air-ground operations is under review from the point of view of doctrine, procedures, and techniques. Integrated studies explaining such aspects as the influence of post-war electronic developments, the special considerations accompanying air support of airborne and amphibious operations. Upon enunciation of over-all guiding policy through the publication of "Joint Action Armed Forces," these sub-studies will be incorporated into a revision of Field Manual 31-35 and other basic documents governing the conduct of air-ground operations.

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F. WHAT IS PLANNED: Liaison with Headquarters Army Field Forces and designated Naval headquarters continues as a primary function of Headquarters Tactical Air Command. Policies, plans, doctrine, organization, equipments, and techniques will be subjected to continuous review and evaluation in the light of new developments and changing concepts. Conclusions reached as the result of the inter-service liaison described above, studies conducted within the Headquarters Tactical Air Command, and joint field exercises and maneuvers will be submitted in the form of recommendations. Specific plans include:

a. Joint Field Exercises, Fiscal Year 1950:

(1) "TARHEEL".

(2) Armored School Demonstration.

(3) Amphibious Training of the 804th Aviaition Engineer Battalion.

(4) "LITTLE COMBINE".

(5) "COMBINE IV".

(6) "CAMID IV".

(7) "NORTH STAR".

G. MONITORING RESPONSIBILITY: Deputy for Tactical Air Operations.

TAB [illegible]

A. FUNCTION: Maintain Liaison with the Army Field Forces in order to determine the requirements for the training of Army and Air Force units and personnel in joint air-ground operations and submit recommendations to the Commanding General, Continental Air Command, for the allocation of the necessary forces to fulfill this requirement.

B. OBJECTIVE: Determine jointly the training requirements of Army and Air Force units and individuals in air-ground operations in order that plans for individual and unit training may be made and executed through the medium of schools, indoctrination courses, training exercises and field maneuvers.

C. DIRECTIVE: Air Force Regulation 23-1, 11 January 1949. This directive prescribes the specific functions for which the Commanding General, Tactical Air Command, is responsible to the Commanding General, Continental Air Command.

D. WHAT HAS BEEN DONE:

1. Conferences have been held with representatives of the Army Field Forces regarding:

    a. Troop Carrier requirements for jump training of airborne units and for air transportability training of other units.

    b. Joint field exercise and demonstration plans which have been implemented or which will be implemented prior to 1 July 1949.

    c. Routine training requirements in conjunction with liaison, reconnaissance, light bombardment, and fig units.

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2. A Joint Ad Hoc Committee, including representatives of Headquarters, Tactical Air Command, prepared and forwarded in March 1949 for the approval and consonance of the Joint Chiefs of Staff a directive to initiate planning for a joint field exercise in the Caribbean during Fiscal Year 1950.

3. From the information gained on the above subjects, recommendations were submitted to Continental Air Command.

E. WHAT IS BEING DONE: The action outlined above is of a continuing nature and requires constant revision to meet changing conditions.

F. WHAT IS PLANNED: Further conference with the Army Field Forces regarding plans for joint field exercises and demonstrations and other joint training are planned.

G. MONITORING RESPONSIBILITY: Deputy for Tactical Air Operations.

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A. FUNCTION:	In accordance with approved plans, participate in joint exercises and maneuvers by utilizing and employing designated personnel and units from other components of the national Military Establishment as may be made available.
B. OBJECTIVE:	To train and indoctrinate personnel and units of the Air National Guard and Air Force Reserve in the principles and techniques applicable to air-ground operations.
C. DIRECTIVE:	Air Force Regulation 23-1, 11 January 1949. This directive prescribes the specific functions for which the Commanding General Tactical Air Command, is responsible to the Commanding General, Continental Air Command. The specific function set forth above is not clear in that: first, all plans of this headquarters for join exercises are being approved prior to participation; second, "other components" of the National Military Establishment includes more than Air National Guard and Air Force Reserve; third, it has been indicated that the above components will be included in plans for field exercises only upon specific request.
D. WHAT HAS BEEN DONE:	Air General Plans for Exercise "TARHEEL" provides for the participationoof two (2) squadrons of the 54th Fighter Wing (ANG) on 7-8, 14-15 May 1949.
E. WHAT IS BEING DONE:	Nothing.
F. WHAT IS PLANNED:	Nothing until a policy is promulgated which clarifies the responsibility of this headquarters in relation to the other components. (See letter this headquarters, 28 February 1949, to Commanding General, Continental Air Command, subject: "Ta ical Air Command Implementation of Air National Guard and USA Reserve Unit Training.")
G. MONITORING RESPONSIBILITY:	Deputy for Tactical Air Operations.

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A.	FUNCTION:	Conduct systematic training of forces allocated by the Commanding General, Continental Air Command, in tactical air operations.
B.	OBJECTIVE:	To attain and maintain within all units of Continental Air Command capable of tactical operations a high state of effectiveness in performance of tactical air operations.
C.	DIRECTIVE:	Air Force Regulation 20-6, 11 June 1946. Air Force Regulation 23-1, 11 January 1949.
D.	WHAT HAS BEEN DONE:	Tactical Air Command has actively participated in and supervised the training of such units of Continental Air Command as have been allocated to the Tactical Air Command. Rigid adherence to approved doctrines and concepts of tactical air operations have been maintained.
E.	WHAT IS ~~BEI~~ BEING DONE:	The above training and supervision is being continued in such exercises as "Little Combine," "Tarheel," and routine exercises of the troop carrier groups with the 82d and the 11th Airborne Divisions.
F.	WHAT IS PLANNED:	The above functions will continue to be one of the most exacting duties of Tactical Air Command. Personnel from the augmented Joint Operations Center/Operations will be responsible for this training and supervision.
G.	MONITORING RESPONSIBILITY:	Deputy for Tactical Air Operations.

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A. FUNCTION: Be prepared to provide cadres of personnel trained and indoctrinated in the employment of tactical air power for the timely formation of Tactical Air Command and/or air force headquarters for overseas deployment, as required.

B. OBJECTIVE: To achieve and maintain among assigned personnel such a high state of proficiency in assigned duties and such a thorough general knowledge of all phases of the tactical air mission that qualified cadres of personnel can be provided on short notice for the formation of air commands and/or air force headquarters for overseas deployment.

C. DIRECTIVE: Air Force Regulation 23-1, 11 January 1949. Department of the Air Force Letter, 9 August 1948, signed by Deputy Chief of Staff, Operations (Classified).

D. WHAT HAS BEEN DONE:

1. By letter this headquarters, dated 28 March 1949, file CG 320.3, subject: "Personnel Requirements," this command has requested assignment of 36 officers and 62 airmen to man a Tactical Air Force Headquarters at Pope Air Force Base, North Carolina.

2. Personnel of the Joint Operations Center/Operations Section, Headquarters Tactical Air Command are being trained to carry out the highly specialized duties of Joint Operations Center/Operations personnel in a Tactical Air Command and/or Air Force.

3. Additional personnel to fully man the Joint Operations Center/Operations Section have been requested by 5th Indorsement to letter, Hq. Continental Air Command, dated 12 January 1949, file OS 320.3, subject: "Submission of New Table of Distribution."

E. WHAT IS BEING DONE:

1. Personnel allocated for the manning of a Tactical Air Force (mobile) are being utilized and trained in current projects such as "Little Combine" and "Tarheel".

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2. Training of Personnel of Headquarters Tactical Air Comm is continuing through all available means including assignment to current projects such as "Little Combine" and "Tarheel."

3. Reserve personnel are being screened and placed on mobilization assignment to Hq. TAC with the view of their eventual assignment to cadres.

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F. WHAT IS PLANNED:

1. Upon activation of the Tactical Air Force Headquarters at Pope Air Force Base, North Carolina, this command will assume responsibility for its state of training in order that it may be ready for overseas deployment on short notice as a Tactical Air Command/Tactical Air Force Headquarters.

2. Intensified training of all personnel assigned this command continues.

G. MONITORING RESPONSIBILITY: Deputy for Tactical Air Operations.

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TAB ___

A. **FUNCTION:** Recommend to the Commanding General, Continental Air Command, the allocation and deployment of available forces in preparation for the conduct of tactical air operations in conjunction with land and/or amphibious forces.

B. **OBJECTIVE:** To assure the timely allocation and the effective deployment of such tactical air units as are required to adequately discharge the Air Force's responsibility for air training in cooperation with designated Army and Naval units in the Zone of the Interior.

C. **DIRECTIVE:** Air Force Regulation 23-1, 11 January 1949.

D. **WHAT HAS BEEN DONE:**

1. A staff study was prepared in March 1949 setting forth the minimum tactical air requirements necessary to adequately perform the Air Force's mission to joint tactical exercise with the Army and Naval forces.

2. Also the staff study included recommendations for the deployment of the air tactical units that will be used in performing the Tactical Air Command's mission.

3. Specific recommendations for the allocation of forces to perform the air mission have been made concurrently with the plans submitted for joint training exercises.

E. **WHAT IS BEING DONE:**

1. The action outlined above requires continuous study, therefore, every effort is being made to effectively utilize the tactical air resources to attain the maximum results in training and operations.

2. A staff study is being prepared outlining the recommended location of the Tactical Control Group and the Signal Battalion to enable this command to most effectively and efficiently utilize these units.

F. **WHAT IS PLANNED:** This headquarters will continue to study the requirements necessary for tactical air operations and deployment of air units and will submit timely recommendations to the Commanding General, Continental Air Command, thereon.

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TAB __

A. FUNCTION: Recommend to the Commanding General, Continental Air Command, the proficiency standards and desired capabilities of units to be employed in tactical air operations.

B. OBJECTIVE: To establish standards of proficiency for units equipped and trained for the performance of each phase of tactical air operations. Such standards to provide the uniformity and flexibility vital for the proper performance of the tactical air mission.

C. DIRECTIVE: Air Force Regulation No. 20-6, dated 11 June 1946.
Air Force Regulation No. 23-1, dated 11 January 1949.

D. WHAT HAS BEEN DONE: The proficiency standards and desired capabilities of reconnaissance, fighter, troop carrier, light bombardment, and liaison units have been prepared and coordinated within Tactical Air Command Headquarters.

E. WHAT IS BEING DONE: Letters to representative units are being prepared asking for comments on the desired standards and capabilities already prepared.

F. WHAT IS PLANNED: Deputy of Operations is in the process of preparing new training standards for each type unit in this command. These standards will set forth the objective toward which the unit will train and will be stated in terms of desired measurable capabilities.

G. MONITORING RESPONSIBILITY: Deputy for Tactical Air Operations.

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TAB ___

A. **FUNCTION:** Promote progressive development of air-antiaircraft artillery coordination of techniques and doctrines as they pertain to the land battlefield.

B. **DIRECTIVE:** Air Force Regulation No. 20-6, dated 11 June 1946.

C. **SUMMARY OF ACTION:** This command has engaged in no activity relative to the development of antiaircraft artillary doctrine and procedures in the land battle due to the lack of joint policy on the operational control of antiaircraft artillery units. The problem is under study by the Joint Chiefs of Staff, and it is anticipated that a document now being drafted to be known as "Joint Action Armed Forces" will delineate responsibilities for operational control of antiaircraft artillery units involved in surface action in overseas areas. Unless otherwise instructed, continued deferment of this subject is contemplated until a joint agreement has been announced.

D. **MONITORING RESPONSIBILITY:** Deputy for Tactical Air Operations.

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8 June '49

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ConAC Bulletin)
:
Number 45-6)

HQ, CONTINENTAL AIR COMMAND
Office, Deputy for Reserve Forces
Mitchel AFB, N.Y., 8 June 1949

RESERVE FORCES

Information on Reserve Forces Programs

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1. USAF Reserve Aircraft. -- AMC Message MCMAT61-5-10, 26 May 1949, states that "Air Reserve aircraft are included wherein a technical order states all active USAF aircraft are affected". This question originally was raised in connection with the installation of equipment in B-26 aircraft.

2. Assignment, USAF Reservists.-- Chief of Staff USAF announced policy for assignment of USAF Reservists to AFRTC units and Corollary units (AFCRF-23620 and AFCon.CMilPers E-11959):

a. First consideration for assignment to either a unit assigned to an AFRTC or to a Corollary unit will be given to those AF Reservists who have previously participated in the AF Reserve Training Program; subject to the following screening criteria:

(1) Qualification in MOS

(2) Efficiency Index

(3) Existence of vacancies in units by rank.

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b. The continued participation a Reservist in these units will be based upon his fulfillment of qualifications and training requirements.

3. USAF Reserve Program, Fiscal Year 1950. -- Message, AFConACRR 11897, 21 May 1949, to ConAC air force commanders itemized the instructions which had been issued and forecast issue of forthcoming instructions concerning implementation of the USAF Reserve Program, Fiscal Year 1950.

4. Accrual of Points, USAFR. -- Messages, C/S USAF, AFPMP-3D-23582, and AFConACMilPers-E-12007, 20 May 1949, mention the concern of individual Reservists over accrual of necessary points or credits for retention of Organized or Volunteer Air Reserve status. "Prior to publication of AFR 45-5, 6 July 1948, no requirement existed, advising Reserve officers of the necessity to accrue a predetermined number of credits or points. Therefore, it is not deemed equitable to require any member of the USAFR to have met any requirements prior to publication of 45-5. For administrative purposes, however, 30 June 1948 is the date that the 3-year period, which established requirements, began and 30 June 1951 is the date that the 3-year period, for which accrual of points or credits are required, will terminate. Points or credits earned subsequent to 30 June 1948, under the provisions of AFR 45-5, 6 July 1948, and prior to publication of AFR 45-5, 16 March 1949, may be accredited. to an individual as provided by paragraph 21 of the latter regulation". The effect of this message is that no Reservist may be transferred to Inactive Air Reserve prior to 6 July 1951, except at his own request.

5. WAF Reserve Assignments. -- Chief of Staff, USAF policy for assignment of WAF Air Reservists in FY 1950 was announced in AFCRF-1-24585, and AFConACWAF 12548:

a. Not to exceed a total strength of 2½% of WAF Air Reserve officers and airmen for the entire program, except Extension Course program.

b. For the Mobilization Assignment, Corollary Unit, AFRTC and VARTU programs, a total strength not to exceed 2½ WAF Air Reserve officers and 2½% Reserve airmen may be applied to each program.

c. AF Regulations of the 45-series are applicable to WAF Air Reserve officers and airmen.

6. Air Reserve Forces Review. -- Letter, DF 000.76, this headquarters, 13 May 1949, "Distribution Plan for Air Reserve Forces Review", announces the distribution procedures for the "Air Reserve Forces Review", to be published monthly by Hq USAF, beginning with the June issue. It is planned the magazine will be informative, stimulating, and interesting throughout, constituting a medium to keep all personnel concerned posted on matters pertaining to the Reserve Forces.

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7. Classified Information. -- Have you read AFL 205-25, 30 March 1949, "Disclosure of Classified Information to Reserve Forces Personnel". Its scope includes USAFR, ANG, AF ROTC, and senior division of CAP, and its liberal provisions should be thoroughly understood by all instructors and unit training personnel.

8. Retired Enlisted Men. -- Message AFPMP-1-C-4-25621, 1 June 1949, states USAF Reserve Officers who are retired enlisted men will not be recalled to active duty for short periods (90 days or less). This restriction will be published soon in AF Regulations.

9. Inactive Duty Training Pay Clarification. -- Last sentence, Example 3, paragraph 7, Section V, ConAC Bulletin 45-6, 3 May 1949, is corrected to read: "In this case, the officers are entitled to receive inactive duty training pay because 60% of the assigned strength of the unit was present".

10. Definition, Mobilization Designation. -- Hq USAF Message AFCRF-19464, 26 April 1949, and AFConAC [illegible]-E-[illegible], 29 April 1949, defined the terms "mobilization Assignment" and "mobilization designation", pending revision of AFR 45-3, 8 October 1948.

"a. Mobilization assignment will not be given to an individual who, in a civilian capacity, occupies a position which would be occupied by him as an officer in event of a mobilization. In all such cases the individual may be given a mobilization designation. The determination as to whether an individual will be given a mobilization assignment or mobilization designation will be made by the individual's immediate military supervisor.

"b. Mobilization designation is a means whereby an individual may be earmarked for mobilization position. Such individuals are members of the VAR. Requirements for retention in the VAR are contained in AFR 45-5, 16 March 1949.

"c. Administrative procedures [illegible] tinent to mobilization designations will be contained in the revised AFR 45-3, [illegible]eferred to above.

"d. Upon publication of the revised AFR 45-3, individuals who hold mobilization assignments in conflict with the above stated policy will be relieved of such assignments and tendered mobilization designations".

11. Inactive Duty Training Authorizations. -- Message, AFConACPI-E-10716, 11 May 1949, refers to paragraph 2b, AFR 45-16, 7 March 1949, and delegates authority to issue inactive duty training authorizations to ConAC air forces and to subordinate units having USAF Reservists assigned or attached for training.

12. Routing ORT Report on Air National Guard. -- Upon telephone request from one of the ConAC air forces, following exact routing for a completed Operational Readiness Test report on an ANG unit was advised: From the unit inspected to the next higher military unit, through military channels to Chief of Staff USAF -- squadron, group, wing, ConAC air force, Hq ConAC, Hq USAF. The Adjutant General of the state to which the inspected unit is assigned will receive an information copy as it is indorsed by the unit commander to the next higher military unit outside the state. Thus, the Adjutant General of the state to which a group is assigned would receive the information copy; the Adjutants General of states to which individual squadrons of the group are assigned would not receive a copy unless the squadron was inspected as a single unit.

13. Double Unit Training Assemblies, ANG. -- Hq USAF, AFCRF-18371, 20 April 1949, relayed by AFConACRG-8983, 22 April 1949, says: "For units of ANGUS, not more than one unit training assembly (drill period) will be authorized for pay purposes for each calendar day, unless the total or aggregate duration of such participation is at least eight hours. When the total or aggregate duration of unit training conducted in a calendar day is eight hours or more, two unit training assemblies may be authorized for pay purposes in that calendar day".

14. Double Unit Training Assemblies, USAFR. -- This same provision (paragraph 13 above) applies to USAF Reserve units per paragraphs 23j and 24 a and b, AFR 45-5, 16 March 1949.

15. Wire Recorders for AF ROTC. -- A proposed revision of T/A 90-1, which would authorize one (1) each, Wire Recorder, Webster-Chicago, Model 180-1, per school, has been submitted to C/S USAF by this headquarters. Therefore some requisitions by AF ROTC units for recorders are being returned by this headquarters without action. Publication of the revised T/A 90-1 prior to the next school semester is anticipated. If suitable recorder-reproducer equipment is not authorized therein, the individual rejected requisitions may be resubmitted.

16. AF ROTC Supply, Fiscal Year 1949. -- The question of the supply procedures to be followed by AF ROTC units after 1 July 1949, is still under consideration by Hq USAF. This headquarters has recommended there be no change in the present supply procedure, with few exceptions. Tentative information is to the effect that the above recommendations will be adopted, but this information is not as yet firm.

a. This headquarters is endeavoring to obtain as much advance information as possible on this subject, and such information will be disseminated to all air forces as received.

b. Requisition channels for AF ROTC units after 1 July 1949, will depend on the recommendation mentioned above. For the time being, requisitions will be submittmd in the same manner as in the past.

c. T/A 10-100 will continue to be used as a guide by AF ROTC units for requisitioning Quartermaster expendable supplies, until such time as T/A 10-100-2, now in the process of study by both Army and Air Force, is approved and published.

d. The provisions of AFR 67-14, 19 October 1948, are not applicable to AF ROTC units. Quartermaster expendable supplies are furnished to ROTC units from ROTC depot stocks, without reference to Quartermaster monetary credits.

17. Administrative Function Pay. -- Recent staff visits by members of this headquarters indicate the possibility of misapplication of paragraph 8, AFR 45-10, 22 March 1949. Wing commanders and group commanders, as such, are not eligible for administrative function pay. This allowance is intended for the commanding officers of wing and group headquarters and headquarters squadrons and the squadron commander of TO&E units.

18. Specialties, VART Flights. -- This headquarters recently recommended to C/S USAF that this command be authorized to approve additional specialties for the composition of VAR Training Flights, in lieu of obtaining specific approval from Hq USAF in each case, as directed by paragraph 3, proposed AFR 45-23. Message AFCRF-1-26334, 3 June 1949, approved that recommendation and advised that the regulation was being so revised.

19. Flight Pay, USAFR. -- Closing the gap of paragraph 5d, AFR 45-10, 22 March 1949, Executive Order 10059, 27 May 1949, authorizes flight pay for rated members of the reserve components not in active status but in an inactive-duty-training pay status or drill status and who is required to participate regularly and frequently in aerial flights by competent authority. Requirements are prescribed, and are in addition to any other duty or duties which may be required of such persons. The order is effective 1 June 1949.

20. Courtesy. -- We find it written into the Officers Guide -- we need to find more of it in our daily procedures. Courtesy is NOT bowing or kneeling -- it is good tempered respect for the other person.

REUBEN KYLE, JR.
Colonel, USAF
Deputy for Reserve Forces

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15 Apr 1949

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Farewell ltr fr:

Gen. G. E. Stratemeyer

to Officers, Airmen and Civilians of the Continental Air Command.

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HEADQUARTERS
CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

UNCLAS

IN REPLY
REFER TO:

15 April 1949

To All Officers, Airmen and Civilians of the Continental Air Command:

After three years of service with you I am leaving for Japan to assume command of our Air Forces in the Far East. To all who have served with me, first in the Air Defense Command, and now in the Continental Air Command, I wish to say a word of personal farewell. It has been an honor and a pleasure to work with you toward the accomplishment of our mutual goals. The extent to which we have succeeded has been measured by your loyalty, your hard work, your broad understanding of the job and your unselfish service.

I leave this command confirmed in the knowledge that I pass on to my successor, Lieutenant General Ennis C. Whitehead, an organization geared to carry out its responsibilities in the most creditable manner. I know that you will give him the same unstinting support and loyalty which you have accorded to me during these important post-war years of our association.

With every good wish and God bless.

Geo. E. Stratemeyer
GEORGE E. STRATEMEYER
Lieutenant General, USAF
Commanding

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3 MAY 1950

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3 May 1950

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ConAC LETTER)
55-2)

HEADQUARTERS CONTINENTAL AIR COMMAND
Mitchel Air Force Base, N.Y., 3 May 1950

OPERATIONS

USAF Reserve Combat-Readiness Reports
(RCS CNC-CT-C1)

	Paragraph
Purpose	1
Scope	2
Responsibility	3
Definitions	4
Preparation	5
Entries	6
The Index Code	7
Order of Transmission	8
Transmission	9
Classification	10
Effective Date	11
Reports Control Symbol	12

1. Purpose.

a. This Letter prescribes standard instructions for the preparation and submission of reports reflecting the current combat readiness of USAF Reserve combat units, and to furnish:

(1) Monthly information which will aid in the determination of combat readiness of the USAF Reserve, the factors limiting such readiness, and the capabilities of the USAF Reserve in the event of an emergency.

(2) A continuous check of selected factors so that corrective action can be instituted immediately at the responsible echelon(s) of command where a deficiency develops adversely affecting combat readiness.

2. Scope. The provisions of this Letter for reporting purposes are applicable to all USAF Reserve combat units operating in connection with the AFRTC program. Reports will be submitted by USAF Reserve combat wings organized under a T/O&E as follows:

a. Report for the combat wing, reflecting the combat readiness of the wing headquarters and its assigned groups as a unit.

b. Report for the combat group as a unit, reflecting the combat group readiness of the group headquarters and its assigned squadrons.

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c. Report for the maintenance and supply group as a unit, reflecting the combat readiness of the group headquarters and its assigned squadrons.

d. Report for the air base group as a unit, reflecting the combat readiness of the group headquarters and its assigned squadrons.

e. Report for the medical group as a unit.

3. Responsibility. The commanding officer of each combat unit will be responsible for the accurate preparation and timely submission of the reports required herein. Reports will be based on factual data reflecting conditions as they actually exist. No change will be made in the original unit report by commanders at intermediate echelons; however, such commanders are responsible for the review and approval or disapproval of reports on all combat units under their command. Approval will be assumed unless disagreement is indicated by a remark giving the intermediate echelons' recommended index(es) with reason(s) therefor.

4. Definitions. For the purpose of the reports submitted under this Letter, the following definitions will apply:

a. Combat Wing - A combat unit consisting of a wing headquarters, headquarters squadron, and four operating groups; the combat group, the maintenance and supply group, the air base group, and the medical group.

b. Combat Unit - A classification of military force having an organization prescribed by the Department of the Air Force, the primary mission of which is one or more of the following:

(1) Destruction of enemy forces, resources, and/or installations, e.g., bombardment.

(2) Furnishing operational assistance to combat elements, e.g., troop carrier.

(3) Support of combat elements, e.g., maintenance and supply group, air base group and medical group.

c. Combat Mission - The combat mission of an organization is the specific combat task assigned, or, if no specific combat task is assigned, the task ordinarily performed by that type of organization under combat conditions.

d. Flying Units - Those USAF Reserve units organized under an appropriate T/O&E and which have flying operations as a mission, such as light bombardment and troop carrier.

RESTRICTED

INDEX CODES

Percentage Arrived at (Entries e through g)	Index Code Reported
100-96	10
95-86	9
85-76	8
75-66	7
65-56	6
55-46	5
45-36	4
35-26	3
25-16	2
15-1	1
0	0

Attachment 1 to ConACL 55-2

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ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

EXAMPLE

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FROM: (Originator)

2596TH AFRTC HENSLEY AFB TEXAS

TO: CG TWELFTH AF BROOKS AFB TEXAS

INFO:

DATE-TIME GROUP	SECURITY CLASSIFICATION RESTRICTED
PRECEDENCE FOR — ACTION: AIR MAIL	INFORMATION
☐ BOOK MESSAGE	☒ ORIGINAL MESSAGE
☐ MULTIPLE ADDRESS	CRYPTOPRECAUTION ☐ YES ☐ NO
REFERS TO MESSAGE	
IDENTIFICATION	CLASSIFICATION

RCS CNC-CT-C1 as of 31 March 1950.

606 TC Wg/Hensley/Brown/B/2/5/2/Personnel not completely trained in auth SSN's.

606 TC Gp/Hensley/Jackson/B/3/6/3/C-46/16/16/10/52/37/Shortage of navigation equipment limits training of combat crews.

606 M&S Gp/Hensley/Coleman/C/1/4/1/Personnel not completely trained in auth S

606 Med Gp/Hensley/Green/B/5/7/6

Colonel John Ryan

SECURITY CLASSIFICATION RESTRICTED	PAGE 1 OF 1 PAGES

FORM 173

Attachment 2 to ConACL [illegible]

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e. Nonflying Units - Those USAF Reserve units organized under an appropriate T/O&E not included in paragraph 4d, above, but whose primary mission is the support of those units.

f. T/E Aircraft - Combat aircraft utilized by a flying unit to perform the combat mission as indicated in paragraph 4c, above.

g. Combat-Ready Aircraft - A combat-ready aircraft is an aircraft which, without additional maintenance, can fly safely and carry out the combat mission of the unit. Loading of bombs, ammunition, classified equipment, or additional equipment necessary for operation in abnormal climatic zones (which can be readily installed) will not be considered in determining the combat-ready status of aircraft.

h. Aircraft on Hand - Combat aircraft physically available to a unit in the accomplishment of training for its combat mission.

i. Organized Combat Crew - A complete combat crew, organized as such and having the necessary combat position requirements of the aircraft. Organized complete crews, both trained and untrained, will be reported in this category.

j. Combat-Ready Crews - An organized crew having the necessary combat position requirements of the aircraft and considered by the unit commander as capable of performing the unit's combat mission, as defined in paragraph 4c, above. Only those crews which a commander would use for actual combat operations will be reported as combat-ready crews.

5. Preparation. The Reserve Combat-Readiness Report will be prepared monthly as of 2400 hours, local time, the last day of each month. The first line of each transmitted report will state the reports control symbol and the "as of" date.

6. Entries. The following entries will be made on this report as indicated:

a through g: by all units reporting.

h through m: by flying units only. However, these entries will not be completed in reports prepared by the wing headquarters.

n: as required by all units reporting.

a. Unit Designation. Enter the designation of the reporting unit.

b. Location. Enter the name of the base at which the headquarters of the reporting unit is located.

c. Commanding Officer. Enter the last name of the assigned unit commander even though he may be temporarily absent from the unit on the "as of" date of the report.

d. Unit Classification. A, B or C unit, as defined by Inclosure No. 3 to Letter, Headquarters USAF, subject, "The AFRTC Program, Fiscal Year 1950," 6 May 1949. (The cited letter is included in booklet "USAF Reserve Program for F.Y. 1950.")

e. Unit Commander's Estimate of Combat Readiness. Enter the unit commander's estimate, expressed as a percentage, of the unit's state of preparedness for the execution of its combat mission, as defined in paragraph 4c, above. Equipment will not be considered when computing this estimate. Units will be considered to be 100 per cent equipped for the execution of its combat mission.

f. Authorized Personnel Assigned. Enter the percentage of authorized personnel assigned to the reporting unit. Only those assigned personnel possessing primary SSN's authorized the reporting unit will be considered. Overages in the form of surplus authorized SSN's and SSN's lacking authorization will not be included. A sample computation follows:

(1) Determine the authorized assigned personnel by primary SSN:

SSN	T/O&E Auth	Asgd Strength by Primary SSN	Auth Assigned
1024	21	18	18
0141	1	1	1
1037	20	12	12
060	8	4	4
256	0	2	0
405	5	7	5
502	1	1	1
514	0	4	0
521	0	9	0
573	1	0	0
684A	40	22	22
747D	30	45	30
750D	16	12	12
824	2	3	2
867	10	9	9
965	0	2	0
	155	151	116

(2) Divide total of authorized assigned personnel by total of T/O&E authorization: 116 ÷ 155 = 75 per cent of authorized personnel assigned.

g. Combat Readiness of Personnel. Enter the percentage of authorized T/O&E positions filled by personnel considered combat-ready. This entry will be computed by dividing the total number of personnel in authorized duty SSN's who are qualified to perform combat duties therein by the total number of positions authorized the unit. The resulting quotient is the figure reported. Personnel will be considered combat-ready when in the opinion of the commanding officer they are fully qualified to perform in actual combat the duties to which assigned.

h. Type and Model of Aircraft. Enter the type and model of T/E aircraft available to the reporting unit.

i. Number of Aircraft on Hand. Enter the number of aircraft, by the type and model shown in paragraph 6h, above, assigned to the AFRTC for utilization by the reporting unit on the "as of" date of the report.

j. Average Number of Aircraft on Hand. Enter the average number of aircraft, of the type and model shown in paragraph 6h, above, assigned to the AFRTC for utilization by the reporting unit. To compute this, divide the number of hours aircraft were on hand by the number of hours in the reporting period. The resultant quotient will be the figure reported.

k. Average Number of Combat-Ready Aircraft. Enter the average number of combat-ready aircraft, of the type and model shown in paragraph 6h, above, for the reporting period. This entry will be computed by dividing the number of hours aircraft were combat-ready by the total number of hours in the reporting period. The resultant quotient will be the figure reported.

l. Number of Combat Crews Organized. Enter the number of complete combat crews organized within the unit for the operation of the aircraft reported in paragraph 6h, above.

m. Number of Combat-Ready Crews. Enter the number of combat-ready crews organized within the unit for the operation of aircraft reported in paragraph 6h, above.

n. Remarks.

(1) In general, this entry will consist of any factors which affect combat readiness but are not readily discernible from the data reported.

(2) Intermediate echelons will comment on corrective action initiated or to be initiated within the command with anticipated results from such action and any recommended action by higher headquarters.

7. The Index Code. Percentage entries required for items e through g, paragraph 6, will be expressed as an index code by a number from 0 through 10 in accordance with the codes listed in attachment 1.

8. Order of Transmission. Regardless of the method of transmission, entries required by paragraph 6 will be prepared in accordance with the example in attachment 2. Joint Messageform, NME Form 173, will be used. Item headings and linear identifications will not be used. Each entry will be separated by a slant (/).

9. Transmission. USAF Reserve wing commanders will consolidate and prepare the report as shown in attachment 2 and forward it to the AFRTC commander for transmission to the appropriate air force commander. Air force commanders will insure that the report reaches this headquarters, Attention: Director of Statistical Services, not later than the fifteenth calendar day of the month following the "as of" date. Transmission may be by courier, mail, or electrical means.

10. Classification. This report when completed will be classified RESTRICTED in accordance with AFR 205-1.

11. Effective Date. The provisions of this Letter become effective 1 June 1950. The first report submitted in compliance with this Letter will be prepared "as of" 30 June 1950.

12. Reports Control Symbol. The Reports Control Symbol assigned the USAF Reserve Combat-Readiness Report is CNC-CT-C1.
(O&T)

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

CHARLES T. MYERS
Major General, USAF
Vice Commander

OFFICIAL:

Neal J O'Brien
NEAL J. O'BRIEN
Colonel, USAF
Air Adjutant General

2 Attachments:
1. Index Codes
2. Sample USAF Reserve Combat-Readiness Report

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22 Dec 1948
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CONAC Regulation 45-6
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HEADQUARTERS, CONTINENTAL AIR COMMAND
Mitchel Field, N.Y., 22 December 1948

USAF RESERVE
Mobilization Assignments for USAF Reserve Personnel

(This Regulation supersedes ConAC Regulation 45-6, 4 December 1947, as amended.)

1. Purpose. The purpose of this Regulation is to establish the procedure to be followed by USAF organizations in requisitioning USAF Reserve personnel for mobilization assignments in accordance with paragraph 6, AF Regulation 45-3, 8 October 1948.

2. General.

a. Mobilization assignments may not be given to a member of a T/O&E unit unless such individual is relieved from the T/O&E unit assignment.

b. Mobilization assignments will be made to Headquarters Continental Air Command and its subordinate units, in accordance with AF Regulation 45-3, 8 October 1948, to the extent of the difference between the authorized peacetime and wartime strength of Continental Air Command organizations. This numerical difference will be considered the numerical requirement as noted in paragraph 6a of AF Regulation 45-3. This headquarters will inform all Continental Air Command Table of Distribution organizations of their wartime strength requirement. Records will be maintained by Continental Air Command units to which individuals are assigned on mobilization assignment in the same manner as other major air commands.

3. Procedure. Major air commands will requisition USAF Reserve personnel directly from Continental Air Command air forces. Direct communication is authorized between air forces of this command and other major air commands in accomplishing mobilization assignments.

a. Individuals who are desired for specific assignments may be requested by name. To assure prompt and correct action on such requests, the following information should be furnished.

(1) Name of Reservist and permanent residence.

(2) MOS, grade and serial number.

(3) Desired assignment (complete designation of unit).

b. Orders and records will be forwarded from the Air Force Reserve Training Center direct to the gaining agencies, except when

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directed otherwise by the major air command concerned. Information copies of orders will be furnished to the Continental Air Command air force headquarters and major air command headquarters concerned. AFRTC's will maintain a status card on each individual transferred on mobilization assignment, containing name, grade, serial number, MOS, home address, reference to order of assignment, station of assignment and date of transfer of records.

c. In the event the Continental Air Command air force cannot completely fill the requirements of other major air commands, the major air command concerned will be so informed.

d. Separate instructions will be issued on reports and reporting procedures.

e. To insure uniformity, mobilization assignment orders will conform with standard letter order, attachment 1.

4. Applicability. This publication is applicable to Regular Air Force and USAF Reserve.

(pp 210.4551)

BY COMMAND OF LIEUTENANT GENERAL STRATEMEYER:

H. M. TURNER
Major General, USAF
Vice Commander

OFFICIAL:

s/t C. R. LANDON
Colonel, AGD (USAF)
Adjutant General

1 Attachment:
Mobilization Assignment

DISTRIBUTION
C

SUBJECT: Mobilization Assignment

TO : Colonel John J. Doe, AO-123456, USAFR

1. Under the provisions of AF Regulation 45-3, 8 October 1948, you are hereby given a mobilization assignment to______________(organization).

2. This mobilization assignment may be changed in accordance with your desires or as determined by the headquarters to which you are given a mobilization assignment.

3. This is the assignment which you will be called upon to fill when ordered to extended active duty in the event of a national emergency.

4. It is most important that this headquarters and the unit to which this order assigns you be informed promptly of any permanent change of address.

5. You are attached to___________________(organization) for flying training and for performance of such flying duties as the commanding officer thereof may deem appropriate.

BY ORDER OF

Attachment 1 to ConACR 45-6

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17 FEB 1949

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51-9)

HEADQUARTERS, CONTINENTAL AIR COMMAND
Mitchel Air Force Base, N.Y., 17 February 1949

FLYING TRAINING
Requirements for USAF Reserve Instructor Pilots

(This Regulation supersedes ConAC Regulation 50-1, 7 February 1947; ConAC Letter 45-1, 11 October 1946; and ConAC Letter 60-4, 28 August 1947.)

1. Purpose. The purpose of this Regulation is to establish a criteria governing the selection of personnel for duties as USAF Reserve flight instructors.

2. Responsibility. The responsibility for establishing and supervising specific qualitative and quantitative requirements for USAF Reserve flight instructors is delegated to ConAC air force commanders.

3. Minimum Requirements. It is suggested that the minimum requirements for USAF Reserve instructor pilots be no less than the minimums listed below; however, these requirements may be altered at the discretion of the Air Force Commander to meet existing circumstances.

a. Five hundred hours total pilot time. This will include flying time as aviation cadet.

b. Trainer type aircraft:

(1) T-6 -- Fifty hours total pilot time in this type aircraft.

(2) T-7 or T-11 -- One hundred hours total pilot time in multi-engine aircraft, of which fifty hours will be in the T-7 and/or T-11 type aircraft.

c. Tactical type aircraft:

(1) B-26 -- Two hundred hours total pilot time in multi-engine aircraft, of which one hundred hours shall be in this type aircraft.

(2) C-46 or C-47 -- Two hundred hours total pilot time in multi-engine aircraft of which one hundred hours shall be in the type aircraft for which instructor pilot is being qualified

4. Instructor Pilots. a. Pilots meeting the requirements established for instructor pilots by their appropriate air force commanders, upon demonstration of their proficiency as instructor pilots to the satisfaction of the AFRTC commander or his authorized representative, will be designated

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Incl #12

on orders as such in accordance with AF Regulation 60-7, 1 October 1945, as amended.

b. USAF Reserve pilots in an inactive duty status who meet the requirements for instructor pilots may be designated and placed on orders as such in accordance with AF Regulation 60-7.

5. General. It is of paramount importance that the best qualified personnel be selected as instructor pilots to insure that the highest quality of instruction possible is given rated USAF Reserve personnel.

6. Applicability. This publication is applicable to Regular USAF and USAF Reserve. (CR 353)

BY COMMAND OF LIEUTENANT GENERAL STRATEMEYER:

t/ H. M. TURNER
Major General, USAF
Vice Commander

OFFICIAL:

s/t NEAL J. O'BRIEN
Colonel, USAF
Adjutant General

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ConAC Regulation 51-10, 2 mar 1949
and 51.10A, 22 april 1949

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ConAC REGULATION)
51-10A)

HEADQUARTERS, CONTINENTAL AIR COMMAND
Mitchel Air Force Base, N.Y., 22 April 1949

FLYING TRAINING
Minimum Requirements for Check-Out in C-47 Aircraft

(This Regulation amends ConAC Regulation 51-10, 2 March 1949.)

* * * * * *

3. Prerequisite Requirements. Air Force Reserve pilots, prior to undertaking C-47 transition, will be required to have accomplished the following:

a. A minimum of two hundred hours of multi-engine flight time of which at least eight hours first pilot time will have been accomplished within the previous three months in trainer type aircraft and/or twin-engine cargo type aircraft, or

b. A minimum of twenty hours first pilot time within the previous six months in trainer type aircraft and/or twin engine cargo type aircraft of which at least eight hours first pilot time will have been accomplished within the previous three months.

c. Where twin-engine trainer type aircraft are assigned for Air Force Reserve training, it is suggested that the requirements prescribed in paragraphs 3a and 3b be accomplished in T-7 and/or T-11 aircraft.

* * * * * *

(RR 201.63)

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

t/H. M. TURNER
Major General, USAF
Vice Commander

OFFICIAL:

s/t NEAL J. O'BRIEN
Colonel, USAF
Adjutant General

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CONAC REGULATION)
51-10)

HEADQUARTERS CONTINENTAL AIR COMMAND
Mitchel Air Force Base, N.Y., 2 March 1949

FLYING TRAINING
Minimum Requirements for Check-out in C-47 Aircraft

1. Purpose. This Regulation establishes minimum requirements governing the checkout procedure in C-47 type aircraft for USAF Reserve pilots while on inactive duty.

2. Responsibility. All commanders are charged with the responsibility for proper supervision and screening necessary to insure compliance with the minimum requirements prescribed herein.

3. Prerequisite Requirements. USAF Reserve pilots, prior to undertaking C-47 transition, will be required to be checked out in the T-6, T-7, and/or T-11 type aircraft and have at least twenty (20) hours first pilot time within the previous six months of which a minimum of eight (8) hours first pilot time will have been obtained within the previous three months. Where twin-engine trainer type aircraft are available, the above requirements will be accomplished in T-7 and/or T-11 type aircraft.

4. Pilot Training. Pilot transition training will be accomplished by phases as indicated below. The air force or the Air Force Reserve Training Center commander will increase the minimum required hours of transition instruction under each phase in any case where the individual requires further instruction to attain the desired standard of proficiency.

a. Minimum training requirements for check-out in the C-47 by phases:

(1) Phase I - C-47 Orientation.

(a) Minimum of five (5) hours of ground instruction to attain proficiency in the following:

1. Visual preflight inspection and servicing.

2. Landing gear operation.

3. Fuel system.

4. Propeller.

5. Electrical system.

6. Brake system.

7. Hydraulic system.

8. Controls.

9. Flaps.

10. Engines.

11. Oil system.

12. Engine and flight instruments.

13. Communications equipment.

14. Emergency procedures.

15. Restricted maneuvers.

16. Engine starting, operating and stopping.

17. Taxiing procedures.

18. Run-up procedures.

19. Take-off, landing and go-around procedures.

20. Power settings and maximum speeds.

21. Stalls and unusual positions.

22. Single engine procedures.

23. Ditching and bail out procedures.

(b) A written questionnaire on the subjects enumerated in paragraph 4a(1)(a), above, such as the suggested questionnaire in attachment 1, will be completed satisfactorily by each USAF Reserve pilot and filed in his AF Form 5 prior to advancing to Phase II.

(2) Phase II - C-47 Transition. Minimum of fourteen (14) hours flight transition in the C-47, and necessary number of flying hours to attain proficiency in the following prior to check-out:

(a) Orientation, familiarization and blindfold check of cockpit - 1 hour.

(b) Engine starting, operating and stopping procedures - 1 hour.

(c) Taxiing, take-off, landing and go-around procedures - 10 hours.

(d) Cross wind landings and simulated single engine landings - 1 hour.

(e) Air work to include instrument flights, stalls, unusual positions, single engine operations and emergency procedures - 3 hours.

b. ConAC air force commanders or Air Force Reserve Training Center commanders may waive the minimum hour requirements for each training phase established in paragraphs 4a(1) and 4a(2), in cases where USAF Reserve pilots have had previous experience in C-47 type aircraft and can satisfactorily demonstrate their ability to pilot the aircraft.

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5. Applicability. This publication is applicable to Regular USAF and USAF Reserve. (ER 201.63)

BY COMMAND OF LIEUTENANT GENERAL STRATEMEYER:

t/H. M. TURNER
Major Genral, USAF
Vice Commander

OFFICIAL:
s/t/NEAL J. O'BRIEN
Colonel, USAF
Adjutant General

1 Attachment:
C-47 Questionnaire

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C-47 QUESTIONNAIRE

The following questions are of the multiple choice type, except where otherwise indicated. Circle the statement which most correctly answers the question.

1. Sitting in the pilot's seat and looking at the pedestal the following would be in order from left to right:

   a. Throttles, prop pitches and mixture.
   b. Prop pitches, throttles, and mixture.
   c. Prop pitches, mixture, and throttles.

2. The correct procedure for lowering the gear of a C-47 is:

   a. Move hydraulic gear handle down, wait for pressure to build up to at least 500 pounds, return hydraulic gear handle to neutral and lock positive latch on floor.
   b. Move hydraulic gear handle down, lock positive latch on floor, wait for pressure to build up to 750 pounds and return handle to neutral.
   c. Lock positive latch on floor, move hydraulic gear handle down, wait for pressure to build up and return hydraulic gear handle to neutral.

3. The C-47 has a hydraulic pump selector valve on the hydraulic panel. Choose which of the following is true:

   a. When the handle is straight up and down the left engine pump furnishes system pressure.
   b. When the handle is in the diagonal position the left engine pump furnishes system pressure.

4. The C-47 has tail wheel lock, which two (2) of the following is true?

   a. The aircraft may be turned with the tail wheel locked without damaging the equipment.
   b. The lock is located under the pedestal directly under the throttles.
   c. The tail wheel is locked when the handle is in the forward position.
   d. The tail wheel is locked when the handle is in the back position.

5. The C-47 has two fuel selector valves, one on each side of the pedestal. Which of the following is true?

   a. The left engine may draw fuel from only the two left tanks and the right engine may draw fuel from only the two right tanks.
   b. The left engine may draw fuel from any one of the four tanks, and the right engine may draw fuel from any one of the four tanks.

6. On take-off the first power reduction is made:

   a. Immediately after breaking ground.
   b. Immediately after the gear comes up and the airspeed is 100MPH.
   c. After the gear comes up and airspeed reaches 120 MPH.

7. The control handle for inflating the wing de-icer boots is located:

   a. Immediately behind the co-pilot's seat.

b. Located to the left of the Bendix Control Box on the switch panel.
c. Immediately behind the pilot's seat.

8. Prior to starting engines, your landing gear pressure should be at least______PSI before placing landing gear hydraulic level in neutral position.

9. After you are certain you have the wheel chocks in place, you release your brakes and spread your landing gear hydraulic handle and flap level handle for what reasons?

a. So you won't trip on the way out.
b. To release hydraulic pressure in the lines to allow for temperature change.
c. To relieve the pressure in the pressure accumulator.
d. To hold pressure in these hydraulic systems.

10. On take-off cowl flaps are in:

a. Trail position.
b. Open position.
c. Closed position.

11. If the engines are turning 2000 RPM, generators are on. With no indication on ammeter, the:

a. Cut-out relay is out.
b. Generators need to be paralleled.
c. Batteries are not charged.

12. If you are climbing and notice trail buffeting:

a. The flaps are down.
b. The cowl flaps are open.
c. The propellers are out of synchronization.
d. The landing gear is down.

13. Recommended maximum speed for lowering flaps is:

a. 140 MPH.
b. 120 MPH.
c. 112 MPH.
d. 150 MPH.

14. Maximum speed for lowering gear is:

a. 120 MPH.
b. 190 MPH.
c. 160 MPH.
d. 180 MPH.

15. Traffic pattern should be flown at what recommended airspeed?

a. 110 MPH.
b. 120 MPH.
c. 130 MPH.
d. 140 MPH.

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16. The average C-47 with power off, full flaps, gear down, and grossing 26,000 pounds will stall out at:

    a. 55-60.
    b. 60-65.
    c. 65-70.
    d. 70-75.

17. Normal fuel consumption is 90 to 100 gallons per hour.

    a. True.
    b. False.

18. The maximum HP rating on take-off is:

    a. 900 HP.
    b. 1050 HP.
    c. 1200 HP.
    d. 1400 HP.

19. Maximum manifold pressure at sea level is:

    a. 45 inches.
    b. 48 inches.
    c. 51 inches.
    d. 42 inches.

20. Desired manifold pressure at 2050 RPM for cruising is:

    a. 20 inches.
    b. 28 inches.
    c. 33 inches.
    d. 40 inches.

21. Desired manifold pressure at 2350 RPM for climb is:

    a. 30 inches.
    b. 33 inches.
    c. 38 inches.
    d. 40 inches.

22. Maximum continuance RPM & manifold pressure is:

    a. 2700 RPM -- 45 inches.
    b. 2550 RPM -- 40 inches.
    c. 2700 RPM -- 40 inches.
    d. 2550 RPM -- 45 inches.

23. On checking magnetos at 30 inch manifold pressure - RPM should be at least:

    a. 2700 RPM.
    b. 2500 RPM.
    c. 2350 RPM.
    d. 2230 RPM.

24. If the left engine fails, what position of hydraulic selector handle operates your landing gear, landing flaps, cowl flaps, and brakes?

    a. Vertical or to rear.
    b. Diagonal or to front.

25. The marker beacon is turned on only by turning on the inverter.

    a. True.
    b. False.

26. Each engine is equipped with a heating unit.

    a. True.
    b. False.

27. Normal operating range for fuel pressure is:

    a. 14 to 16 pounds.
    b. 12 to 17 pounds.
    c. 16 to 22 pounds.

28. The landing gear hydraulic pressure should be at least 500 PSI before locking the mechanical latch.

    a. True.

    b. False.

29. Each oil system incorporates an oil tank having a capacity of 29 (U.S.) gallons.

    a. True.
    b. False.

30. You do not turn on your airplane battery switches when using a battery cart because:

    a. It doesn't make a difference.
    b. It will run down the airplane battery.
    c. It will overcharge the batteries.
    d. It may cause your radios to burn out.

31. On your indicators (instruments) green markers indicate normal operating range; red markers indicate maximum or minimum limits of safe operation and the white-lines are guides for correct position of cover glasses.

    a. True.
    b. False.

32. 200 PSI is needed to extend and lock the landing gear.

    a. True.
    b. False.

33. At high manifold pressures the maximum cylinder head temperature should not exceed:

a. 120°C.
b. 200°C.
c. 280°C.
d. 260°C.

34. During engine warm-up, do not allow engine cylinder head temperature to exceed:

a. 150°C.
b. 180°C.
c. 232°C.
d. 255°C.

35. There are two emergency escape hatches on each side of the fuselage on the C-47.

a. True.
b. False.

36. On single engine the C-47 will maintain 110 MPH with gear and flaps down according to the T.O.

a. True.
b. False.

37. The auto pilot should not be used at less than___MPH above stalling speed.

a. 20 MPH.
b. 30 MPH.
c. 40 MPH.
d. 50 MPH.

38. Normal oil temperature is:

a. 40° to 60°C.
b. 60° to 110°C.
c. 80° to 110°C.
d. 60° to 75° C.

39. In the carburetor anti-icing system "Mom" position stands for momentary operation.

a. True.
b. False.

40. The C-47 does not have a starter hand crank and gear box for emergency starting.

a. True.
b. False.

41. Pilots hand book for C-47 type planes is AN-CN-400-39-1.

a. True.
b. False.

42. Normal filter position for take-off is "Filtered Air."

a. True.
b. False.

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43. Gross weight for take-off is:

    a. 27,600 pounds.
    b. 26,500 pounds.
    c. 25,500 pounds.
    d. 31,000 pounds.

44. Maximum gross weight for landing is:

    a. 24,000 pounds.
    b. 25,000 pounds.
    c. 26,000 pounds.
    d. 27,000 pounds.

45. The C-47 has how many gas tanks and holds a total of how many gallons?

    a. 4 tanks -- 708 gallons.
    b. 6 tanks -- 808 gallons.
    c. 4 tanks --804 gallons.
    d. 6 tanks --1000 gallons.

46. The engine nacelle fire extinguisher controls are located;

    a. In the radio compartment.
    b. On the floor between the pilot and co-pilot seats.
    c. In the cabin on the left side.
    d. Near the main door.

47. It is the pilot's responsibility to give the airplane a visual inspection prior to starting the engines.

    a. True.
    b. False.

48. On single engine operation you should maintain a minimum of:

    a. 85 MPH.
    b. 95 MPH.
    c. 110 MPH.
    d. 125 MPH.

49. In landing during a single engine operation, lower the gear and use your flaps:

    a. As in a normal manner.
    b. When you are on the final approach and are certain you can make a landing.
    c. On the base leg.
    d. On the down wind leg.

50. Normal operating range for oil pressure is:

    a. 75-90 PSI.
    b. 40-70 PSI.
    c. 60-110 PSI.
    d. 40-110 PSI.

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16 March 1950

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CONAC REGULATION)
123-1)

*ConACR 123-1
1-3
HEADQUARTERS CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York, 16 Mar 1950

AIR INSPECTOR

Inspection of USAF Reserve Training Program

	Paragraph
Purpose.	1
Responsibility	2
Organized Air Reserve.	3
Reports Control Exemption.	4

1. Purpose. The purpose of this Regulation is to provide for uniformity of inspection of the USAF Reserve training program within the Continental Air Command.

2. Responsibility. Inspection of the mobilization assignment training and of the headquarters and units of the Organized Air Reserve is the responsibility of the Continental Air Command air force to which the mobilization assignment personnel and the units are assigned.

3. Organized Air Reserve. a. Mobilization Assignments. Inspection of this phase of the USAF Reserve training program will be conducted concurrently with the annual air inspection and the quarterly inspections of the headquarters or unit to which such USAF Reserve personnel are assigned. Observation of the actual training of mobilization assignees will be made to the greatest extent possible. The inspection will include but will not be limited to the following:

(1) Assignment of best qualified eligible Reservists.

(2) Adherence to prerequisites for mobilization assignment.

(a) Member of Organized Air Reserve or Volunteer Air Reserve.

(b) Participation in USAF Reserve program.

(c) Within age-in-grade requirements.

(d) Professionally qualified.

(e) Physically qualified.

(3) Quality of group and individual training.

(4) General administration to include:

(a) Pay.

(b) Maintenance of records.

(c) Retention of assignees in the Organized Air Reserve.

b. Units (AFRTC and Corollary Program).

(1) Units of the Organized Air Reserve will be given the same annual air inspection as comparable organizations of the Regular United States Air Force. A separate written report

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*This Regulation supersedes ConAC Regulation 123-1, 9 August 1949

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for each unit will be addressed through appropriate command channels to the commander ordering the inspection. This report will be forwarded through USAF Reserve command channels to the USAF Reserve wing, thence to the AFRTC or parent wing (Corollary program) and thence through regular command channels.

(2) Inspections will be conducted with the least possible interference with the training of the unit.

(3) Quarterly inspections will be conducted by air inspection personnel of the parent organization (AFRTC or tactical wing).

(4) The inspection of a wing or group is complete only when each subordinate unit has been inspected.

(5) Each subordinate unit will be inspected immediately prior to the inspection of the parent organization to the extent possible consistent with paragraph 3b(6), below.

(6) All inspections will be conducted during unit training assemblies.

4. Reports Control Exemption. The inspection reports required by this directive are exempt from reports control procedures in accordance with paragraph 9a(4), AFR 174-1. (IG)

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

CHARLES T. MYERS
Major General, USAF
Vice Commander

OFFICIAL:

s/t/ V. E. MURPHY
Lt Col, USAF
Asst Air Adj Gen

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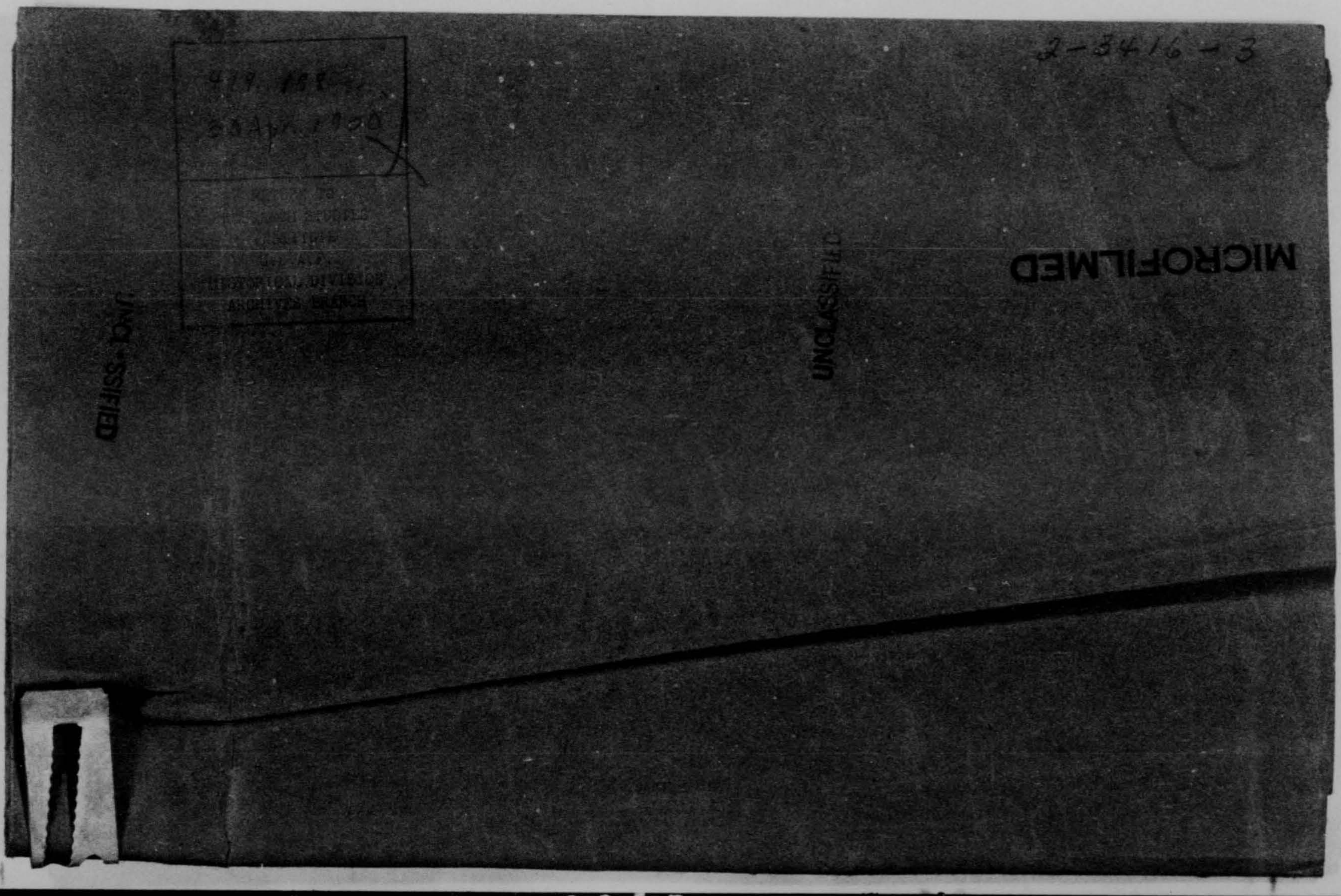

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30 Apr 1950

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OVERALL SUMMARY
COMMAND CNC
TABLE I, STATUS AND TURNOVER TOTAL SALARIED WAGE AS OF 30 APRIL 50

PAGE OF

A		B	C	D	E	F	G	H	I	J	K
TOT EMP PREV PO	1	0188	8334	3909	4425						
ORIG PROB APMT	1	0201	52	23	29						
APMT AND REEMPL	1	0204	179	66	113						
RTN DY EXT LWOP	1	0205	1	1							
TRF OTHR FED AGY	1	0206	33	17	16						
TRF OTHR AF ORGN	1	0207	165	76	89						
TOTAL ACCESSIONS	1	0299	430	183	247						
RESIGNATION	1	0301	165	93	72						
SEP FOR MIL SER	1	0302	1		1						
REDUCTION FORCE	1	0303	89	31	58						
REMV FOR CAUSE	1	0304	2		2						
REMV FOR CAUSE	1	0305	1		1						
RET DEATH INCOMP	1	0306	5	3	2						
TERMINATION	1	0307	53	22	31						
EXT LWOP SUSPEN	1	0310	4	2	2						
TRF OTHR FED AGY	1	0311	17	9	8						
TRF OTHR AF ORGN	1	0312	62	42	20						
TERM DISPLACMT	1	0314	11	2	9						
TOTAL SEPARATION	1	0399	410	204	206						
INTRA ORGN ADDS	1	0418	17	7	10						
INTRA ORGN LOSS	1	0428	15	10	5						

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ALL SUMMARY
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E I, STATUS AND TURNOVER TOTAL SALARIED WAGE AS OF 30 APRIL 50

PAGE OF

A		B	C	D	E	F	G	H	I	J	K	L
EMP PREV PO	1	0188	8334	3909	4425							
G PROB APMT	1	0201	52	23	29							
T AND REEMPL	1	0204	179	66	113							
DY EXT LWOP	1	0205	1	1								
OTHR FED AGY	1	0206	33	17	16							
OTHR AF ORGN	1	0207	165	76	89							
AL ACCESSIONS	1	0299	430	183	247							
IGNATION	1	0301	165	93	72							
FOR MIL SER	1	0302	1		1							
UCTION FORCE	1	0303	89	31	58							
V FOR CAUSE	1	0304	2		2							
V FOR CAUSE	1	0305	1		1							
DEATH INCOMP	1	0306	5	3	2							
MINATION	1	0307	53	22	31							
LWOP SUSPEN	1	0310	4	2	2							
OTHR FED AGY	1	0311	17	9	8							
OTHR AF ORGN	1	0312	62	42	20							
M DISPLACMT	1	0314	11	2	9							
AL SEPARATION	1	0399	410	204	206							
RA ORGN ADDS	1	0418	17	7	10							
RA ORGN LOSS	1	0428	15	10	5							

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TABLE I, (CONT'D)

		TOTAL	SALARIED	WAGE				
A	B	C	D	E	F	G	H	I
TOTAL FT EMPL	10508	8356	3885	4471				
TOT WAE END PD	10608	18	17	1				
T SP CONS END PD	10618	2						
TOTAL EMPLOYEES	10788	8376	3902	4472				
TOTAL FEM EMPL	10908	2557	2519	38				
TOT FT FEM EMPL	10918	2557	2519	38				
FEM INCL 10201 6	10928	93	93					
FEM INC 10301 11	10938	122	117	5				
TEMP EMP 10201 6	11018	87	29	58				
TEMP ON 10301 11	11028	61	28	33				
WAE NOT WKNG	11118	1						

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	TOTAL	SALARIED	WAGE					PAGE	OF	
B	C	D	E	F	G	H	I	J	K	L
10508	8356	3885	4471							
10608	18	17	1							
10618	2									
10788	8376	3902	4472							
10908	2557	2519	38							
10918	2557	2519	38							
10928	93	93								
10938	122	117	5							
11018	87	29	58							
11028	61	28	33							
11118	1									

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TABLE II, VETERAN STATUS

		TOTAL						
A	B.	C	D	E	F	G	H	I
MALE VETS WW2 SV	20101	3282						
FEM VETS WW2 SV	20102	148						
MALE VETS OTHER	20103	703						
FEM VETS OTHER	20104	7						
WIVES WID WW2	20105	62						
WIVES WID OTHER	20106	46						
MOTHERS OF VETS	20107	1						
TOTAL VET STATUS	20199	4249						
ACC TRF WTHIN AF	20201	96						
ACC TRF OUT AF	20202	15						
ACC ORIG APPNT	20203	29						
OTHER ACCESSIONS	20204	80						
TOTAL ACCESSIONS	20299	220						
SEP TRF WTHIN AF	20301	35						
SEP TRF OUT AF	20302	5						
RESIGNATIONS	20303	66						
REDUCTION FORCE	20304	55						
REMV CAUSE PROB	20305	1						
REMV AFTER PROB	20306	1						
OTHER SEPARATION	20310	17						
TERM DISPLACMT	20311	4						
TOTAL SEPARATION	20399	184						

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	TOTAL							PAGE	OF	
B.	C	D	E	F	G	H	I	J	K	L
20101	3282									
20102	148									
20103	703									
20104	7									
20105	62									
20106	45									
20107	1									
20199	4249									
20201	96									
20202	15									
20203	29									
20204	80									
20299	220									
20301	35									
20302	5									
20303	66									
20304	55									
20305	1									
20306	1									
20310	17									
20311	4									
20399	184									

TABLE II VETERAN STATUS (CONT'D)		TOTAL						
A	B	C	D	E	F	G	H	I
VET W 10 PT PREF	20408	727						
VET ESTB PREF	20418	11						

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D)			TOTAL							PAGE	OF	
		B	C	D	E	F	G	H	I	J	K	L
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		20418	11									

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TABLE III, ACCESSION SPECIAL CATEGORY

A	B	C TOTAL	D	E	F	G	H	I
ACC PHYS IM PERS	30101	7						
ACC CS REG 2114A	30102	23						
ACC CS REG 10102	30104	5						
REINST PART 7	30106	40						
NEW ACC EX CSO	30107	1						
ACC PHYS IMP VET	30110	5						
TOTAL	30199	81						

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CATEGORY		TOTAL							PAGE	OF	
	B	C	D	E	F	G	H	I	J	K	L
	30101	7									
	30102	23									
	30104	5									
	30106	40									
	30107	1									
	30110	5									
	30199	81									

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TABLE IV, MISCELLANEOUS A	B	TOTAL C	D	E	F	G	H	I
EMPL PD LUMP SUM	40118	365						
HRS WAE WKD	40318	670						
HRS SPEC CON WKD	40328	80						
VET ACC	40418	15						
VET PART 7	40428	13						
CONV PERM PROB	40448	90						

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PAGE OF

US	B	TOTAL C	D	E	F	G	H	I	J	K	L
U M	40118	365									
	40318	670									
K D	40328	80									
	40418	15									
	40428	13									
	40448	90									

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TABLE V, INVENTORY BY CATEGORY AND GRADE		TOTAL	CHIEF SURGEONS OFFICE	BASE HOSPITAL	SEPARATE DISP	INDUSTRIAL DISP		
A	B	C	D	E	F	G	H	I
GS1	50001	1						
GS2	50002	719		12	2			
GS3	50003	1376		42	7	2		
GS4	50004	644	2	18	2			
GS5	50005	325		27	3	1		
GS6	50006	105		1				
GS7	50007	216		5				
GS10	50010	35						
GS11	50011	91		2				
GS12	50012	20						
GS13	50013	76		8		1		
GS14	50014	21		4	1			
GS15	50015	3						
GS16	50016	5						
TOTAL GS	50099	3637	2	119	15	4		
CPC2	51002	4						
CPC3	51003	13						
CPC4	51004	21		1				
CPC5	51005	11						
CPC6	51006	65						
CPC7	51007	30						
CPC8	51010	58						
CPC9	51011	27						

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EGORY AND GRADE		TOTAL	CHIEF SURGEONS OFFICE	BASE HOSPITAL	SEPARATE DISP	INDUSTRIAL DISP			PAGE	OF	
	B	C	D	E	F	G	H	I	J	K	L
	50001	1									
	50002	719		12	2						
	50003	1376		42	7	2					
	50004	644	2	18	2						
	50005	325		27	3	1					
	50006	105		1							
	50007	216		5							
	50010	35									
	50011	91		2							
	50012	20									
	50013	76		8		1					
	50014	21		4	1						
	50015	3									
	50016	5									
	50099	3637	2	119	15	4					
	51002	4									
	51003	13									
	51004	21		1							
	51005	11									
	51006	65									
	51007	30									
	51010	58									
	51011	27									

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TABLE V, (CONT'D)

A	B	TOTAL C	CHIEF SURGEONS OFFICE D	BASE HOSPITAL E	SEPARATE DISP F	INDUSTRIAL DISP G	H	I
CPC10	51012	35						
CPC TOTAL	51099	264		1				
TOTAL SAL	53008	3902	2	120	15	4		
GRS1 3	54001	491						
GRS 4 10	54002	927						
GRS 11 17	54003	2789						
GRS18 UP	54004	258						
MARITIME	54005	2						
OTHER	54006	5						
TOTAL WG BD	54099	4472						
SPEC CONS	55008	1						
AGGREGATE	56008	8375	2	120	15	4		

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		TOTAL	CHIEF SURGEONS OFFICE	BASE HOSPITAL	SEPARATE DISP	INDUSTRIAL DISP			PAGE	OF	
	B	C	D	E	F	G	H	I	J	K	L
5	1012	35									
5	1099	264		1							
5	3008	3902	2	120	15	4					
5	4001	491									
5	4002	927									
5	4003	2789									
5	4004	258									
5	4005	2									
5	4006	5									
5	4099	4472									
5	5008	1									
5	6008	8375	2	120	15	4					

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TABLE VI, PROMOTION DATA

			PROMOTED	DEMOTED					
A		B	C	D	E	F	G	H	I
VETERANS	6	0101	90	40					
NON VETERANS	6	0102	80	39					
TOTAL	6	0199	170	79					

AF FORM 631 APPROVED 6 SEPT. 46

		PROMOT D	DEMOTED						PAGE	OF	
	B	C	D	E	F	G	H	I	J	K	L
6	0101	90	40								
6	0102	80	39								
6	0199	170	79								

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TABLE VIII, EMPL BY GROUP

		TOTAL	SALARIED	WAGE				
A	B	C	D	E	F	G	H	I
P P SUBJ CSCR	80101	7035	3369	3666				
P P NOT CSCR	80102	13	5	8				
WSI TI SUBJ CSCR	80103	1044	437	607				
WSI TI NOT CSCR	80104	22	7	15				
TEMP SUBJ CSCR	80105	258	84	174				
TEMP NOT CSCR	80106	3		2				
TOTAL	80199	8375	3902	4472				

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		TOTAL	SALARIED	WAGE					PAGE	OF	
	B	C	D	E	F	G	H	I	J	K	L
8	0101	7035	3369	3666							
8	0102	13	5	8							
8	0103	1044	437	607							
8	0104	22	7	15							
8	0105	258	84	174							
8	0106	3		2							
8	0199	8375	3902	4472							

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CONTINENTAL AIR COMMAND

MITCHEL AFB

REPORTS CONTROL SYMBOL
FS-P68

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2 OF 6

Archives.

MONTHLY SUMMARY OF CONAC CIVILIAN PERSONNEL

SOURCE: AF-SC-P68
Report of AF Civilian Personnel

AS OF
30 April 1950

OFFICE OF STATISTICAL SERVICES

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419 198-1
Mar. 1950

ConAC Management Analysis
Review

March 1950

3-3054-7

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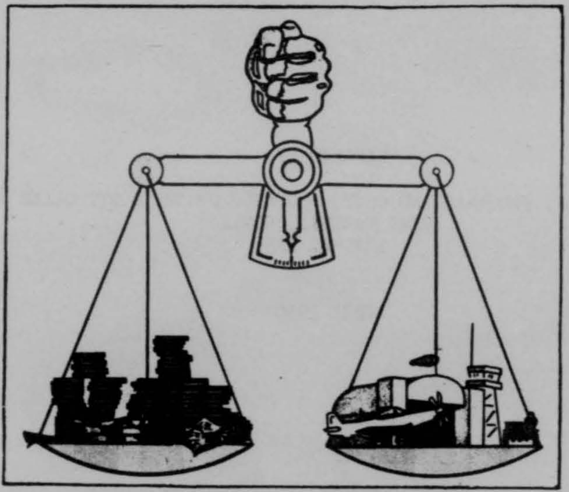
3-3054-7

CONTINENTAL AIR COMMAND

MANAGEMENT ANALYSIS REVIEW

MARCH 1950



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PREPARED BY:

DIRECTOR, PROGRAMS AND COSTS - OFFICE OF THE COMPTROLLER
HEADQUARTERS, CONAC
MITCHEL AFB

APRIL 1950

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INTRODUCTION

THE PURPOSE OF THE CONAC MANAGEMENT ANALYSIS REVIEW IS TO PROVIDE COMMANDERS AND THEIR STAFFS EACH MONTH WITH ANALYSES AND SELECTED DATA WHICH, WHEN PROPERLY INTERPRETED, WILL INDICATE ACHIEVEMENT WITHIN SPECIFIC FUNCTIONS OF THEIR ACTIVITY.

IT IS INTENDED THAT THIS REVIEW PRESENT FACTS IN SUCH A MANNER THAT COMMANDERS AND THEIR STAFFS CAN EVALUATE THE CONSISTENCY OF THEIR OPERATING ACTIONS, THE EFFICIENT AND ECONOMICAL USE OF RESOURCES AND THE PROGRESS OF THEIR VARIOUS ACTIVITIES TOWARD AUTHORIZED OBJECTIVES.

THE CONTENTS OF THIS REVIEW WILL VARY FROM MONTH TO MONTH. THIS WILL PERMIT GREATER COVERAGE OF COMMAND ACTIVITIES AND CONCENTRATION ON CURRENT ITEMS OF COMMAND INTEREST.

THE PRESENCE OF EXTREME CONDITIONS ARE READILY APPARENT TO COMMANDERS WHEN PROPERLY SHOWN IN GRAPHIC PRESENTATIONS. MANY OF THE EXTREME CONDITIONS INDICATED HEREIN MAY BE JUSTIFIED BY LOCAL SITUATIONS AND THE NATURE OF ASSIGNED MISSIONS. THESE ANALYSES, HOWEVER, SERVE AS A GUIDE TO AREAS AND ACTIVITIES WHERE FURTHER INVESTIGATIONS AND CORRECTIVE ACTIONS MAY RESULT IN BETTER MANAGEMENT.

THE ANALYSES CONTAINED HEREIN HAVE BEEN DERIVED FROM INFORMATION AS REPORTED TO THIS HEADQUARTERS.

EXPLANATION OF GRAPHIC PRESENTATION ON

TOTAL COST OF CONTINENTAL AIR COMMAND BY FUNCTIONAL GROUPING - MONTHLY DISTRIBUTION

The following activities are included in the functional groupings as shown on the chart:

COMMAND GROUP

Hq & Hq Sq, Continental Air Command
Hq & Hq Sq, Tactical Air Command
Hq & Hq Sq, Air Defense Forces
Hq & Hq Sq, ConAC Air Forces
Hq & Hq Sq, Air Divisions (Defense)
2220th Field Printing Plant (May through December 1950)
2220th Extension Group, Less Extension Course Activity (January through April 1950)
Hq & Hq Sq, Combat Wings

OPERATIONS GROUP

Combat - Total Operating Costs of Fighter Groups, Troop Carrier Groups, Tactical Recon Group, Bomb Squadrons (L), Assault Squadron.

Combat Support - Total Operating Costs of Liaison Squadrons and Flights, Aircraft Control and Warning Units, Tactical Control Groups, Shoran Beacon Unit.

SERVICE GROUP

Total operating costs of ConAC organizations less those included in Command, Operations and other Mission Groups.

OTHER MISSION GROUP

Air Force Reserve (AFRTC's only)
Air National Guard (includes Instructor Personnel)
Air ROTC (includes Instructor Personnel)
Air Explorer Liaison
Air Force Overseas Replacement Groups
All other (minor activities including Military Liaison Personnel with Army, Navy and other agencies)
Extension Course Activity of 2220th Extension Group (January through April 1950)

ADDITIONAL CHARGES

Cost of excess personnel and recruits awaiting shipment, AFORG Casuals, Detachment of Patients, Lump Sum Payments, reenlistment bonuses, initial issue of clothing, PCS, Supplies and Services furnished others, parts to salvage, extraordinary repairs and condemned inventory.

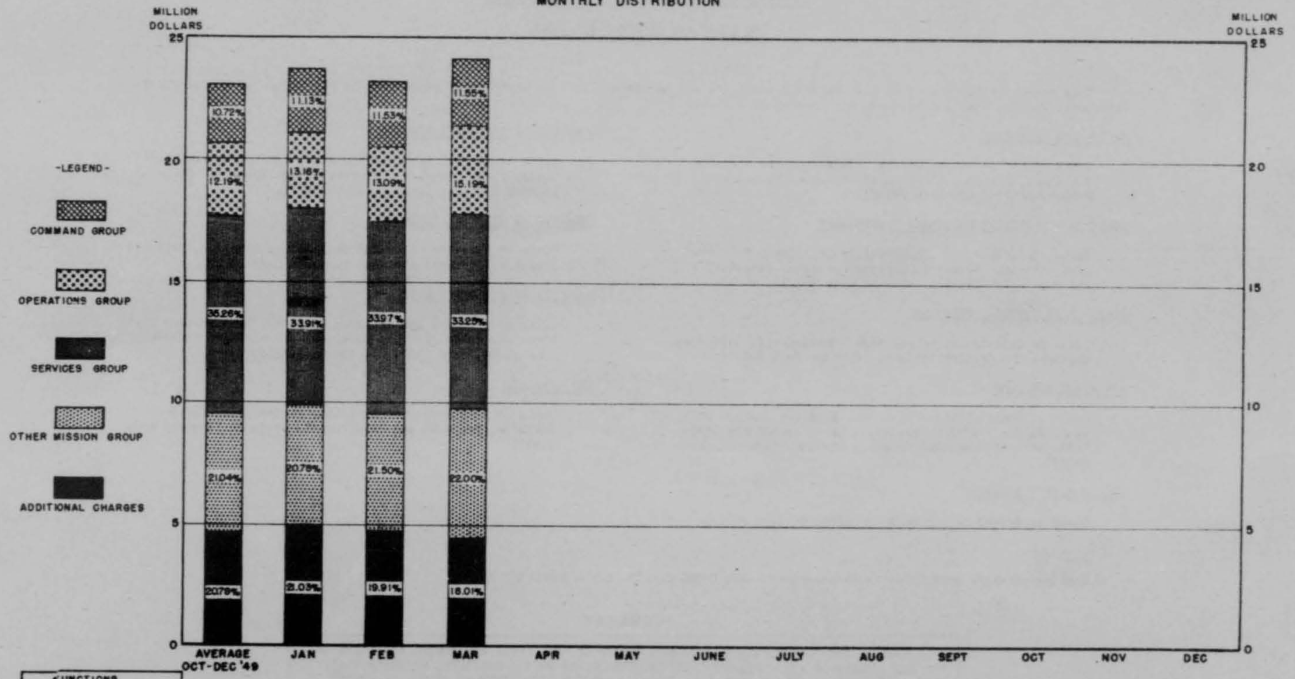
COMMENT

AN OVERALL INCREASE IN COSTS OF $964,126 FOR MARCH OVER FEBRUARY IS INDICATED. INCREASES ARE NOTED IN ALL FUNCTIONS WITH THE EXCEPTION OF ADDITIONAL CHARGES WHERE A DECREASE OF $266,000 HAS OCCURRED. THE MAJOR INCREASE OF $634,000 APPEARS IN THE OPERATIONS GROUP WHICH IS MAINLY ATTRIBUTED TO AN INCREASE IN FLYING AND THE COST OF FUELS AND LUBES ($499,433) FOR SPECIAL OPERATIONS SUCH AS PORTREX AND SWEETBRIAR.

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950

TOTAL COST OF CONTINENTAL AIR COMMAND BY FUNCTIONAL GROUPING

MONTHLY DISTRIBUTION



FUNCTIONS	AVERAGE OCT-DEC '49	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
COMMAND GROUP	$ 2,469,831	$ 2,644,365	$ 2,676,706	$ 2,792,306									
OPERATIONS GROUP	2,808,108	3,127,350	3,038,494	3,672,826									
SERVICES GROUP	8,119,532	8,059,017	7,887,319	8,040,820									
OTHER MISSION GROUP	4,845,713	4,938,632	4,992,491	5,319,026									
ADDITIONAL CHARGES	4,785,965	4,998,770	4,621,056	4,355,214									
TOTAL COST	$ 23,029,149	$ 23,768,134	$ 23,216,066	$ 24,180,192									

SOURCE: COST CONTROL REPORT, AF FORM 320, 321, 322
RCS: AF-FO-F220

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EXPLANATION OF GRAPHIC PRESENTATION ON

COSTS OF OFFICE OF THE DEPUTY FOR PERSONNEL

HQ CONAC AND HQ CONAC AIR FORCES

This chart depicts the total cost (payroll, supplies and services), for the staff group supervised by the Office of the Deputy for Personnel, for Hq ConAC and Hq ConAC Air Forces, as follows:

DEPUTY FOR PERSONNEL

Costs of the Assistant Deputy, Administrative Division, WAF Staff Director, Director of Personnel Planning and Management (Account Code 20203).

DIRECTOR OF MILITARY PERSONNEL PROCUREMENT

Costs of Officer Procurement Division, Airmen Procurement Division, Selective Service Division, Advertising and Publicity Division (Account Code 20221).

DIRECTOR OF CIVILIAN PERSONNEL

Costs of Classification and Wage Administration Division, Employee Utilization Division (Account Code 20229).

AIR JUDGE ADVOCATE

Costs of Administrative Division, Military Justice Division, Military Affairs Division, Legal Assistance Division, Reserve Division, Training Division (Account Code 20209).

GROUND SAFETY DIVISION

Costs of Ground Safety Division (Account Code 20223).

DIRECTOR OF PERSONNEL SERVICES

Costs of Special Services Division, Non-Appropriated and Sundry Funds Division, Information and Education Division, Library Division (Account Code 20217).

DIRECTOR OF MILITARY PERSONNEL

Costs of Classification and Utilization Division, Officers Division, Airmens' Division (Account Code 20227).

DIRECTOR OF AIR FORCE ROTC

Costs of Training and Research Division, Requirements Division, the costs of field personnel are excluded (Account Code 21009, less 21009.01, AFROTC (field)).

AIR CHAPLAIN

Costs of Administrative Division, Professional Service Division, Projects and Requirements Division (Account Code 20211)

Costing of staff activities is in accordance with ConAC Ltr 170-1 and ConAC Ltr 170-7.

COMMENT

COST OF THE DIRECTORATE OF MILITARY PERSONNEL, HQ FOURTH AIR FORCE, AND COSTS OF THE DIRECTORATE OF PERSONNEL SERVICES AND THE GROUND SAFETY DIVISION, HQ TWELFTH AIR FORCE APPEAR TO BE OUT OF LINE WITH COSTS OF SIMILAR ACTIVITIES IN OTHER AIR FORCE HEADQUARTERS.

THE TOTAL COST FOR THE DEPUTY FOR PERSONNEL HAS SHOWN A GENERAL INCREASE SINCE FEBRUARY 1950 RANGING FROM $162 AT HQ TWELFTH AIR FORCE TO $2,183 AT HQ FIRST AIR FORCE (HQ NINTH AIR FORCE REPORTED A DECREASE OF $277).

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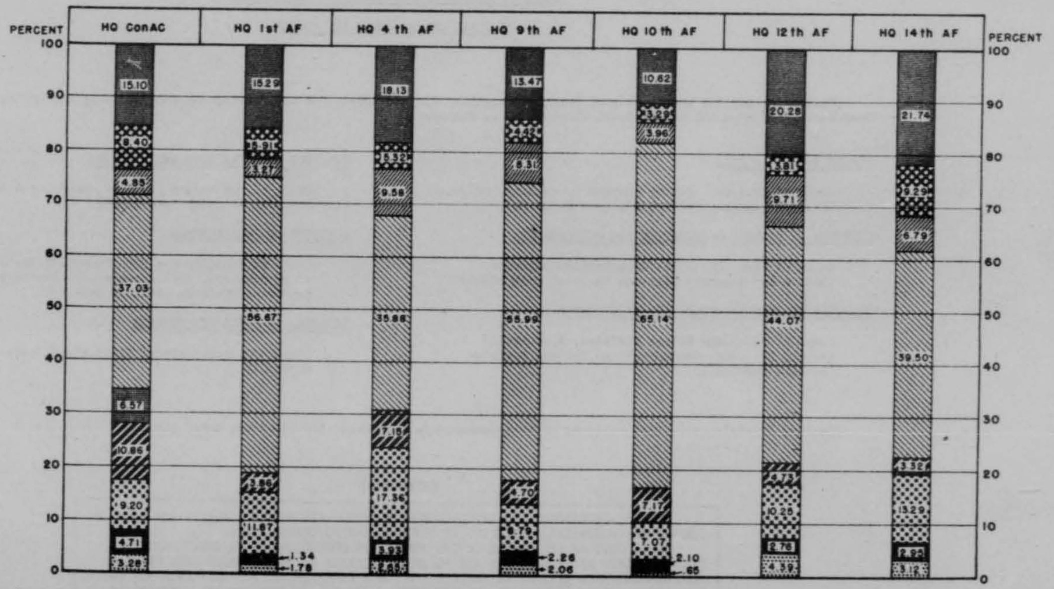
COST OF OFFICE OF THE DEPUTY FOR PERSONNEL
HQ ConAC AND HQ ConAC AIR FORCE
MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



LEGEND

		HQ ConAC	HQ 1st AF	HQ 4th AF	HQ 9th AF	HQ 10th AF	HQ 12th AF	HQ 14th AF
■	DEPUTY FOR PERSONNEL	$ 9,322	$ 5,672	$ 4,125	$ 3,975	$ 3,478	$ 5,030	$ 6,746
▩	DIRECTOR OF PERSONNEL SERVICES	5,187	2,194	1,210	1,303	1,078	946	2,883
▨	DIR. OF MIL. PERS. PROCUREMENT	2,991	1,215	2,181	2,453	1,295	2,407	2,106
▧	DIRECTOR OF MILITARY PERSONNEL	22,857	21,028	8,163	16,517	21,326	10,927	12,257
■	DIRECTOR OF CIVILIAN PERSONNEL	4,055	NR	NR	NR	NR	NR	NR
▨	DIRECTOR OF AIR FORCE ROTC	6,700	1,433	1,628	1,386	2,348	1,172	1,029
○	AIR JUDGE ADVOCATE	5,676	4,406	3,951	2,594	2,315	2,543	4,122
■	AIR CHAPLAIN	2,904	498	895	666	689	685	916
▒	GROUND SAFETY DIVISION	2,024	660	604	607	213	1,089	968
	TOTAL	$ 61,716	$ 37,106	$ 22,757	$ 29,501	$ 32,742	$ 24,799	$ 31,027

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON
COSTS OF OFFICE OF THE DEPUTY FOR OPERATIONS
HQ CONAC AND HQ CONAC AIR FORCES

This chart depicts the total cost (payroll, supplies and services), for the staff group supervised by the Office of the Deputy for Operations, for Hq ConAC and Hq ConAC Air Forces, as follows:

DEPUTY FOR OPERATIONS

Costs of Assistant Deputy and the Operations Analysis Division (Account Code 20303, less 20303.01).

DIRECTOR OF PLANS, ORGANIZATION AND REQUIREMENTS

Costs of Plans Division, Organization Division, Mission Requirements Division (Account Code 20307).

DIRECTOR OF COMMUNICATIONS AND ELECTRONICS

Costs of Plans and Policy Division, Electronics Systems Division, Communications Systems Division (Account Code 20315).

DIRECTOR OF OPERATIONS AND TRAINING

Costs of Operations Division, Training Division, Armament Division (Account Code 20305).

DIRECTOR OF INTELLIGENCE

Costs of Intelligence Requirements Division, Photo Intelligence Division, Intelligence Doctrine Division, Intelligence Estimates Division (Account Code 20311).

DIRECTOR OF CIVIL AIR DEFENSE

Costs of Directorate of Civil Air Defense (Account Code 20303.01).

Costing of staff activities referred to is in accordance with ConAC Ltr 170-1 and ConAC Ltr 170-7.

COMMENT

COST OF DIRECTORATE OF INTELLIGENCE, HQ FIRST AIR FORCE, REFLECTS LOW COST IN COMPARISON TO SIMILAR ACTIVITIES AT OTHER REPORTING HEADQUARTERS.

TOTAL COST OF THE OFFICE OF THE DEPUTY FOR OPERATIONS AT HQ CONAC, AND HQ TENTH, TWELFTH AND FOURTEENTH AIR FORCES, INDICATES A COST INCREASE OVER FEBRUARY 1950 RANGING FROM $111 AT HQ TWELFTH AIR FORCE TO $3,490 AT HQ FOURTEENTH AIR FORCE. THE LATTER AIR FORCE HOWEVER, IS RESPONSIBLE FOR THE SUPERVISION AND TRAINING OF FOUR COMBAT GROUPS, FOUR AFRTC'S AND TWO SEPARATE COMBAT SQUADRONS, TOGETHER WITH A HEAVY MANEUVER COMMITMENT.

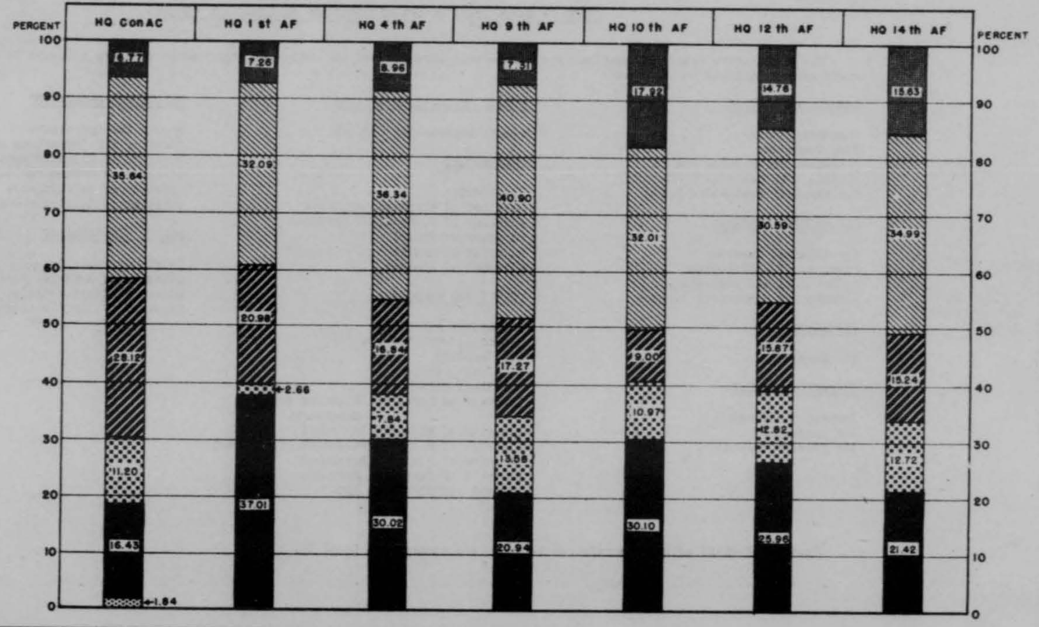
HQ FIRST, FOURTH AND NINTH AIR FORCES REPORT DECREASES OF $641, $491 AND $417, RESPECTIVELY.

COST OF OFFICE OF THE DEPUTY FOR OPERATIONS

HQ ConAC AND HQ ConAC AIR FORCES

MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



-LEGEND-

■	DEPUTY FOR OPERATIONS	$ 5,046	$ 1,323	$ 1,979	$ 1,241	$ 3,011	$ 2,096	$ 3,649
▧	DIR. OF OPERATIONS & TRAINING	26,537	5,844	8,022	6,947	5,380	4,345	8,170
▨	DIR. OF PLANS, ORGN, & RQMTS	20,950	3,820	3,718	2,933	1,512	2,253	3,559
▩	DIRECTOR OF INTELLIGENCE	8,345	485	1,732	2,306	1,844	1,820	2,971
■	DIR. OF COMM & ELECTRONICS	12,241	6,740	6,629	3,557	5,059	3,687	5,002
▦	DIR. OF CIVIL AIR DEFENSE	1,374	NR	NR	NR	NR	NR	NR
	TOTAL	$ 74,493	$ 18,212	$ 22,080	$ 16,984	$ 16,806	$ 14,201	$ 23,351

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON
COSTS OF MAJOR STAFF GROUPS HQ CONAC AND HQ CONAC AIR FORCES

The total costs (payroll, supplies and contractual services) of the following staff activities are included in the major staff groups as shown on the chart:

COMMANDING GENERAL

Commanding General
Vice Commander
Assistant for Reserve Forces
Assistant to the Vice Commander
The Manpower Evaluation Board

AIR ADJUTANT GENERAL

Air Adjutant General
Director of Publications
Director of Administration
Director of Historical Services

AIR SURGEON

Air Surgeon

INSPECTOR GENERAL

Inspector General
Air Inspector
Air Provost Marshal

PUBLIC INFORMATION OFFICER

Public Information Officer

COMPTROLLER

Comptroller
Director of Programs and Costs
Director of Statistical Services
Director of Budget
Director of Audits
Director of Finance

DEPUTY FOR PERSONNEL

Deputy for Personnel
Ground Safety Division
Air Chaplain
Air Judge Advocate
WAF Staff Director
Director of Personnel Planning and Management
Director of Military Personnel
Director of Military Personnel Procurement
Director of Civilian Personnel
Director of Personnel Services
Director of Air Force ROTC

DEPUTY FOR OPERATIONS

Deputy for Operations
Director for Operations and Training
Director of Plans, Organization & Requirements
Director of Communications & Electronics
Director of Intelligence
Director of Civil Air Defense

DEPUTY FOR MATERIEL

Deputy for Materiel
Director of Materiel Planning
Director of Maintenance, Supply & Services
Director of Installations

Costing of staff activities referred to is in accordance with ConAC Ltr 170-7.

COMMENT

COSTS OF THE DEPUTY FOR MATERIEL, HQ TWELFTH AIR FORCE ARE NOT IN LINE WITH COSTS OF SIMILAR ACTIVITY IN OTHER AIR FORCE HEADQUARTERS, BEING $8,358 LESS THAN THE AVERAGE OF $21,829 FOR ALL HQ CONAC AIR FORCES.

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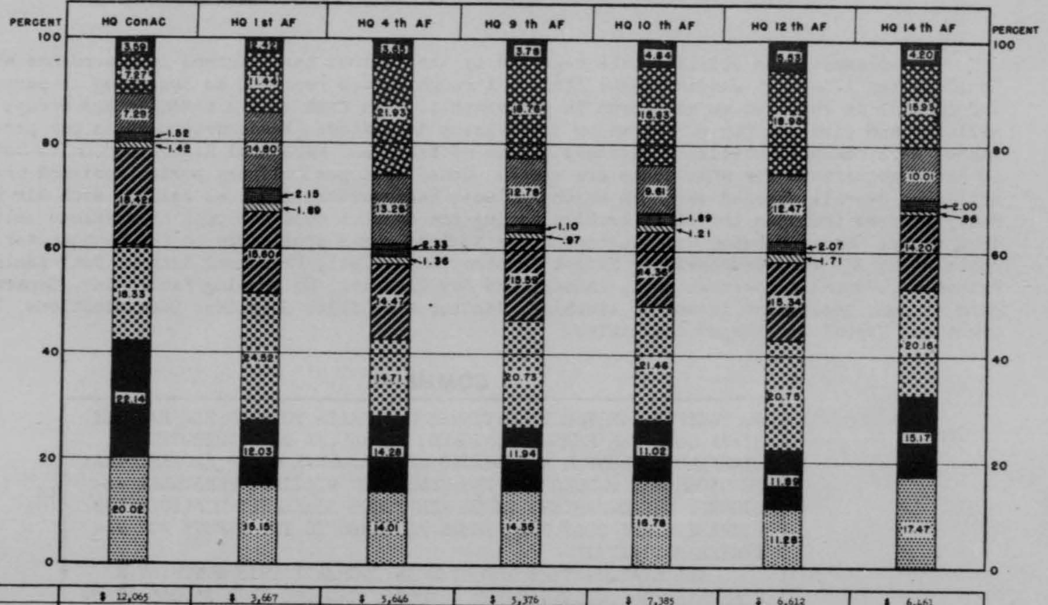
COST OF MAJOR STAFF GROUPS
HQ ConAC AND HQ ConAC AIR FORCES
MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



-LEGEND-

		HQ ConAC	HQ 1st AF	HQ 4 th AF	HQ 9 th AF	HQ 10 th AF	HQ 12 th AF	HQ 14 th AF
■	COMMANDING GENERAL	$ 12,065	$ 3,667	$ 5,646	$ 5,376	$ 7,385	$ 6,612	$ 6,461
▩	AIR ADJUTANT GENERAL	24,460	17,325	33,913	26,691	28,725	22,653	24,515
▨	INSPECTOR GENERAL	24,516	22,403	20,500	18,188	14,660	14,897	15,413
▤	AIR SURGEON	5,117	3,252	3,608	1,565	2,890	2,471	3,082
▧	PUBLIC INFORMATION OFFICER	4,778	2,862	2,097	1,382	1,839	2,039	1,329
▨	COMPTROLLER	61,961	23,620	22,379	22,192	21,910	18,320	21,857
▩	DEPUTY FOR PERSONNEL	61,716	37,106	22,757	29,501	32,742	24,799	31,027
■	DEPUTY FOR OPERATIONS	74,493	18,212	22,080	16,984	16,806	14,201	23,351
░	DEPUTY FOR MATERIEL	67,352	22,935	21,665	20,425	25,591	13,471	26,889
	TOTAL	$ 336,458	$ 151,382	$ 154,645	$ 142,304	$ 152,548	$ 119,463	$ 153,924

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF TABULAR PRESENTATION

ANALYSIS OF HEADQUARTERS COSTS - HQ CONAC AND HQ CONAC AIR FORCES

This presentation utilizes data reported by the various headquarters in accordance with ConAC Letter 170-7, 25 January 1950; items 2 through 10 are reported as described in paragraph 3, and item 11 is reported as set forth in paragraph 4. The Cost of the Headquarters Groups includes military and civilian pay of the major staff group indicated. Headquarters costs per person assigned were computed utilizing military totals of the ConAC Personnel Report for units comparable to the Headquarters for whom costs are shown. ConAC cost per military person assigned was computed utilizing overall command strength which includes Headquarters ConAC as well as each Air Force. Heavy figures indicate the staff section having the highest cost per unit of workload selected for this study. Undistributed Headquarters costs include costs applicable to the Headquarters such as costs of Hq Sq. Adm. Overhead, Hq Flight Section, Motor Pool, Personnel Without Duty Assignment, Prisoners, Rental Allowances paid, Laundry and Dry Cleaning, Hq Messing Facilities, Separate Rations paid airmen, Replacment issues of clothing, Janitor and Office Supplies, Communications, TDY costs, Overtime, Rental for leased facilities.

COMMENT

HQ TWELFTH AIR FORCE CONTINUES GENERALLY TO SHOW THE HIGHEST STAFF COST PER PERSON ASSIGNED. THIS CAN BE ATTRIBUTED TO STAFFING IN NUMBER AND GRADES OF PERSONNEL WHICH EXCEEDS THAT OF OTHER AIR FORCES FOR THE NUMBER OF MILITARY PERSONNEL ASSIGNED. HEADQUARTERS TENTH AIR FORCE SIMILARLY REFLECTS THE HIGHEST STAFF COST PER PERSON ASSIGNED TO THE DEPUTY FOR MATERIEL ACTIVITY.

ALL HEADQUARTERS REPORTED AN INCREASE THIS MONTH OVER FEBRUARY, IN UNDISTRIBUTED CHARGES, RANGING FROM $6,066 AT HQ TWELFTH AIR FORCE TO $18,423 AT HQ CONAC. INCREASE ATTRIBUTED TO TDY, RENTAL ALLOWANCE PAID, MISCELLANEOUS SUPPLIES, FOOD SERVICE AND SUBSISTENCE AND PERSONNEL WITHOUT DUTY ASSIGNMENT. PERSONNEL WITHOUT DUTY ASSIGNMENT INCREASED $1,606 (FROM $2,552 IN FEBRUARY TO $4,158) AT HQ FOURTH AIR FORCE AND $3,377 (FROM $3,359 IN FEBRUARY TO $6,736) AT HQ FOURTEENTH AIR FORCE.

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ANALYSIS OF HEADQUARTERS COSTS
HQ ConAC AND HQ ConAC AIR FORCES
MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950

	ASSIGNED STRENGTH						
	ConAC	1 st AIR FORCE	4 th AIR FORCE	9 th AIR FORCE	10 th AIR FORCE	12 th AIR FORCE	14 th AIR FORCE
1 PERMANENT PARTY TOTAL (LESS PIPELINE)	61,441	11,882	12,337	7,997	8,612	5,469	12,916

COST OF HEADQUARTERS GROUPS

	HQ ConAC	HQ 1 st AF	HQ 4 th AF	HQ 9 th AF	HQ 10 th AF	HQ 12 th AF	HQ 14 th AF
2 COMMANDING GENERAL	$ 12,065	$ 3,667	$ 5,646	$ 5,376	$ 7,385	$ 6,612	$ 6,461
3 AIR ADJUTANT GENERAL	24,460	17,325	33,913	26,691	28,725	22,653	24,515
4 INSPECTOR GENERAL	24,516	22,403	20,500	18,188	14,660	14,897	15,413
5 AIR SURGEON	5,117	3,252	3,608	1,565	2,890	2,471	3,082
6 PUBLIC INFORMATION OFFICER	4,778	2,862	2,097	1,382	1,839	2,039	1,329
7 COMPTROLLER	61,961	23,620	22,379	22,492	21,910	18,320	21,857
8 DEPUTY FOR PERSONNEL	61,716	37,106	22,757	29,501	32,742	24,799	31,027
9 DEPUTY FOR OPERATIONS	74,493	18,212	22,080	16,984	16,806	14,201	23,351
10 DEPUTY FOR MATERIEL	67,352	22,935	21,665	20,425	25,591	13,471	26,889
11 UNDISTRIBUTED HQ COST	156,900	125,264	109,320	161,629	107,583	102,486	170,259
12 TOTAL HEADQUARTERS COSTS	$ 493,358	$ 276,646	$ 263,965	$ 303,933	$ 260,131	$ 221,949	$ 324,183

HEADQUARTERS COST PER PERSON ASSIGNED

13 COMMANDING GENERAL	$ .20	$ .31	$ .46	$ .67	$ .86	$ 1.21	$ .50
14 AIR ADJUTANT GENERAL	.40	1.46	2.75	3.34	3.34	**4.14**	1.90
15 INSPECTOR GENERAL	.40	1.89	1.66	2.27	1.70	**2.72**	1.19
16 AIR SURGEON	.08	.27	.29	.20	.34	**.45**	.24
17 PUBLIC INFORMATION OFFICER	.08	.24	.17	.17	.21	**.37**	.10
18 COMPTROLLER	1.01	1.99	1.81	2.78	2.54	**3.35**	1.69
19 DEPUTY FOR PERSONNEL	1.00	3.12	1.84	3.69	3.80	**4.53**	2.40
20 DEPUTY FOR OPERATIONS	1.21	1.53	1.79	2.12	1.95	**2.60**	1.81
21 DEPUTY FOR MATERIEL	1.10	1.93	1.76	2.55	**2.97**	2.46	2.08
22 UNDISTRIBUTED HQ COST	2.55	10.54	8.86	**20.21**	12.49	18.74	13.18
23 TOTAL HEADQUARTERS COSTS (PER PERSON ASSIGNED)	$ 8.03	$ 23.28	$ 21.39	$ 38.00	$ 30.20	**40.57**	$ 25.09

SOURCE: COST CONTROL REPORT, AF FORM 321, RCS: AF-FO-F22C
CONAC PERSONNEL STRENGTH REPORT, RCS: FS-P2D

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EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF CONTRACTUAL COMMUNICATIONS - HQ CONAC AND HQ CONAC AIR FORCES

The cost of Contractual Communications reflects all payments to commercial organizations for services and includes charges for long distance telephone calls, trunk service, telegraph and cable service, teletype service, charges for rental of commercial telephone service, central office equipment, and the cost of installation of communications equipment as required.

Where commercial service for a headquarters is paid for by the base on which located, the headquarters proportionate share of contractual costs is posted to this account (20527).

The chart reflects the cost variation to date for Contractual Communications since the beginning of Fiscal Year 1950.

COMMENT

EMPHASIS WAS PLACED ON THE REDUCTION OF COSTS OF COMMUNICATION SERVICES IN SEPTEMBER 1949. THIS PRESENTATION MEASURES THE EFFECT OF THIS EMPHASIS IN HQ CONAC AND EACH HQ CONAC AIR FORCE. THERE HAS BEEN A 40% REDUCTION IN COSTS FOR ALL HEADQUARTERS DURING THE NINE MONTHS PERIOD, RANGING FROM 60% AT HQ NINTH AIR FORCE TO 1% AT HQ FOURTEENTH AIR FORCE; HOWEVER, COSTS AT HQ FOURTEENTH AIR FORCE, PRIMARILY THOSE OF TRUNK AND TELEPHONE SERVICE HAVE INCREASED SINCE NOVEMBER. COSTS AT HQ CONAC, PRIMARILY THOSE OF LONG-DISTANCE TELEPHONE CALLS, INCREASED $366 IN FEBRUARY AND THE COST OF TELEPHONE AND EQUIPMENT SERVICE INCREASED $143 IN MARCH.

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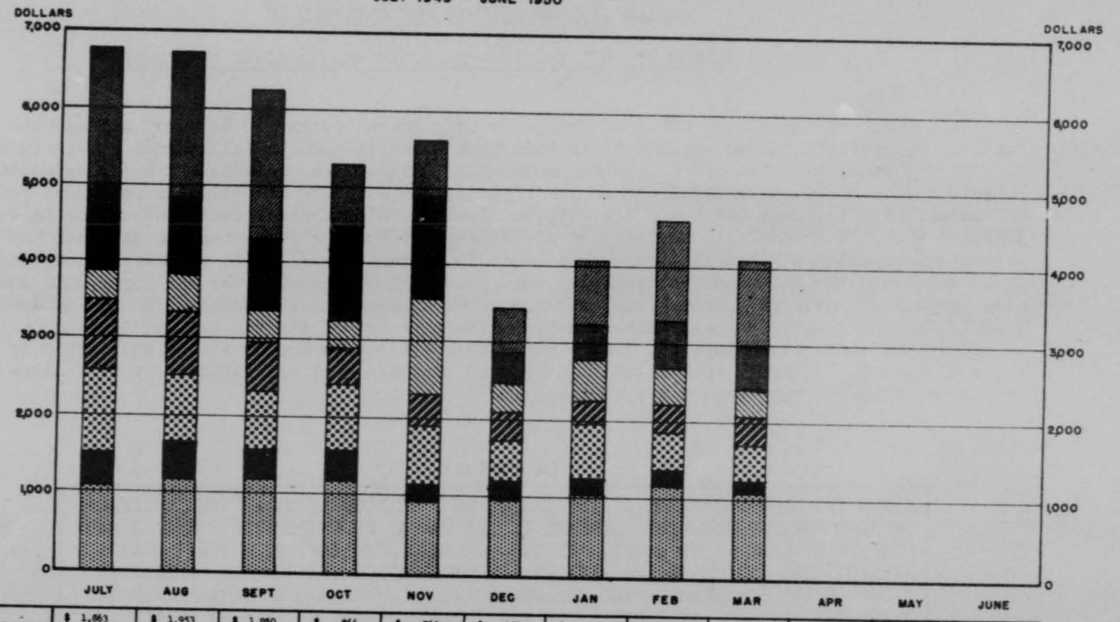
COST OF CONTRACTUAL COMMUNICATIONS

HQ ConAC AND HQ ConAC AIR FORCES

JULY 1949 – JUNE 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



-LEGEND-

		JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
▩	HQ CONAC	$ 1,863	$ 1,953	$ 1,950	$ 866	$ 763	$ 577	$ 886	$ 1,301	$ 1,113	$	$	$
■	HQ 1st AF	1,152	991	937	1,202	1,309	387	427	657	547			
▧	HQ 4th AF	376	535	413	355	1,242	386	508	455	353			
▨	HQ 9th AF	898	809	630	490	394	348	293	329	355			
▦	HQ 10th AF	1,038	840	751	829	784	530	698	448	477			
■	HQ 12th AF	378	499	375	377	199	228	207	200	174			
▒	HQ 14th AF	1,088	1,106	1,178	1,179	911	953	1,056	1,189	1,081			
	TOTAL	$ 6,793	$ 6,733	$ 6,234	$ 5,298	$ 5,602	$ 3,409	$ 4,075	$ 4,579	$ 4,100	$	$	$

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF TEMPORARY DUTY TRAVEL - HQ CONAC AND HQ CONAC AIR FORCES

This chart indicates the trend of Temporary Duty travel costs for Hq ConAC and Hq ConAC Air Forces. Expenditures shown include those from both specific and open allotments and include the cost of Per Diem, Rail Transportation of persons and things, meal tickets and minor expenditures (liquid coffee money, taxi fares and porter's tips), for civilian and military personnel traveling on official business (Account Code 20529). Specific allotments provide for travel in conjunction with the following: Ferrying of Air Force, Air Force Reserve and Air National Guard aircraft, Operation of installations, area cadet recruitment, air combat manuevers, individual or group movements for attendance at schools, travel in conjunction with the Air Force ROTC instruction program at civilian institutions, and summer encampments of Air Force ROTC and Air National Guard. Open allotments normally cover costs incident to travel and per diem of civilian witnesses in connection with courts-martial, travel of medical attendants and escort of military dead to the place of burial. Although cost figures include adjustments over obligations, it is believed that totals for a three month period are comparable.

COMMENT

SINCE THE ACCOMPLISHMENT OF TDY TRAVEL IS CONTINUOUSLY UNDER THE INFLUENCE OF FUND LIMITATIONS, THE INCREASE IN TDY TRAVEL COSTS FOR THE PERIOD 1 JANUARY TO 31 MARCH (3RD QUARTER FY 50) COMPARED WITH THE PRIOR THREE MONTHS, REFLECTS THE INCREASED AVAILABILITY OF FUNDS AFTER THE REMOVAL OF LIMITATIONS ON EXPENDITURES DURING THE 2ND QUARTER. INCREASE IN TOTAL EXPENDITURES WAS $92,000, AN INCREASE OF 54%. MAJOR INCREASES IN COST DURING THE 3RD QUARTER AS COMPARED TO THE 2ND QUARTER OCCURED IN HQ CONAC ($30,000 - 125%), HQ FOURTH AIR FORCE ($18,000 - 106%), HQ NINTH AIR FORCE ($18,000 - 106%) AND HQ FOURTEENTH AIR FORCE ($23,000 - 115%). DURING THIS PERIOD, OPERATION PORTREX WAS IN EFFECT.

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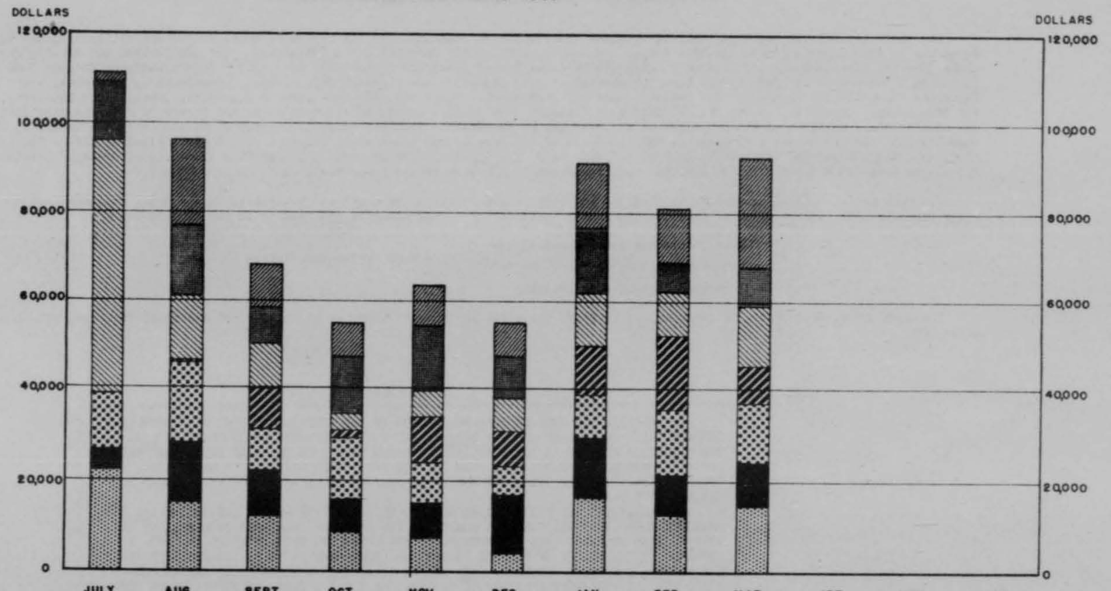
COST OF TEMPORARY DUTY TRAVEL
HQ ConAC AND HQ ConAC AIR FORCES
JULY 1949 - JUNE 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



-LEGEND-

		JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
▨	HQ CONAC	$ 1,856	$ 21,299	$ 9,229	$ 7,246	$ 9,557	$ 7,295	$ 17,581	$ 11,984	$ 24,570	$	$	$
■	HQ 1st AF	13,168	14,240	8,926	8,415	14,492	11,528	11,822	6,598	9,495			
▧	HQ 4th AF	57,668	15,087	9,632	7,405	5,286	4,696	12,203	10,491	13,207			
▨	HQ 9th AF	0	50	8,222	1,993	9,575	5,798	11,172	16,449	8,293			
▩	HQ 10th AF	11,671	18,698	9,406	13,069	9,365	9,051	8,570	13,722	12,596			
■	HQ 12th AF	4,426	11,524	9,839	7,513	7,489	12,198	13,199	8,979	9,409			
▒	HQ 14th AF	22,451	15,238	12,433	8,624	7,408	3,979	16,468	12,687	14,704			
	TOTAL	$ 111,240	$ 96,136	$ 67,687	$ 54,265	$ 63,172	$ 54,545	$ 91,015	$ 80,910	$ 92,274	$	$	$

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON
RELATIVE WORK PERFORMANCE OF SQUADRON ADMINISTRATIVE OVERHEAD

The costs include the combined costs of squadron administrative functions for the following units and/or activities: Hq and Hq Squadrons of Wing Organizations, Air Base Groups (Separate), AFRTCs, Air Base Squadrons (Separate). Aircraft Control and Warning Organizations (Special Mission Group B), Liaison Flights, Fighter and Bomber Squadrons (Separate), and Standby Base Squadrons (Account Code 01020); Hq and Hq Squadrons of Air Base Groups when a component of Wing Organizations (Account Code 02013); Communications Squadrons, Motor Vehicle Squadrons, Installation Squadrons, Air Police Squadrons, Food Service Squadrons, Air Base Service Squadrons, Installation Squadrons, and Air Base Groups (Separate), except Medical Squadrons (Account Code 02014); Maintenance Squadrons of M&S Groups of Wing Organizations and the maintenance activities of M&S Squadrons of Air Base Groups (Separate), (Account Code 05012); Supply Squadrons of M&S Groups of Wing Organizations and the supply activities of M&S Squadrons of Air Base Groups (Separate), (Account Code 05014); Mission Units - Combat Squadrons, Operations Squadrons of Aircraft Control and Warning Groups (Special Mission Group B); Operating companies of Engineer Aviation Battalions (Special Mission Group B) and Operating Squadrons of Air Base Groups (Separate), (Account Code 07014).

The work performance is determined by dividing the total costs of the above mentioned activities by the total military personnel of these organizations (except major or intermediate command headquarters), and applying the results in the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Base Activity}} \text{ X } 100 = \text{Work Performance Rating}$$

The ConAC Standard Cost for these functions is $8.75 for bases having a military strength over 500 and $4.75 for bases with a population under 500.

COMMENT

AT MEMPHIS, THE AVERAGE COST PER PERSON IN THE FUNCTION OF $181 FOR MARCH 1950 COMPARED WITH AN AVERAGE COST OF $137 IN MAY 1949 REPRESENTS AN INCREASE OF 40%. THE NUMBER OF PERSONS IN THE FUNCTION INCREASED FROM 9 TO 24 WHILE THE NUMBER OF PERSONS SERVICED INCREASED LESS THAN 20% FOR THE PERIOD MAY 1949 TO MARCH 1950. THERE APPEARS TO BE AN EXCESSIVE NUMBER OF PERSONS IN THE FUNCTION AS COMPARED TO SIMILAR TYPE BASES.

HENSLEY FIELD REPORTS A RATING OF 324 AND A COST PER PERSON SERVICED OF $2.78. ANALYSIS SHOWS THAT THE COST PER PERSON IN THE FUNCTION INCREASED FROM $115 IN MAY 1949 TO $180 IN MARCH 1950 AN INCREASE OF 57%. DESPITE THIS INCREASE IN COST, A DECREASE IN THE NUMBER OF PERSONS IN THE FUNCTION (FROM 11 TO 8) AND AN INCREASE IN THE NUMBER OF PERSONS SERVICED, (387 IN MAY 1949, 518 IN MARCH 1950) ARE RESPONSIBLE FOR THE HIGH WORK PERFORMANCE RATING. ON A RATIO BASIS, DOBBINS, FLOYD BENNETT, GODMAND AND MEMPHIS HAVE EXCESSIVE NUMBERS OF PERSONNEL IN THE FUNCTION FOR A WORKLOAD COMPARABLE TO THAT AT HENSLEY.

THE OTHER EXTREME IN THIS GROUP IS AT MCGUIRE AFB WITH A LOW WORK PERFORMANCE RATING OF 67 AND A COST PER PERSON OF $13.39. ANALYSIS REVEALS THAT THE AVERAGE COST PER PERSON IN THE FUNCTION IS $181 COMPARED TO $160 IN OCTOBER 1949, OR AN INCREASE OF 13% AFTER THE CAREER COMPENSATION ACT TOOK EFFECT. THIS IS NOT EXCESSIVE. BASED ON THE POPULATION WORKLOAD THE RATIO OF PERSONS IN THE FUNCTION TO PERSONS SERVICED APPEARS TO BE HIGH IN COMPARISON WITH BASES SUCH AS SHAW, STEWART AND POPE, AND ACCOUNTS FOR THE COMPARATIVELY LOW PERFORMANCE RATING.

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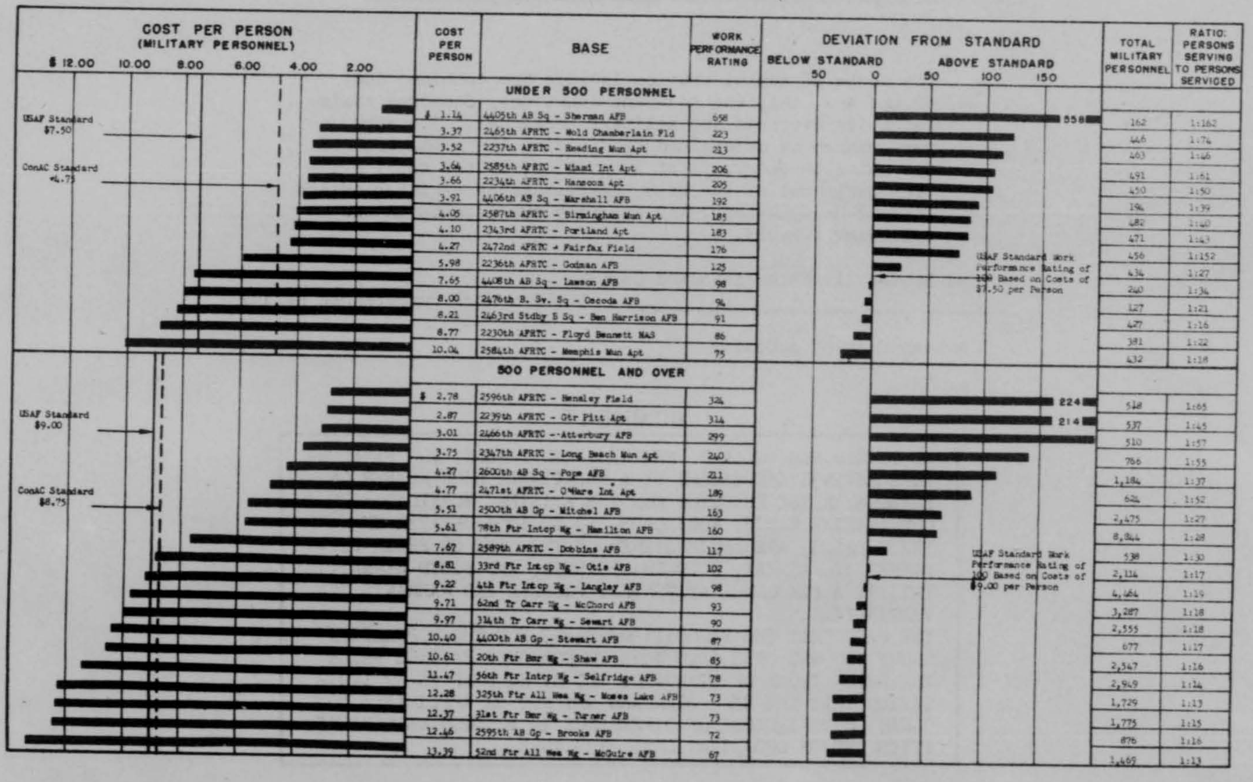
RELATIVE WORK PERFORMANCE OF SQUADRON ADMINISTRATIVE OVERHEAD

MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



USAF Standard Work Performance Rating of 100 Based on Costs of $7.50 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $9.00 per Person

COST PER PERSON	BASE	WORK PERFORMANCE RATING	TOTAL MILITARY PERSONNEL	RATIO: PERSONS SERVING TO PERSONS SERVICED
	UNDER 500 PERSONNEL			
$ 1.14	4405th AB Sq - Sherman AFB	658	162	1:162
3.37	2465th AFRTC - Wold Chamberlain Fld	223	446	1:74
3.52	2237th AFRTC - Reading Mun Apt	213	463	1:46
3.64	2585th AFRTC - Miami Int Apt	206	491	1:61
3.66	2234th AFRTC - Hanscom Apt	205	450	1:50
3.91	4406th AB Sq - Marshall AFB	192	194	1:39
4.05	2587th AFRTC - Birmingham Mun Apt	185	482	1:40
4.10	2343rd AFRTC - Portland Apt	183	471	1:43
4.27	2472nd AFRTC - Fairfax Field	176	456	1:152
5.98	2236th AFRTC - Godman AFB	125	434	1:27
7.65	4408th AB Sq - Lawson AFB	98	240	1:34
8.00	2476th B. Sv. Sq - Oscoda AFB	94	127	1:21
8.21	2463rd Stdby B Sq - Ben Harrison AFB	91	427	1:16
8.77	2230th AFRTC - Floyd Bennett NAS	86	381	1:22
10.04	2584th AFRTC - Memphis Mun Apt	75	432	1:18
	500 PERSONNEL AND OVER			
$ 2.78	2596th AFRTC - Hensley Field	324	518	1:65
2.87	2239th AFRTC - Gtr Pitt Apt	314	537	1:45
3.01	2466th AFRTC - Atterbury AFB	299	510	1:57
3.75	2347th AFRTC - Long Beach Mun Apt	240	766	1:55
4.27	2600th AB Sq - Pope AFB	211	1,184	1:37
4.77	2471st AFRTC - O'Hare Int Apt	189	624	1:52
5.51	2500th AB Gp - Mitchel AFB	163	2,475	1:27
5.61	78th Ftr Intcp Wg - Hamilton AFB	160	8,844	1:28
7.67	2589th AFRTC - Dobbins AFB	117	538	1:30
8.81	33rd Ftr Intcp Wg - Otis AFB	102	2,114	1:17
9.22	4th Ftr Intcp Wg - Langley AFB	98	4,464	1:19
9.71	62nd Tr Carr Wg - McChord AFB	93	3,287	1:18
9.97	314th Tr Carr Wg - Sewart AFB	90	2,555	1:18
10.40	4400th AB Gp - Stewart AFB	87	677	1:17
10.61	20th Ftr Bmr Wg - Shaw AFB	85	2,547	1:16
11.47	56th Ftr Intcp Wg - Selfridge AFB	78	2,949	1:14
12.28	325th Ftr All Wea Wg - Moses Lake AFB	73	1,729	1:13
12.37	31st Ftr Bmr Wg - Turner AFB	73	1,775	1:15
12.46	2595th AB Gp - Brooks AFB	72	876	1:16
13.39	52nd Ftr All Wea Wg - McGuire AFB	67	1,469	1:13

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

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EXPLANATION OF GRAPHIC PRESENTATION ON RELATIVE WORK PERFORMANCE OF COST OF ADMINISTRATION

The costs of Administration include the combined cost of the A-1, S-1, and Adjutant functions, Squadron Administrative Overhead and Military Personnel. The work performance is determined by dividing the total cost of the above three groups of activities, by the total military personnel of the base, (except major or intermediate command headquarters) and applying the results in the following formula.

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Activity}} \times 100 = \text{Work Performance Rating}$$

COMMENT

AT BIRMINGHAM, GODMAN, MEMPHIS, AND LAWSON, LOW PERFORMANCE RATINGS ARE CAUSED BY A RELATIVELY HIGH NUMBER OF PERSONS IN THE FUNCTION FOR THE EXISTENT WORKLOAD. ON A COMPARATIVE BASIS, WORKLOADS, 50 TO 100% GREATER THAN THESE BASES, ARE ADMINISTERED BY THE SAME OR FEWER PERSONNEL AT FAIRFAX, WOLD-CHAMBERLAIN, AND FLOYD BENNETT. THIS IS A PERSONNEL ASSIGNMENT PROBLEM AND WARRANTS INVESTIGATION.

THE FACT THAT THE MAJORITY OF BASES FOR THE POPULATION GROUP 500 AND OVER SHOW WORK PERFORMANCE RATINGS WHICH ARE BELOW THOSE OF STANDARDS SET BY HQ USAF IS AN INDICATION THAT THE USAF STANDARD MAY NOT BE APPLICABLE TO CONAC UNITS BECAUSE OF DIFFERENCE IN MISSION RESPONSIBILITIES AND/OR ORGANIZATIONAL STRUCTURE.

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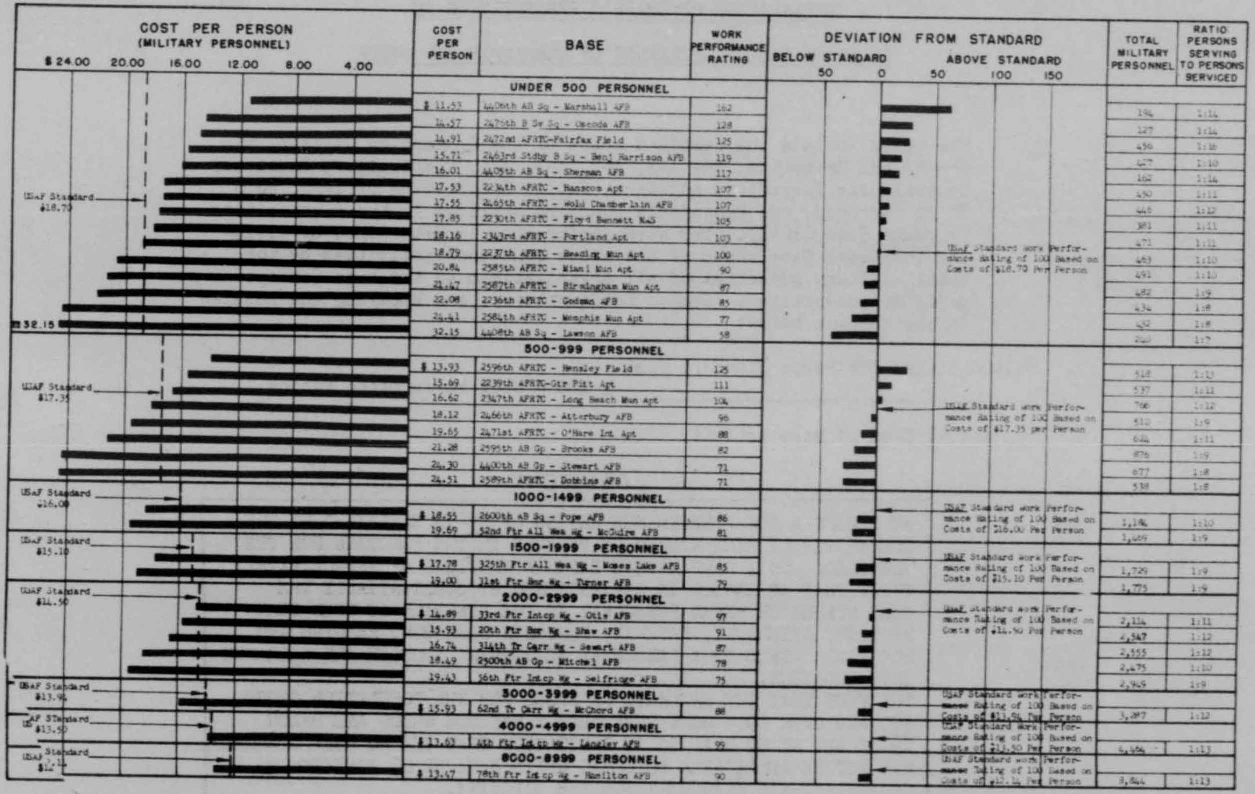
RELATIVE WORK PERFORMANCE OF COST OF ADMINISTRATION

MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



COST PER PERSON	BASE	WORK PERFORMANCE RATING	TOTAL MILITARY PERSONNEL	RATIO PERSONS SERVING TO PERSONS SERVICED
	UNDER 500 PERSONNEL			
$ 11.53	4406th AB Sq - Marshall AFB	162	194	1:14
14.57	2475th B Sv Sq - Oscoda AFB	128	127	1:14
14.91	2472nd AFRTC-Fairfax Field	125	456	1:16
15.71	2463rd Stdby B Sq - Benj Harrison AFB	119	427	1:10
16.01	4405th AB Sq - Sherman AFB	117	162	1:14
17.53	2234th AFRTC - Hanscom Apt	107	450	1:11
17.55	2465th AFRTC - Wold Chamberlain AFB	107	446	1:12
17.85	2230th AFRTC - Floyd Bennett NAS	105	381	1:11
18.16	2343rd AFRTC - Portland Apt	103	471	1:11
18.79	2237th AFRTC - Reading Mun Apt	100	463	1:10
20.84	2585th AFRTC - Miami Mun Apt	90	491	1:10
21.47	2587th AFRTC - Birmingham Mun Apt	87	482	1:9
22.08	2236th AFRTC - Godman AFB	85	434	1:8
24.41	2584th AFRTC - Memphis Mun Apt	77	432	1:8
32.15	4408th AB Sq - Lawson AFB	58	260	1:7
	500-999 PERSONNEL			
$ 13.93	2596th AFRTC - Hensley Field	125	518	1:13
15.69	2239th AFRTC-Gtr Pitt Apt	111	537	1:12
16.62	2347th AFRTC - Long Beach Mun Apt	104	766	1:12
18.12	2466th AFRTC - Atterbury AFB	96	510	1:9
19.65	2471st AFRTC - O'Hare Int Apt	88	624	1:11
21.28	2595th AB Gp - Brooks AFB	82	876	1:9
24.30	4400th AB Gp - Stewart AFB	71	677	1:8
24.51	2589th AFRTC - Dobbins AFB	71	538	1:8
	1000-1499 PERSONNEL			
$ 18.55	2600th AB Sq - Pope AFB	86	1,184	1:10
19.69	52nd Ftr All Wea Wg - McGuire AFB	81	1,489	1:9
	1500-1999 PERSONNEL			
$ 17.78	325th Ftr All Wea Wg - Moses Lake AFB	85	1,729	1:9
19.00	31st Ftr Bmr Wg - Turner AFB	79	1,775	1:9
	2000-2999 PERSONNEL			
$ 14.89	33rd Ftr Intcp Wg - Otis AFB	97	2,114	1:11
15.93	20th Ftr Bmr Wg - Shaw AFB	91	2,347	1:12
16.74	314th Tr Carr Wg - Sewart AFB	87	2,555	1:12
18.49	2500th AB Gp - Mitchel AFB	78	2,475	1:10
19.43	56th Ftr Intcp Wg - Selfridge AFB	75	2,949	1:9
	3000-3999 PERSONNEL			
$ 15.93	62nd Tr Carr Wg - McChord AFB	88	3,287	1:12
	4000-4999 PERSONNEL			
$ 13.63	4th Ftr Intcp Wg - Langley AFB	99	4,464	1:13
	8000-8999 PERSONNEL			
$ 13.47	78th Ftr Intcp Wg - Hamilton AFB	90	8,844	1:13

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323
RCS: AF-FO-F30

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EXPLANATION OF GRAPHIC PRESENTATION ON

RELATIVE WORK PERFORMANCE OF COMMANDER AND STAFF

The costs include the combined costs of the Commanding Officer, his Deputy and Executive, the A-1, A-2, A-3, A-4, Comptroller, Inspector General, Air Inspector, Adjutant, Public Information Officer, Hq & Hq Sq Overhead, and Expendable Supplies utilized in these activities (Account Code 01051). The work performance is determined by dividing the total Base costs of the above mentioned activities by the total military personnel of all organizations on the base (except major or intermediate command headquarters), and applying the results in the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Base Activity}} \text{ X } 100 = \text{Work Performance Rating}$$

COMMENT

AT LAWSON A LOW PERFORMANCE RATING OF 59 IS EXPLAINED BY THE COMPARATIVELY HIGH NUMBER OF PERSONS IN THE FUNCTION FOR THE WORKLOAD. ON A COMPARATIVE BASIS A WORKLOAD OF APPROXIMATELY TWICE THAT AT LAWSON IS ADMINISTERED BY SUBSTANTIALLY THE SAME NUMBER OR FEWER PERSONNEL IN THE FUNCTION AT WOLD-CHAMBERLAIN, ATTERBURY, FAIRFAX, BENJAMIN HARRISON, READING AND PORTLAND. THIS IS A PERSONNEL ASSIGNMENT PROBLEM AND WARRANTS INVESTIGATION.

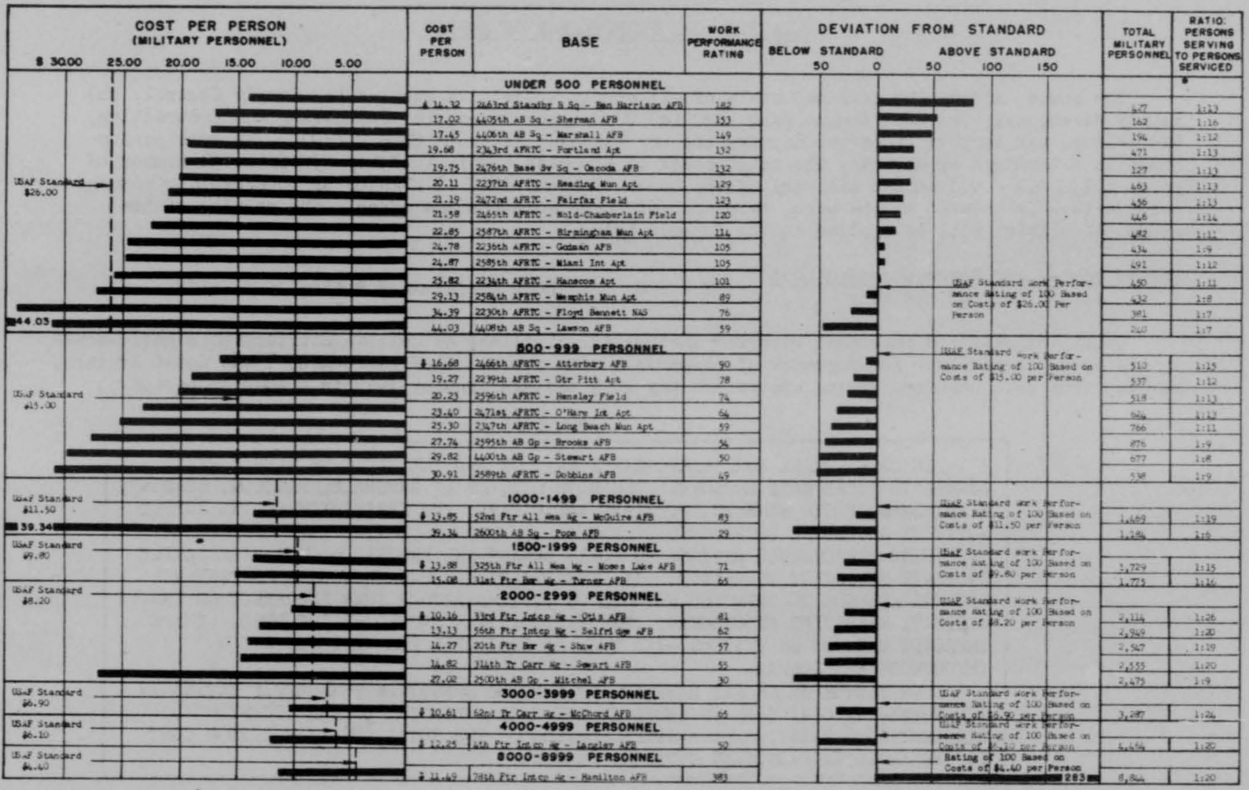
THE FACT THAT THE MAJORITY OF BASES FOR THE POPULATION GROUP 500 AND OVER SHOW WORK PERFORMANCE RATINGS WHICH ARE BELOW THOSE SET BY HQ USAF IS AN INDICATION THAT THE HQ USAF STANDARD MAY NOT BE APPLICABLE TO CONAC UNITS BECAUSE OF DIFFERENCES IN ORGANIZATIONAL ALIGNMENT FOR THE ACTIVITY.

RESTRICTED

RELATIVE WORK PERFORMANCE OF COMMANDER AND STAFF

MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



USAF Standard Work Performance Rating of 100 Based on Costs of $26.00 Per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $15.00 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $11.50 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $9.80 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $8.20 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $6.90 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $6.10 per Person

Rating of 100 Based on Costs of $4.40 per Person

COST PER PERSON	BASE	WORK PERFORMANCE RATING	TOTAL MILITARY PERSONNEL	RATIO: PERSONS SERVING TO PERSONS SERVICED *
	UNDER 500 PERSONNEL			
$ 14.32	2463rd Standby B Sq - Ben Harrison AFB	182	427	1:13
17.02	4405th AB Sq - Sherman AFB	153	162	1:16
17.45	4406th AB Sq - Marshall AFB	149	194	1:12
19.68	2343rd AFRTC - Portland Apt	132	471	1:13
19.75	2476th Base Sv Sq - Oscoda AFB	132	127	1:13
20.11	2237th AFRTC - Reading Mun Apt	129	463	1:13
21.19	2472nd AFRTC - Fairfax Field	123	456	1:13
21.58	2465th AFRTC - Wold-Chamberlain Field	120	446	1:14
22.85	2587th AFRTC - Birmingham Mun Apt	114	482	1:11
24.78	2236th AFRTC - Godman AFB	105	434	1:9
24.87	2585th AFRTC - Miami Int Apt	105	491	1:12
25.82	2234th AFRTC - Hanscom Apt	101	450	1:11
29.13	2584th AFRTC - Memphis Mun Apt	89	432	1:8
34.39	2230th AFRTC - Floyd Bennett NAS	76	381	1:7
44.03	4408th AB Sq - Lawson AFB	59	240	1:7
	500-999 PERSONNEL			
$ 16.68	2466th AFRTC - Atterbury AFB	90	510	1:15
19.27	2239th AFRTC - Gtr Pitt Apt	78	537	1:12
20.23	2596th AFRTC - Hensley Field	74	518	1:13
23.40	2471st AFRTC - O'Hare Int Apt	64	944	1:13
25.30	2347th AFRTC - Long Beach Mun Apt	59	766	1:11
27.74	2595th AB Gp - Brooks AFB	54	876	1:9
29.82	4400th AB Gp - Stewart AFB	50	677	1:8
30.91	2589th AFRTC - Dobbins AFB	49	538	1:9
	1000-1499 PERSONNEL			
$ 13.85	52nd Ftr All Wea Wg - McGuire AFB	83	1,469	1:19
39.34	2600th AB Sq - Pope AFB	29	1,184	1:6
	1500-1999 PERSONNEL			
$ 13.88	325th Ftr All Wea Wg - Moses Lake AFB	71	1,729	1:15
15.08	31st Ftr Bmr Wg - Turner AFB	65	1,775	1:16
	2000-2999 PERSONNEL			
$ 10.16	33rd Ftr Intcp Wg - Otis AFB	81	2,114	1:26
13.13	56th Ftr Intcp Wg - Selfridge AFB	62	2,949	1:20
14.27	20th Ftr Bmr Wg - Shaw AFB	57	2,547	1:19
14.82	314th Tr Carr Wg - Sewart AFB	55	2,555	1:20
27.02	2500th AB Gp - Mitchel AFB	30	2,475	1:9
	3000-3999 PERSONNEL			
$ 10.61	62nd Tr Carr Wg - McChord AFB	66	3,287	1:24
	4000-4999 PERSONNEL			
$ 12.25	4th Ftr Intcp Wg - Langley AFB	50	4,464	1:20
	8000-8999 PERSONNEL			
$ 11.49	78th Ftr Intcp Wg - Hamilton AFB	283	8,844	1:20

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323
RCS: AF-FO-F30

EXPLANATION OF GRAPHIC PRESENTATION ON

RELATIVE WORK PERFORMANCE OF SUPPLY

The costs include the combined costs of all supply activities such as (a) Supply Control, (b) Supply Warehouses, (c) Subsistence Handling, (d) Commissary Sales, (e) Purchasing and Contracting, (f) Salvage and Surplus Property, Laundry and Dry Cleaning (Account Code 05450). The work performance is determined by dividing the total costs of the base supply activity by the total number of personnel, both civilian and military of the base. In addition, if a major or intermediate command headquarters is located on the base, personnel of those commands are added. The results of the above calculation will be applied to the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Activity}} \quad \text{X} \quad 100 \quad = \quad \text{Work Performance Rating}$$

Total installation personnel reported include all civilians as well as military personnel served by the supply activity. For purposes of comparison with overall USAF performance, the ConAC Average, derived from data reported during the period May 1949 through January 1950 is presented hereon.

COMMENT

IN CASES WHERE WORK PERFORMANCE RATINGS AND THE RATIO OF SUPPLY PERSONNEL TO TOTAL BASE PERSONNEL ARE BOTH LOW, AS AT MARSHALL, HANSCOM, READING, BIRMINGHAM, FLOYD BENNETT, PORTLAND AND O'HARE, THE EFFICIENCY OF THE SUPPLY ACTIVITY SHOULD BE CONSIDERED.

HIGH PERFORMANCE RATINGS AT POPE, SEWART AND BROOKS, DO NOT NECESSARILY INDICATE EFFICIENT OPERATION. IF INVESTIGATION SHOWS THAT HIGH PERFORMANCE RATINGS ARE DUE TO IMPROVED METHODS OR SYSTEMS RATHER THAN INCORRECT OR INADEQUATE REPORTING PROCEDURES, THIS HEADQUARTERS SHOULD BE INFORMED. THESE IMPROVED METHODS OR SYSTEMS WILL THEN BE AVAILABLE FOR IMPLEMENTATION THROUGHOUT THE COMMAND.

ONE FACTOR WHICH MAY HAVE AN INFLUENCING EFFECT ON THE SUPPLY RATING IS THE NUMBER OF CIVILIANS INCLUDED IN THE BASE STRENGTH: UNLESS EXCEPTIONAL CIRCUMSTANCES EXIST, ONLY A SMALL PORTION OF THE TOTAL SUPPLY FUNCTION COST IS INCREASED IN SERVICING CIVILIAN PERSONNEL.

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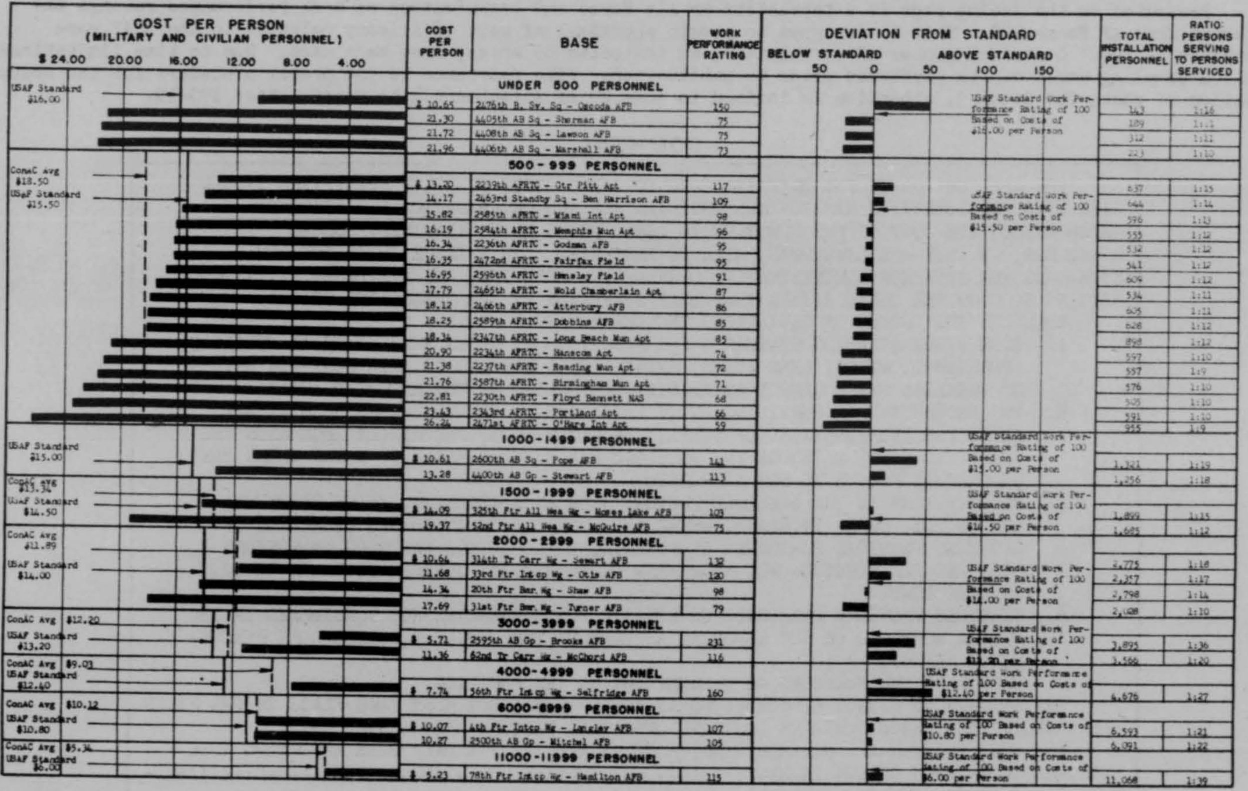
RELATIVE WORK PERFORMANCE OF SUPPLY

MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



COST PER PERSON	BASE	WORK PERFORMANCE RATING	TOTAL INSTALLATION PERSONNEL	RATIO: PERSONS SERVING TO PERSONS SERVICED
	UNDER 500 PERSONNEL			
$ 10.65	2476th B. Sv. Sq - Oscoda AFB	150	143	1:16
21.30	4405th AB Sq - Sherman AFB	75	189	1:11
21.72	4408th AB Sq - Lawson AFB	75	312	1:11
21.96	4406th AB Sq - Marshall AFB	73	223	1:10
	500 - 999 PERSONNEL			
$ 13.20	2239th AFRTC - Gtr Pitt Apt	117	637	1:15
14.17	2463rd Standby Sq - Ben Harrison AFB	109	644	1:14
15.82	2585th AFRTC - Miami Int Apt	98	596	1:13
16.19	2584th AFRTC - Memphis Mun Apt	96	555	1:12
16.34	2236th AFRTC - Godman AFB	95	532	1:12
16.35	2472nd AFRTC - Fairfax Field	95	541	1:12
16.95	2596th AFRTC - Hensley Field	91	609	1:12
17.79	2465th AFRTC - Wold Chamberlain Apt	87	534	1:11
18.12	2466th AFRTC - Atterbury AFB	86	605	1:11
18.25	2589th AFRTC - Dobbins AFB	85	628	1:12
18.34	2347th AFRTC - Long Beach Mun Apt	85	898	1:12
20.90	2234th AFRTC - Hanscom Apt	74	597	1:10
21.38	2237th AFRTC - Reading Mun Apt	72	557	1:9
21.76	2587th AFRTC - Birmingham Mun Apt	71	576	1:10
22.81	2230th AFRTC - Floyd Bennett NAS	68	505	1:10
23.43	2343rd AFRTC - Portland Apt	66	591	1:10
26.24	2471st AFRTC - O'Hare Int Apt	59	955	1:9
	1000 - 1499 PERSONNEL			
$ 10.61	2600th AB Sq - Pope AFB	141	1,321	1:19
13.28	4400th AB Gp - Stewart AFB	113	1,256	1:18
	1500 - 1999 PERSONNEL			
$ 14.09	325th Ftr All Wea Wg - Moses Lake AFB	103	1,899	1:15
19.37	52nd Ftr All Wea Wg - McGuire AFB	75	1,685	1:12
	2000 - 2999 PERSONNEL			
$ 10.64	314th Tr Carr Wg - Sewart AFB	132	2,775	1:18
11.68	33rd Ftr Intcp Wg - Otis AFB	120	2,357	1:17
14.34	20th Ftr Bmr Wg - Shaw AFB	98	2,798	1:14
17.69	31st Ftr Bmr Wg - Turner AFB	79	2,028	1:10
	3000 - 3999 PERSONNEL			
$ 5.71	2595th AB Gp - Brooks AFB	231	3,895	1:36
11.36	62nd Tr Carr Wg - McChord AFB	116	3,566	1:20
	4000 - 4999 PERSONNEL			
$ 7.74	56th Ftr Intcp Wg - Selfridge AFB	160	4,676	1:27
	6000 - 6999 PERSONNEL			
$ 10.07	4th Ftr Intcp Wg - Langley AFB	107	6,593	1:21
10.27	2500th AB Gp - Mitchel AFB	105	6,091	1:22
	11000 - 11999 PERSONNEL			
$ 5.23	78th Ftr Intcp Wg - Hamilton AFB	115	11,068	1:39

USAF Standard Work Performance Rating of 100 Based on Costs of $16.00 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $15.50 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $15.00 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $14.50 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $14.00 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $13.20 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $12.40 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $10.80 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $6.00 per Person

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

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EXPLANATION OF TABULAR PRESENTATION ON WORK PERFORMANCE RATINGS

Presented on the facing page is a tabulation by Air Force and organization of Work Performance ratings extracted from AF Forms 323. This is designed to permit appraisal of unit efficiency relative to the USAF performance of 100. A minimum number of corrections, as indicated by notes, have been made. Due to time limitations, only a sampling audit can be performed prior to publication. With reference to the proper procedure for the accumulation of costs for Group 3, attention is invited to item 20 of Attachment 1 to ConAC Letter 170-1B.

COMMENT

THE APPLICATION OF THE USAF STANDARD TO CONAC UNITS BY STAFF ACTIVITIES SHOULD TAKE INTO CONSIDERATION MISSION RESPONSIBILITIES AND ORGANIZATIONAL DIFFERENCES WHICH AFFECT THE COST OF THE FUNCTION IN CONAC UNITS BEING EXAMINED. CONAC STANDARDS, AS THEY ARE DEVELOPED, WILL BE PRESENTED. THIS ISSUE INDICATES CONAC STANDARDS FOR SQUADRON ADMINISTRATIVE OVERHEAD. WHERE THEY ARE AVAILABLE, IT IS MORE FITTING TO CONSIDER CONAC RATHER THAN USAF STANDARDS AS THE "MEASURING STICK".

NORMALLY THE CAUSES OF DEVIATIONS INCLUDE THE FOLLOWING:

A. HIGH T/O&E STAFFING STANDARDS FOR FUNCTIONS AT BASES WHERE A SMALL WORKLOAD (PERSONNEL, MILES, LINE ITEMS) EXIST. THIS RESULTS IN HIGH COST PER UNIT OF WORKLOAD WHICH CANNOT BE READILY CONTROLLED BY THE REPORTING UNIT.

B. THE NECESSITY FOR SERVICING UNITS WHICH ARE WIDELY DISPERSED SUCH AS MAY EXIST FOR THE FUNCTIONS OF SUPPLY, OR MOTOR POOL, ABNORMALLY INCREASES THE OPERATING COST, ALTHOUGH THE WORKLOAD MAY BE COMPARABLE TO BASES WHERE THE GEOGRAPHIC FACTOR IS NOT A PROBLEM.

C. FLUCTUATIONS IN THE WORKLOAD FACTOR, SUCH AS A DECREASE, WHERE PERSONNEL ARE ON TDY, OR AN INCREASE, WHERE THE WORKLOAD IS INCREASED BY REASON OF SERVICES PROVIDED PERSONNEL TEMPORARILY ATTACHED FOR TRAINING, MANUEVERS ETC, AND THE FUNCTION NOT AUGMENTED OR REDUCED TO CONFORM TO THESE CHANGES IN WORK LOAD.

D. SERVICES PROVIDED PERSONNEL OF NON-AIR FORCE AGENCIES NOT CONSIDERED IN THE NORMAL WORKLOAD OR NOT REPORTED AS PART OF THE WORKLOAD ON THE WORK PERFORMANCE REPORT.

E. TEMPORARY UNDERMANNING OR OVERMANNING OF THE FUNCTION.

INVESTIGATIONS CANNOT BE CONDUCTED AT "DESK" LEVEL BUT MUST TAKE PLACE IN THE FIELD WHERE ACTIVITIES WHICH GENERATE COST AND OPERATING FACTORS ARE CARRIED ON.

THE 52ND FIGHTER-ALL WEATHER WING, MCGUIRE AFB, IS THE ONLY BASE REPORTING WORK PERFORMANCE RATINGS (SHOWN IN HEAVY PRINT) WHICH ARE BELOW STANDARD FOR ALL ACTIVITIES INCLUDED IN THIS SUMMARY.

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WORK PERFORMANCE RATINGS *
CONTINENTAL AIR COMMAND
MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950

BASE	FUNCTION OR GROUP										
	A-1, S-1 & ADJUTANT (GROUP 1)	SQ ADM OVERHEAD (GROUP 2)	MILITARY PERSONNEL (GROUP 3)	COST OF ADMINISTRATION (GROUP 4)	COMMANDER & STAFF (GROUP 5)	TOTAL ADM & SERVICES (GROUP 6)	SUPPLY (GROUP 7)	TOT. MAINT & SUPPLY (1) (GROUP 8)	MOTOR POOL (GROUP 9)	MAINT-AUTO & G.P.E. (GROUP 10)	PERSONNEL SERVICES (GROUP 11)
FIRST AIR FORCE											
33d Ftr-Intcp Wg - Otis AFB	91	102	88	97	81	78	120	98	144	89	85
52d Ftr A/W Wg - McGuire AFB	75	67	NPC (3)	81	83	74	75	(1)	89	76	91
2230th AFRTC - Floyd Bennett NAS	83	86	202	105	76	93 (2)	68	(1)	103	68	276
2234th AFRTC - Hanscom Apt	111	205	66	107	101	74	74	(1)	123	93	101
2500th AB Gp - Mitchel AFB	48	163	29	78	30	68	105	128	114	94	82
4400th AB Gp - Stewart AFB	61	87	58	71	50	79	113	(1)	93	75	106
FOURTH AIR FORCE											
78th Ftr-Intcp Wg - Hamilton AFB	68	160	9	90	383	91	115	117	71	175	107
62d Tr Carr Wg - McChord AFB	66	93	NPC (3)	88	65	77	116	107	83	103	140
325th Ftr A/W Wg - Moses Lake AFB	90	73	400	85	71	67	103	(1)	159	152	100 (2)
2343d AFRTC - Portland Apt	104	183	64	103 (5)	132	82	66	(1)	93	348	83
2347th AFRTC - Long Beach Mun Apt	131	240 (5)	38	104	59	109	85 (5)	(1)	79	110	91
NINTH AIR FORCE											
4th Ftr-Intcp Wg - Langley AFB	88	98	NPC (3)	99	50	84	107	110	146	132	95
2236th AFRTC - Godman AFB	93	125	58	85	105	97	95 (2)	(1)	62	132	NPC (3)
2237th AFRTC - Reading Mun Apt	81	213	68	100 (5)	129 (5)	85	72	(1)	146	149	102
2239th AFRTC - Gtr Pittsburgh Apt	100	313	44	111	78	86	117	(1)	64	118	364
TENTH AIR FORCE											
56th Ftr-Intcp Wg - Selfridge AFB	65	78	92	75	62	93	160 (5)	155	120	157	116
2465th AFRTC - Wold-Chamberlain Fld	127	223 (5)	61	107	120	94 (2)	87 (2)	(1)	95	1,012	107
2466th AFRTC - Atterbury AFB	159	299	29	96	90	81	86	(1)	82	196	221
2471st AFRTC - O'Hare Int Apt	88	189	37	88	64	63	59	(1)	86	72	155
2472d AFRTC - Fairfax Fld	139	176	88	125	123	101 (2)	95 (2)	(1)	77	106	237
4405th AB Sq - Sherman AFB	51	658 (5)	121	117	153	37	75	(1)	65	85	206
4406th AB Sq - Marshall AFB	107	192	210	162 (5)	149	56	73	(1)	186	336	279
2463d Standby Base Sq - Benj Harr AFB	105 (2)	91 (2)	227 (2)	119 (2)	182 (2)	716	109 (2)	(1)	253	177	NPC (3)
2476th Base Service Sq - Oscoda AFB	76	94	NPC (3)	128 (5)	132	53	150	(1)	64	NPC (3)	200
TWELFTH AIR FORCE											
2596th AFRTC - Hensley Fld	123	324	48	125	74	96	91	(1)	167	55	84
2595th AB Gp - Brooks AFB	79	72	132	82	54	185	231 (2)	327	123	194	164
FOURTEENTH AIR FORCE											
314th Tr Carr Wg - Sewart AFB	72	90	169	87	55	97	132	106	78	109	98
20th Ftr-Bmr Wg - Shaw AFB	85	85	76	91	57	88	98	117	110	200	88
31st Ftr-Bmr Wg - Turner AFB	69 (2)	73	NPC (3)	79 (2)	65 (2)	81	79	97	137	122	127 (2)
2584th AFRTC - Memphis Mun Apt	87	75	72	77	89	89	96	(1)	92	220	97
2585th AFRTC - Miami Int Apt	88	206	57	90	105	100	98	(1)	133	132	116
2587th AFRTC - Birmingham Mun Apt	73	185	58	87	114	93 (2)	71 (2)	(1)	83	60	59
2589th AFRTC - Dobbins AFB	64	117	32	71 (4)	49	81	85	(1)	117	159	56
2600th AB Sq - Pope AFB	47	211	53	86	29	97	141	(1)	173	362	218
4408th AB Sq - Lawson AFB	39	98	53	58	59	45	75	(1)	107	102	99

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

* RATING FOR COST EQUAL TO USAF STANDARD IS 100

NOTE: (1) LESS THAN 2000 TOTAL POPULATION NOT REQUIRED TO REPORT FOR GROUP 8
(2) CORRECTED RATING COMPUTED AT HQ CONAC, INCORRECT STANDARDS APPLIED BY BASE ANALYST ACCOMPLISHING AF FORM 323
(3) NO PERSONNEL COSTED (NPC)
(4) TOTAL COST INCORRECTLY ADDED ON AF FORM 323
(5) MATHEMATICAL ERROR; CORRECTED AT HQ CONAC

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EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF SERVING THE RATION

This chart shows the cost of serving the ration at Continental Air Command Bases reporting Food Service, Subsistence Handling and Subsistance Costs. Costs of the Food Supervisor, Hq ConAC and Hq each numbered Air Force are not included since these functions service all units of the respective commands and do not materially affect the costs of the function described in this presentation.

The Food Service account includes the cost of the Base Food Supervisor and personnel necessary to direct and operate dining halls for airmen, the officer's mess and other central food activities such as bakeries. The Subsistence Handling account includes the costs incurred in the receipt, issue and distribution of subsistence. The Subsistence account includes the cost of the ration; this cost was not added as a cost, to the cost of serving the ration but was used as explained below. Subsistence costs of headquarters, tenant and special mission organizations as described in AF Manual 170-5 are reported under the organization providing the services, such as the Wings, Air Base Groups or Squadrons, or AFRTC's.

The number of rations served was obtained from the Commissary Operating Statement (WD AGO Form 10-133) for those bases submitting this statement. Where bases did not submit the Commissary Operating Statement, the number of rations was computed by dividing the total cost of subsistence by the ration value. If the field ration value was not available, the garrison ration value was used.

The cost of serving the ration was computed by dividing the total cost of the function (Food Service Costs plus Subsistence Handling Costs) by the number of rations served. The cost of the ration furnished is not included in costs of the function presented here, but was used to determine the number of rations served as explained above.

Averages were computed after eliminating the "extreme deviations from average" as indicated on the chart.

COMMENT

THE AVERAGE COST OF SERVING THE RATION DECREASED GENERALLY IN FEBRUARY OVER JANUARY FOR WINGS, AIR BASE GROUPS AND SQUADRONS DUE PRIMARILY TO CONSIDERABLE REDUCTIONS IN PERSONNEL IN THE FUNCTION. EXCEPTIONS EXIST AT OTIS WHERE INCREASES IN PERSONNEL AND COSTS ACCOUNT FOR A HIGHER COST PER RATION SERVED, AND AT MITCHEL AND KIRTLAND WHERE THE INCREASE IS CAUSED BY A SUBSTANTIAL REDUCTION IN THE NUMBER OF RATIONS SERVED.

NINE AFRTC'S SHOW INCREASES IN THE COST OF SERVING THE RATION. INCREASES IN PERSONNEL AND COSTS IN THE FUNCTION, WITH FEWER RATIONS SERVED, WERE THE PRIMARY FACTORS CONTRIBUTING TO THIS INCREASE.

LARGE INCREASES IN THE COST OF SERVING THE RATION IN FEBRUARY OVER JANUARY ARE NOTED AT KIRTLAND (11¢) MITCHEL (9¢) READING (9¢) FLOYD BENNETT (12¢) AND BIRMINGHAM (8¢). THESE INCREASES WARRANT INVESTIGATION.

AN ANALYSIS OF THE DATA REPORTED FOR BIRMINGHAM WAS MADE FOR THE PRIOR SEVEN MONTHS PERIOD, TO DETERMINE THE BASIC REASON FOR THE CONSISTENTLY HIGH COST PER RATION AT THIS BASE. THIS ANALYSIS INDICATED THAT THE LARGE NUMBER OF PERSONNEL IN THE FUNCTION WAS THE UNDERLYING CAUSE. ON A COMPARATIVE BASIS, THERE APPEARS TO BE NO JUSTIFICATION FOR THE EMPLOYMENT OF AS MANY AS 28 PERSONS IN THE FUNCTION WHEN THE WORKLOAD, 4850 RATIONS SERVED, IS COMPARED WITH WORKLOADS AT OTHER AFRTC'S WHICH EMPLOY 5 or 6 FEWER PERSONS AND SERVE FROM 1000 TO 4000 MORE RATIONS PER MONTH. THIS IS A PERSONNEL AND ASSIGNMENT PROBLEM AND WARRANTS IMMEDIATE INVESTIGATION.

FOR ALL UNITS THERE IS A NET REDUCTION FROM JANUARY OF 301 PERSONS AND $35,200 IN COSTS OF THE FUNCTION

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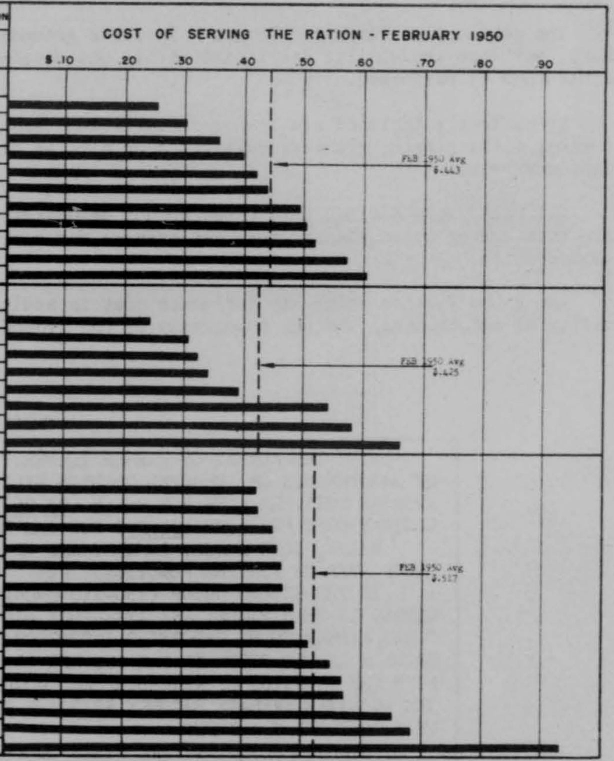
COST OF SERVING THE RATION

FEBRUARY 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950

BASE	NUMBER OF PERSONNEL IN FUNCTION	TOTAL COST OF FUNCTION	AVG COST PER PERSON	NUMBER OF RATIONS SERVED	COST OF SERVING THE RATION	
					JANUARY 1950	FEBRUARY 1950
WINGS						
78th Ftr Intcp Wg - Hamilton AFB	207	$ 33,220	$ 160	128,661	$.274	$.258
325th Ftr All Wea Wg - Moses Lake AFB	62	8,495	137	28,162	.377	.302
62d Tr Carr Wg - McChord AFB	101	14,651	145	41,020	.516	.357
56th Ftr Intcp Wg - Selfridge AFB	116	16,917	146	42,462	.385	.398
33rd Ftr Intcp Wg - Otis AFB	84	13,288	158	31,598	.375	.420
20th Ftr Bmr Wg - Shaw AFB	86	14,404	167	32,639	.529	.441
81st Ftr Intcp Wg - Kirtland AFB	70	9,256	132	18,779	.382	* .493
52d Ftr All Wea Wg - McGuire AFB	90	11,938	133	23,626	.536	* .505
314th Tr Carr Wg - Sewart AFB	99	14,065	142	26,988	.625	.521
4th Ftr Intcp Wg - Langley AFB	252	37,986	151	66,391	.628	.572
31st Ftr Bmr Wg - Turner AFB	84	12,837	153	21,177	.699	.606
AIR BASE GROUPS AND SQUADRONS						
2476th Base Sv Sq - Oscoda AFB	8	$ 917	$ 115	3,730	$ -	* $.246
4406th AB Gp - Marshall AFB	10	1,316	132	4,270	.338	* .308
2600th AB Sq - Pope AFB	31	5,688	** 183	17,622	.634	* .323
4400th AB Gp - Stewart AFB	19	3,166	166	9,270	.479	* .341
2595th AB Gp - Brooks AFB	58	9,578	165	24,449	.507	.392
2463rd Stby B Sq-Ben Harrison AFB	17	3,335	** 196	6,154	.498	* .542
2500th AB Gp - Mitchel AFB	200	29,281	146	50,097	.494	.584
4408th AB Sq - Lawson AFB	9	1,884	** 209	2,821	** .874	* .668
AIR FORCE RESERVE TRAINING CENTERS						
2237th AFRTC - Reading Mun Apt	23	$ 3,476	$ 151	8,235	$.332	* $.422
2230th AFRTC - Floyd Bennett NAS	20	2,997	150	7,037	.305	.426
2236th AFRTC - Godman AFB	18	2,974	165	6,532	.417	* .455
2234th AFRTC - Hanscom Apt	15	2,649	** 176	5,738	.394	* .461
2239th AFRTC - Gtr Pitts Apt	26	3,436	132	7,327	.442	* .469
2584th AFRTC - Memphis Mun Apt	17	2,528	149	5,343	.492	* .473
2585th AFRTC - Miami Int Apt	19	3,202	169	6,509	.565	.492
2343rd AFRTC - Portland Apt	28	4,380	156	8,878	** .862	.493
2466th AFRTC - Atterbury AFB	27	4,015	149	7,850	.578	.511
2596th AFRTC - Hensley Fld	23	3,415	148	6,160	.578	* .554
2347th AFRTC - Long Beach Mun Apt	33	4,568	138	8,008	.567	* .571
2589th AFRTC - Dobbins AFB	19	3,126	165	5,439	.540	* .575
2471st AFRTC - O'Hare Int Apt	27	3,878	144	5,930	.641	* .654
2472nd AFRTC - Fairfax Field	18	2,552	142	3,728	.619	* .684
2587th AFRTC - Birmingham Mun Apt	28	4,536	162	4,854	** .856	** .934



SOURCE: COST CONTROL REPORT, AF FORM 320, 321, 322, RCS: AF-FO-F22C
COMMISSARY OPERATING STATEMENT, WD-AGO FORM 10-133, RCS

* GARRISION RATION VALUE USED FOR THESE BASES.
** EXTREME DEVIATIONS FROM AVERAGES.

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EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF MAINTENANCE OF IMPROVED GROUNDS

The designation "Improved Grounds" includes grounds adjacent to buildings, other structures, street, roads, walks, parkways and similar facilities within the developed areas of the installation on which intensive ground maintenance is performed.

Specifically included are lawns, installation cemeteries, parade grounds, parkways, athletic fields, golf courses, rifle ranges, grassed, cultivated or similar fire breaks, beaches and the operation of greenhouses and plant nurseries.

All bases were divided into three groups depending upon the length of the growing season, or the frost-free time during which plants grow. An average was computed for each group and for all ConAC bases under consideration.

Among the factors which may influence cost in addition to acreage and length of growing season are the quality of maintenance, and the topography of the ground under cultivation.

COMMENT

WITH THE ADVENT OF WARMER TEMPERATURES, IT IS ANTICIPATED THAT THE COST OF MAINTENANCE OF IMPROVED GROUNDS WILL NORMALLY INCREASE. HOWEVER, THE CONAC AVERAGE COST PER ACRE FOR MARCH ($3.96) COMPARES FAVORABLY WITH THE AVERAGE MONTHLY COST PER ACRE ($4.20) FOR THE PERIOD FROM JULY 1949 THROUGH JANUARY 1950.

MIAMI, LONG BEACH, LANGLEY AND HENSLEY SHOW COSTS MORE THAN DOUBLE THE GROUP AVERAGE FOR THE FUNCTION.

IN THE SECOND GROUP (160-210 GROWING DAYS) THE MARCH AVERAGE IS $2.75. INCLUDED IN THIS FIGURE ARE ATTERBURY AND MCGUIRE WHICH, FROM DATA AVAILABLE IN HQ CONAC, APPEAR TO BE REPORTING INCORRECT ACREAGE: THE DEFINITION OF IMPROVED GROUNDS AS SET FORTH IN PAR 4b, AFR 90-1, 23 DECEMBER 1948, SHOULD BE CONSULTED. WITH THE DELETION OF ATTERBURY AND MCGUIRE FROM THE CALCULATION OF THE AVERAGE, THE ADJUSTED AVERAGE BECOMES $5.12, A FIGURE WHICH MORE ACCURATELY REFLECTS THE UNIT COST FOR THE GROUP.

COMMANDERS SHOULD TAKE STEPS TO ASSURE THEMSELVES THAT STANDARDS OF QUALITY OF MAINTENANCE AS SET FORTH IN AFR 90-1, AS WELL AS REASONABLE COSTS, ARE BEING MAINTAINED.

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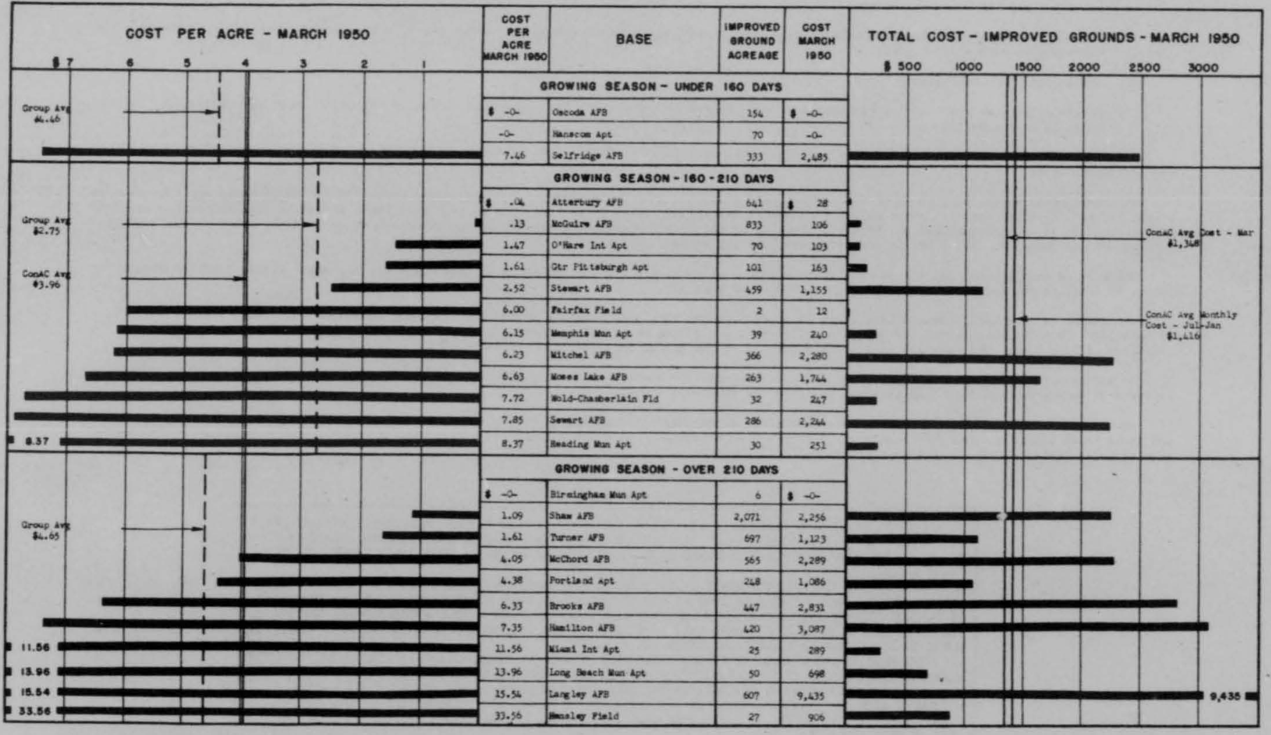
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950

COST OF MAINTENANCE OF IMPROVED GROUNDS
SELECTED INSTALLATIONS
MARCH 1950



COST PER ACRE MARCH 1950	BASE	IMPROVED GROUND ACREAGE	COST MARCH 1950
GROWING SEASON - UNDER 160 DAYS			
$ -0-	Oscoda AFB	154	$ -0-
-0-	Hanscom Apt	70	-0-
7.46	Selfridge AFB	333	2,485
GROWING SEASON - 160 - 210 DAYS			
$ .04	Atterbury AFB	641	$ 28
.13	McGuire AFB	833	106
1.47	O'Hare Int Apt	70	103
1.61	Gtr Pittsburgh Apt	101	163
2.52	Stewart AFB	459	1,155
6.00	Fairfax Field	2	12
6.15	Memphis Mun Apt	39	240
6.23	Mitchel AFB	366	2,280
6.63	Moses Lake AFB	263	1,744
7.72	Wold-Chamberlain Fld	32	247
7.85	Sewart AFB	286	2,244
8.37	Reading Mun Apt	30	251
GROWING SEASON - OVER 210 DAYS			
$ -0-	Birmingham Mun Apt	6	$ -0-
1.09	Shaw AFB	2,071	2,256
1.61	Turner AFB	697	1,123
4.05	McChord AFB	565	2,289
4.38	Portland Apt	248	1,086
6.33	Brooks AFB	447	2,831
7.35	Hamilton AFB	420	3,087
11.56	Miami Int Apt	25	289
13.96	Long Beach Mun Apt	50	698
15.54	Langley AFB	607	9,435
33.56	Hensley Field	27	906

SOURCE: REAL ESTATE FACILITIES MONTHLY COST REPORT, AF FORM 329, RCS: AF-MD-F33A

1941 YEARBOOK - US DEPT OF AGRICULTURE

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EXPLANATION OF GRAPHIC PRESENTATION ON COST OF REFUSE COLLECTION

The function of "Refuse Collection" includes the collection of refuse, salvageable scrap and waste materiel and the washing of garbage containers and cans.

Activities included in this account are:

(1) Loading from designated pick-up points the garbage, trash, salvageable scrap, and waste materials into suitable vehicles, delivering and unloading at points of disposal.

(2) Washing and replacing garbage cans.

(3) Refuse collection and disposal accomplished under contract at a cost to the government. Credits collected under such agreements are not reported in the Refuse Collection account.

The bases were divided into USAF and USAFR groups. This division was made because of the strength difference in the number of personnel at USAF and USAFR bases.

Military labor, which makes up about 70% of the total cost of Refuse Collection for USAF bases and about 25% for USAFR bases may include some prison labor. In those instances where military prisoners accomplish refuse collection, the cost of such labor should be included in the cost report as this is an AIO responsibility. However, there is no way of differentiating between prison labor and other military labor on the Monthly Cost Report, AF Form 329. All labor is costed at civilian pay rates.

The average monthly cost and the average monthly number of cubic yards collected shown on this chart are one month averages of the cumulative totals reported in the Refuse Collection account (08303), AF Form 329.

The number of personnel shown on this chart is taken from the work unit quantity column for the Mess and Kitchen Equipment account (02102), AF Form 329. This figure includes the number of military and civilian personnel quartered on the base plus 1/2 the military and civilians quartered off the base. The quantity is a monthly average of the period from July 1949 to March 1950.

In addition to the computation of averages, ConAC standards for the cost per cubic yard collected were developed by deleting the upper and lower extremes of each group and computing averages based on the remaining costs.

The installations included in this analysis are those which submit a detailed AF Form 329. Installations which submit Army or Navy type reports and those which submit a short form report on AF Form 329 were omitted. Birmingham Municipal Airport was excluded because no costs or work units were reported in the Refuse Collection account.

COMMENT

SEVERAL BASES SHOW ABNORMALLY HIGH COSTS PER CUBIC YARD OF REFUSE COLLECTED. STEWART AFB WITH A COST OF $4.01, FAIRFAX FIELD WITH A COST OF $3.71 AND READING MUN APT WITH A COST OF $3.44 ARE THE HIGH COST BASES COMPARED TO THE STANDARDS OF $1.06 FOR USAF BASES AND $1.42 FOR USAFR BASES.

ON A PER CAPITA COST PER MONTH BASIS, STEWART AFB SHOWS MORE THAN TWICE THE AVERAGE FOR THE USAF GROUP OF BASES. THIS HIGH COST AT STEWART IS DUE IN PART TO THE LARGE DISTANCES TRAVELLED BY GARBAGE PICK-UP TRUCKS BETWEEN HOMES, THE BASE AND THE INCINERATOR. FURTHER INVESTIGATION SHOULD BE MADE INTO COSTS AND WORK UNIT QUANTITIES TO SEE IF THEY ARE CORRECT AND IF IMPROVEMENTS IN THE SYSTEM OF REFUSE COLLECTION CAN BE MADE.

THE PROCESS AND METHODS OF REFUSE COLLECTION AT STEWART, FAIRFAX AND READING SHOULD BE EXAMINED IN AN EFFORT TO BRING UNIT COSTS MORE IN LINE WITH THE CONAC STANDARDS.

THE WORK UNIT QUANTITY REPORTED IN THE HAMILTON COST REPORT, (714 CU.YDS.), IS NOT IN AGREEMENT WITH THE FIGURE REPORTED IN THE DAILY LOG OF REFUSE AND SALVAGE COLLECTION, WD AGO FORM 5-126, (37,361 CU.YDS.) THE LATTER QUANTITY IS MORE IN AGREEMENT WITH THE COST, AND WAS USED IN THIS ANALYSIS.

THE QUANTITY COLLECTED FOR MOSES LAKE AFB HAS NOT BEEN REPORTED SINCE SEPTEMBER 1949 AND THE FIGURE USED HERE IS AN ESTIMATE BASED UPON THE UNIT COST ON THE SEPTEMBER 1949 REPORT.

VARIATIONS IN BASE POPULATION ARE REFLECTED IN THE LOWER MONTHLY COST PER CAPITA AT USAF BASES - $.53 COMPARED TO $.92 AT USAFR BASES.

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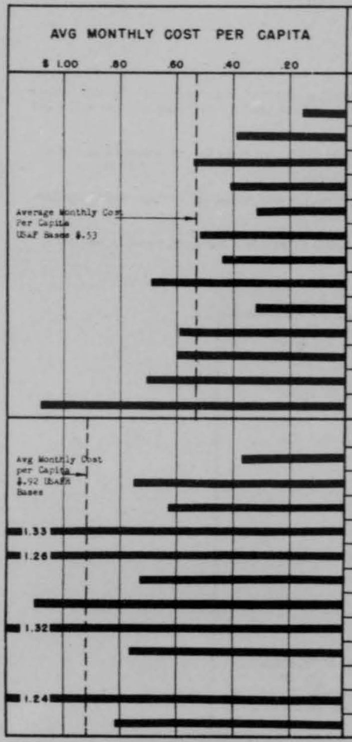
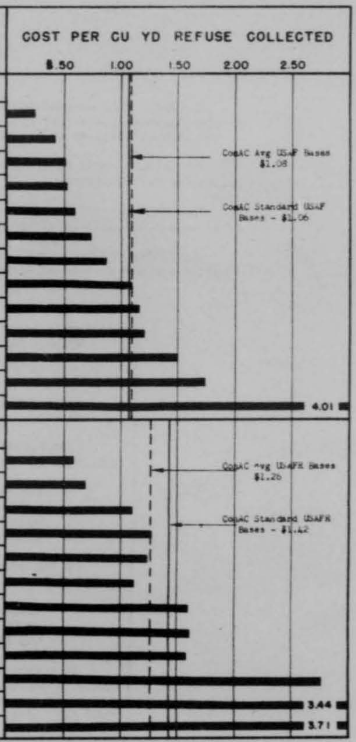
AVERAGE MONTHLY COST OF REFUSE COLLECTION
SELECTED INSTALLATIONS
JULY 1949 - MAR 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



AVG MONTHLY COST PER CAPITA	AVG MONTHLY NO. OF PERSONNEL	BASE	AVG MONTHLY COST	CU YDS REFUSE COLLECTED PER MONTH	COST PER CU YD
		USAF INSTALLATIONS			
$ .16	1,360	Turner AFB	$ 224	921	$ .24
.39	1,808	Moses Lake AFB	712	*1,678	.42
.54	138	Oscoda AFB	75	146	.51
.41	2,463	Shaw AFB	1,004	1,911	.53
.32	2,562	McChord AFB	831	1,442	.58
.52	1,583	Sewart AFB	828	1,137	.73
.44	1,893	Brooks AFB	825	951	.87
.69	2,000	McGuire AFB	1,381	1,279	1.08
.32	4,391	Mitchel AFB	1,418	1,237	1.15
.59	5,399	Langley AFB	3,176	2,615	1.21
.60	10,488	Hamilton AFB	6,246	4,151	1.50
.71	3,993	Selfridge AFB	2,850	1,639	1.74
1.08	1,275	Stewart AFB	1,381	344	4.01
		USAFR INSTALLATIONS			
$ .37	830	O'Hare Int Apt	$ 310	546	$ .57
.75	600	Atterbury AFB	448	645	.69
.63	655	Long Beach Mun Apt	414	375	1.10
1.33	315	Miami Int Apt	418	329	1.27
1.26	336	Hanscom Apt	424	343	1.24
.73	227	Portland Apt	165	148	1.11
1.10	363	Memphis Mun Apt	398	250	1.59
1.32	402	Gtr Pittsburgh Apt	529	330	1.60
.77	385	Hensley Field	295	187	1.58
-	NR	Wold-Chamberlain Field	308	111	2.77
1.24	324	Reading Mun Apt	403	117	3.44
.82	298	Fairfax Field	245	66	3.71



SOURCE: REAL ESTATE FACILITIES MONTHLY COST REPORT, AF FORM 329, RCS AF-MD-F 33A
DAILY LOG OF REFUSE & SALVAGE COLLECTION - WD-AGO 5-126 RCS: ENG 14(R1)A
* - ESTIMATED ON BASIS OF SEPT 1949 REPORT

NR - PERSONNEL FIGURE NOT REPORTED

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EXPLANATION OF GRAPHIC PRESENTATION ON COMPARATIVE PAYROLL COST OF MOTOR POOL ACTIVITY

The Motor Pool Account includes the following costs of operation: Cost of Motor Pool Officer, Refueling Officer, dispatchers, clerks, drivers, service personnel, and cost of fuels and lubricants used. The "Payroll Cost per Vehicle Mile Operated" is determined by dividing the Payroll Cost of the above activities by the number of miles operated as reported on AF Form 122A.

The payroll costs of the Motor Pool activity do not include any of the payroll costs applicable to the field maintenance of Automotive and ground powered equipment.

The average payroll cost per vehicle mile operated for each organizational type was determined by dividing the total of average costs by the total of average miles operated for each period.

The factor "Payroll Cost" rather than Total Cost, was chosen for analysis, since personnel discrepancies revealed can more readily be "controlled" for the purpose of accomplishing a cost reduction of value to USAF.

COMMENT

WHILE A SLIGHT REDUCTION IN COST PER VEHICLE MILE OPERATED DURING MARCH 1950 IS NOTED FOR ALL THREE GROUPS AS COMPARED TO THE MONTH OF FEBRUARY 1950, THE AVERAGE COST FOR EACH GROUP IS STILL IN EXCESS OF THE SEVEN MONTH AVERAGE AS SHOWN IN THE MANAGEMENT ANALYSIS REVIEW, FEBRUARY 1950.

TOTAL PAYROLL COST OF THE MOTOR POOL ACTIVITY, $258,379, IS APPROXIMATELY THE SAME AS SHOWN IN FEBRUARY.

SIGNIFICANT REDUCTIONS IN COST PER MILE FOR MARCH AS COMPARED TO FEBRUARY ARE NOTED FOR THE FOLLOWING BASES:

TURNER AFB - 51%
PORTLAND APT - 39%
WOLD-CHAMBERLAIN - 34%
MITCHEL AFB - 32%
LAWSON AFB - 31%
HANSCOM APT - 25%
FLOYD BENNETT NAS - 25%
SHAW AFB - 19%

ON THE OTHER HAND SUBSTANTIAL INCREASES OVER FEBRUARY COSTS ARE EVIDENT FOR THE FOLLOWING (FIGURES IN PARENTHESIS SHOW INCREASES OVER THE SEVEN MONTH AVERAGE):

HENSLEY FIELD - 46% (112%)
BROOKS AFB - 37% (10%)
GTR PITTSBURG APT - 34% (31%)
STEWART AFB - 27% (91%)
POPE AFB - 25% (79%)

IN COMPARISON WITH THE SEVEN MONTH AVERAGE, COSTS AT HENSLEY, STEWART AND POPE ARE EXCESSIVE. ANALYSIS INDICATES THAT THE INCREASE AT HENSLEY IS DUE TO A 44% DECREASE OF MILEAGE WITH 17% INCREASE IN PAYROLL COST. AT STEWART, PAYROLL COSTS INCREASED 117% AGAINST INCREASED MILEAGE OF ONLY 14%. POPE SHOWS INCREASED PAYROLL OF 30% WITH A DECREASED MILEAGE OF 27%. FURTHER INVESTIGATIONS OF THE ACTIVITY AT THESE BASES IS WARRANTED.

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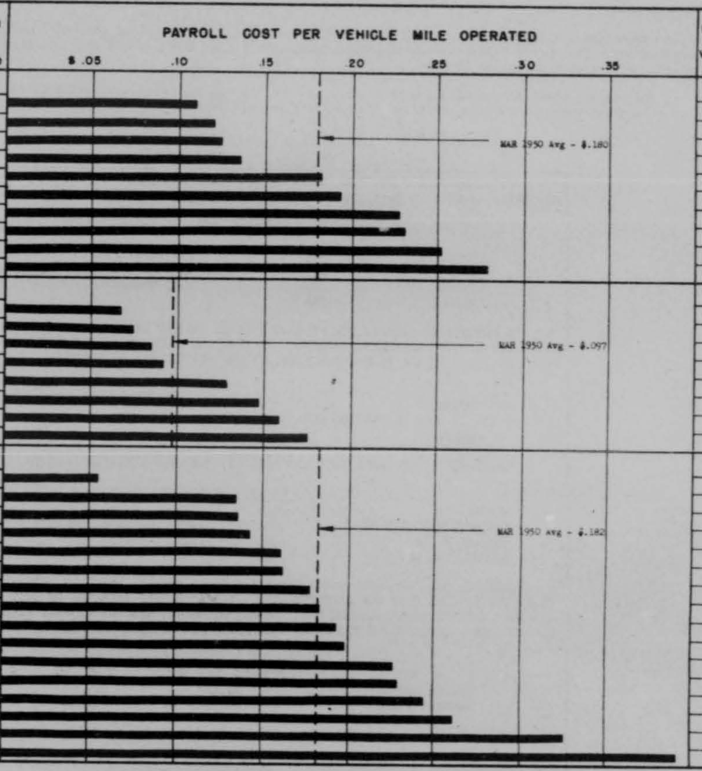
COMPARATIVE PAYROLL COST OF MOTOR POOL ACTIVITY

MARCH 1950

PREPARED BY
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950

MOTOR POOL PAYROLL COST	VEHICLE MILES OPERATED	BASE	PAYROLL COST PER VEHICLE MILE OPERATED	NON PERSONNEL COST PER VEHICLE MILE OPERATED
		WINGS		
$ 6,886	62,878	325th Ftr All Wea Wg - Moses Lake AFB	$.110	$.079
11,286	93,787	31st Ftr Bmr Wg - Turner AFB	.120	.032
10,193	81,890	33rd Ftr Intcp Wg - Otis AFB	.124	.037
21,219	156,667	4th Ftr Intcp Wg - Langley AFB	.135	.042
22,906	125,819	62nd Tr Carr Wg - McChord AFB	.182	.047
11,506	59,753	314th Tr Carr Wg - Sewart AFB	.193	.030
15,289	66,793	56th Ftr Intcp Wg - Selfridge AFB	.229	.059
10,328	44,741	52nd Ftr All Wea Wg - McGuire AFB	.231	.041
23,284	92,520	78th Ftr Intcp Wg - Hamilton AFB	.252	.043
22,549	80,677	20th Ftr Bmr Wg - Shaw AFB	.279	.062
		AIR BASE GPS AND SQS		
$ 5,941	88,487	2595th AB Gp - Brooks AFB	$.067	$.030
1,567	21,219	2463rd Stdby B Sq - Benj Harrison AFB	.074	.049
17,781	212,763	2500th AB Gp - Mitchel AFB	.084	.025
526	5,799	4406th AB Sq - Marshall AFB	.091	.042
6,888	53,997	4400th AB Gp - Stewart AFB	.128	.025
2,133	14,500	4408th AB Sq - Lawson AFB	.147	.033
7,654	48,236	2600th AB Sq - Pope AFB	.159	.061
1,410	8,049	4405th AB Sq - Sherman AFB	.175	.017
		AFRTC's		
$ 2,186	39,580	2585th AFRTC - Miami Intl Apt	$.055	$.014
4,020	29,965	2589th AFRTC - Dobbins AFB	.134	.033
3,225	23,963	2237th AFRTC - Reading Mun Apt	.135	.040
1,698	11,986	2596th AFRTC - Hensley Field	.142	.050
2,838	17,678	2234th AFRTC - Hanscom Apt	.161	.021
3,589	22,105	2343rd AFRTC - Portland Apt	.162	.043
3,001	16,850	2587th AFRTC - Birmingham Mun Apt	.178	.033
2,357	12,896	2230th AFRTC - Floyd Bennett NAS	.183	.036
7,677	39,871	2347th AFRTC - Long Beach Mun Apt	.193	.027
2,773	14,010	2465th AFRTC - Wold-Chamberlain Fld	.198	.056
2,819	12,603	2472nd AFRTC - Fairfax Field	.224	.031
3,389	14,842	2584th AFRTC - Memphis Mun Apt	.228	.044
5,877	24,139	2471st AFRTC - O'Hare Intl Apt	.243	.038
4,840	18,651	2466th AFRTC - Atterbury AFB	.260	.038
4,964	15,266	2239th AFRTC - Gtr Pittsburgh Apt	.325	.088
3,778	10,514	2236th AFRTC - Godman AFB	.359	.031



SOURCE: COST CONTROL REPORTS, AF FORMS 320, 321, 322, RCS: AF-FO-F22C
USAF GROUND ACCIDENT EXPERIENCE SUMMARY AND ANALYSIS,
AF FORM 122 A, RCS: AF-AP-U8

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EXPLANATION OF GRAPHIC PRESENTATION ON

COMPARATIVE PAYROLL COST OF MAINTENANCE - AUTOMOTIVE AND GROUND POWERED EQUIPMENT

Automotive and Ground Powered Equipment Maintenance Costs include cost of personnel and supplies utilized in the accomplishment of field maintenance. The "payroll cost per vehicle mile operated" is determined by dividing the payroll cost of the above activities by the number of miles operated as reported on AF Form 122A.

The payroll costs of the Maintenance activity do not include any costs applicable to the Motor Pool. The average payroll cost per mile for each group was determined by dividing the total of average payroll costs by the total of average miles operated for each period.

COMMENT

TOTAL PAYROLL COST OF MAINTENANCE FOR MARCH 1950, FOR THE THIRTY FOUR BASES INCLUDED IN THE ANALYSIS, AMOUNTS TO $215,109 COMPARED WITH $212,454 IN FEBRUARY.

SIGNIFICANT DECREASES IN COST PER MILE OPERATED ARE SHOWN BY:

POPE AFB	-	61%	PORTLAND APT	-	42%
MARSHALL AFB	-	49%	MITCHEL AFB	-	32%.
TURNER AFB	-	44%	WOLD-CHAMBERLAIN FIELD	-	29%
MCCHORD AFB	-	28%			

A SLIGHT DECREASE IN THE AVERAGE PAYROLL COST OF MAINTENANCE PER MILE OPERATED FOR MARCH IS SHOWN FOR ALL THREE GROUPS. HOWEVER, IT IS STILL HIGHER THAN THE SEVEN MONTH AVERAGES FOR EACH GROUP AS SHOWN IN THE FEBRUARY REVIEW. THESE FIGURES ARE AS FOLLOWS:

	7 MO AVG	FEBRUARY	MARCH
WINGS	$.121	$.167	$.147
AIR BASE GROUPS AND SQUADRONS	.085	.095	.087
AFRTC'S	.124	.152	.148

BASES REPORTING LARGE INCREASES IN COST PER MILE OPERATED IN MARCH COMPARED WITH FEBRUARY ARE:

	7 MO AVG	FEBRUARY	MARCH	% INCREASE MARCH OVER FEBRUARY
BROOKS AFB	$.025	$.022	$.050	127%
BENJAMIN HARRISON AFB	.044	.076	.168	121%
HENSLEY FIELD	.205	.335	.533	59%
MEMPHIS MUN APT	.062	.071	.092	30%

MILEAGE FOR THE ABOVE BASES DECREASED CONSIDERABLY, WHICH IS PRIMARILY THE REASON FOR THE INCREASE IN PAYROLL COST PER MILE OPERATED. THE EXCESSIVE INCREASE IN COST OVER THE SEVEN MONTH AVERAGE WARRANTS INVESTIGATION PARTICULARLY AT BROOKS AFB AND HENSLEY FIELD WHICH REPORT TOTAL MAINTENANCE PAYROLL COSTS FOR MARCH WHICH ARE GREATLY IN EXCESS OF THE SEVEN MONTH AVERAGE AS FOLLOWS:

	PAYROLL COST MARCH	7 MO AVG	% INCREASE
BROOKS AFB	$4,408	$2,701	63%
HENSLEY FIELD	6,384	4,404	45%

NON-PERSONNEL COSTS PER MILE OPERATED AT THE FOLLOWING BASES ALSO WARRANT INVESTIGATION:

	% OF INCREASE, MARCH OVER FEBRUARY
MOSES LAKE AFB	800%
HENSLEY FIELD	457%
ATTERBURY AFB	450%
BROOKS AFB	400%

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PREPARED BY:
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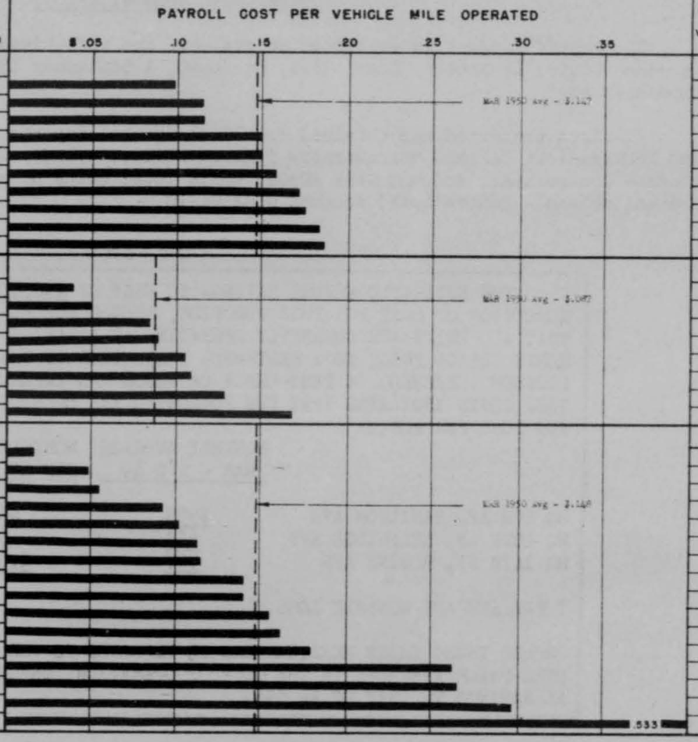
HQ, CONAC
APRIL 1950

COMPARATIVE PAYROLL COST OF MAINTENANCE - AUTOMOTIVE AND GROUND POWERED EQUIPMENT

MARCH 1950

MAINTENANCE PAYROLL COST	VEHICLE MILES OPERATED	BASE	PAYROLL COST PER VEHICLE MILE OPERATED	NON PERSONNEL COST PER VEHICLE MILE OPERATED
		WINGS		
$ 9,035	92,520	78th Ftr Intcp Wg - Hamilton AFB	$.098	$.018
6,850	59,753	314th Tr Carr Wg - Sewart AFB	.115	.042
14,539	125,819	62nd Tr Carr Wg - McChord AFB	.116	.064
23,473	156,667	4th Ftr Intcp Wg - Langley AFB	.150	.040
9,404	62,878	325th Ftr All Wea Wg-Moses Lake AFB	.150	.045
14,887	93,787	31st Ftr Bmr Wg - Turner AFB	.159	.014
13,882	80,677	20th Ftr Bmr Wg - Shaw AFB	.172	.013
7,872	44,741	52nd Ftr All Wea Wg - McGuire AFB	.176	.140
15,101	81,890	33rd Ftr Intcp Wg - Otis AFB	.184	.073
12,479	66,793	56th Ftr Intcp Wg - Selfridge AFB	.187	.033
		AIR BASE GPS AND SQS		
$ 228	5,799	4406th AB Sq - Marshall AFB	$.039	$.032
4,408	88,487	2595th AB Gp - Brooks AFB	.050	.015
17,770	212,763	2500th AB Gp - Mitchel AFB	.084	.037
4,290	48,236	2600th AB Gp - Pope AFB	.089	.014
849	8,049	4405th AB Sq - Sherman AFB	.105	.040
1,582	14,500	4408th AB Sq - Lawson AFB	.109	.078
6,898	53,997	4400th AB Gp - Stewart AFB	.128	.060
3,560	21,219	2463rd Stdby B Sq - Benj Harrison AFB	.168	.005
		AFRTC's		
$ 233	14,010	2465th AFRTC - Wold-Chamberlain Field	$.017	$.007
1,924	39,580	2585th AFRTC - Miami Intl Apt	.049	.021
1,188	22,105	2343rd AFRTC - Portland Airport	.054	.0-
1,366	14,842	2584th AFRTC - Memphis Mun Apt	.092	.020
1,894	18,651	2466th AFRTC - Atterbury AFB	.102	.022
4,513	39,871	2347th AFRTC - Long Beach Mun Apt	.113	.024
3,443	29,965	2589th AFRTC - Dobbins AFB	.115	.007
2,468	17,678	2234th AFRTC - Hanscom Apt	.140	.098
1,765	12,601	2472nd AFRTC - Fairfax Field	.140	.043
3,735	23,963	2237th AFRTC - Reading Mun Apt	.156	.012
1,704	10,514	2236th AFRTC - Godman AFB	.162	.018
2,744	15,266	2239th AFRTC - Gtr Pittsburgh Apt	.180	.041
4,417	16,850	2587th AFRTC - Birmingham Mun Apt	.262	.036
6,404	24,139	2471st AFRTC - O'Hare Intl Apt	.265	.070
3,820	12,896	2230th AFRTC - Floyd Bennett NAS	.296	.032
6,384	11,986	2596th AFRTC - Hensley Field	.533	.039



SOURCE: COST CONTROL REPORTS, AF FORMS 320, 321, 322, RCS: AF-FO-F22C
USAF GROUND ACCIDENT EXPERIENCE SUMMARY AND ANALYSIS,
AF FORM 122A, RCS: AF-AP-U8

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EXPLANATION OF PAYOFF PROJECT

CONAC SAVINGS IN COST OF CONTRACTUAL COMMUNICATIONS

The Payoff Project is presented to evaluate the effectiveness of positive management action as demonstrated by letter, Comm 676.1, Hq ConAC, 1 September 1949, "Reduction of Telecommunications Expenditures."

The data presented was obtained from Cost Control Reports on AF Forms 320, 321 and 322. Major and Intermediate Command Headquarters figures reflect average monthly totals contained in Communications - Contractual, Account Code 20527, while total costs of all other ConAC units are contained in Communications - Contractual, Account Code 04110.

COMMENT

THE ESTIMATED ANNUAL SAVINGS TO USAF OF $56,652 DUE TO THE OVERALL REDUCTION OF COST FOR THIS FUNCTION, SHOULD NOT BE INTERPRETED TO INDICATE THAT ALL UNITS ARE CURRENTLY OPERATING AT A SAVING AS COMPARED WITH THE SIX MONTH PERIOD PRIOR TO 1 SEPTEMBER 1949: THIS IS THE NET EFFECT OF THE REDUCTION ACHIEVED. A TEST-CHECK OF MAJOR AND INTERMEDIATE COMMAND HEADQUARTERS COSTS INDICATES THAT THE FOLLOWING ARE OPERATING AT AN INCREASED AVERAGE COST PER MONTH:

	MONTHLY AVERAGE MAR - AUG 49	MONTHLY AVERAGE SEP 49 - FEB 50	MONTHLY AVERAGE INCREASED COST
HQ 4TH AF, HAMILTON AFB	$333	$560	$227
HQ 10TH AF, SELFRIDGE AFB	668	673	5
HQ 14TH AF, ROBINS AFB	927	1,078	151
TOTAL AVERAGE MONTHLY LOSS			$383

SHOULD THESE THREE HEADQUARTERS BE IMPROVED TO THE POINT OF ZERO-INCREASE OVER PRIOR AVERAGES IN THE COST OF OPERATION, THERE WOULD ENSUE AN ADDITIONAL SAVINGS TO USAF OF $4,596.

PAYOFF PROJECT

ANALYSIS OF CONAC SAVINGS IN COST OF CONTRACTUAL COMMUNICATIONS

MAR-AUG 49 COMPARED WITH SEP 49-FEB 50

	MAJOR AND INTERMEDIATE COMMAND HQ	ALL OTHER CONAC UNITS	TOTAL CONAC UNITS
Average monthly total cost of Contractual Communications, (telephone, telegraph and TWX service) 6 month period - March through August 1949	$5,865	$34,613	$40,478
Average monthly total cost of Contractual Communications, 6 month period - September 1949 through February 1950	5,253	30,504	35,757
Average Monthly Savings	$ 612	$ 4,109	$ 4,721

ESTIMATED ANNUAL SAVINGS TO THE USAF $ 56,652

Source: ConAC Consolidation Cost Control Report, RCS: FS-F1

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EXPLANATION OF TABULATIONS OF COMPARATIVE DATA
FOR PROGRESS AND MANAGEMENT ANALYSIS
COMBAT GROUPS, SEPARATE SQUADRONS AND
AIR FORCE RESERVE TRAINING CENTERS

The purpose of the tabulations presented on the following three pages is to provide, to commanders and management analysts, at unit level, selected performance data. These tabulations provide a basis for local progress and management analysis.

The data contained in these tabulations does not replace, but rather supplements Comptroller Chart #6 and the presentations in this Review. Additional data will be included in future issues of this Review upon request. Information classified above RESTRICTED will not be included.

Examples of analyses possible from data shown here are:

a. Cost of Organizational Maintenance per Flying Hour (ConAC Cost Analysis Review, August).

b. Cost of Fuels and Lubes per Flying Hour (Page 16, ConAC Cost Analysis Review, July).

c. Utilization of in-commission rates.

d. Analysis of Fuel Consumption per hour.

e. Ratio of weather hours to total hours flown (Col. 11).

f. Cost of organizational maintenance per unit of flying, AFRTC (Page 11, ConAC Cost Analysis Review, November).

g. Hours flown per person assigned to organizational maintenance function.

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COMPARATIVE DATA FOR PROGRESS AND MANAGEMENT ANALYSIS

COMBAT GROUPS AND SEPARATE SQUADRONS

CONTINENTAL AIR COMMAND

MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ ConAC
APRIL 1950

COMBAT GROUP	AIRCRAFT - FLYING HOUR FACTORS													PERSONNEL FACTORS						COST - FACTORS								
COLUMN	1 AIR FORCE	2 TYPE ACFT	3 AVG NO ACFT ON HAND	4 AVG NO ACFT IN COMM	5 AVG NO (MAINT) ACFT OUT	6 AVG NO (T. O. COMP) ACFT OUT	7 AVG NO (AOCP) ACFT OUT	8 AVG NO (OTHER) ACFT OUT	9 TOTAL HRS FLOWN	10 HRS FLOWN PER ACFT (ON HAND)	11 WEATHER HRS FLOWN	12 HOOD HRS FLOWN	13 GALLONS FUEL PER HR	14 NUMBER OFF AUTH	15 NUMBER OFF ASGD	16 NUMBER AMN AUTH	17 NUMBER AMN ASGD	18 TOTAL PERS ASGD	19 % AUTH PERS ASGD	20 TOTAL PERS ORG MAINT (07110)	21 PAYROLL COST ORG MAINT (07110)	22 TOTAL PERS UNIT OVERHEAD (07061)	23 PAYROLL COST UNIT OVERHEAD (07061)	24 COST OF FUEL CMBT ACFT (07102)	25 TOTAL UNIT PERS CMBT (07270)	26 PAYROLL COST COMBAT UNIT (07270)	27 TOTAL PERS-MISSION ACFT (05102-05104)	28 PAYROLL COST-MISSION ACFT (05102-05104)
56TH FTR INTCP GP	10	F-80A	82	57	23	0	2	0	2,064	25	47	76	350	101	98	349	362	460	102	300	$44,698	71	$15,779	$96,839	447	$93,460	42	$ 7,740
52ND FTR A/W GP	1	F-82F	25	14	9	0	1	0	579	23	30	115	135	78	69	219	217	286	96	162	25,500	56	12,764	14,739	268	60,738	78	14,297
325TH FTR A/W GP*	4	F-82F	36	17	12	0	7	0	835	23	87	87	145	111	93	316	272	365	85	216	34,190	51	12,201	29,550	358	79,729	51	8,664
20TH FTR BMR GP**	14	F-84	76	49	23	0	2	2	2,422	32	41	182	392	101	106	367	371	477	102	291	41,995	63	12,550	215,120	446	95,148	47	8,441
31ST FTR BMR GP**	14	F-84	68	16	7	0	4	41	401	6	0	112	324	101	121	367	355	476	102	(a) 124	17,927	18	2,720	67,150	194	40,832	49	8,428
78TH FTR INTCP GP	4	F-84D	54	28	21	0	4	1	2,036	38	42	149	365	101	113	367	361	474	101	320	47,535	44	10,117	83,443	468	100,976	99	19,215
33RD FTR INTCP GP	1	F-84C F-86A	35 41	22 29	10 7	0 0	2 5	1 0	994 1,162	28 28	11 3	99 83	306 303	101	113	367	397	510	109	315	46,535	68	13,775	92,961	498	103,643	114	17,009
4TH FTR INTCP GP	9	F-86A	72	53	12	1	3	3	2,001	28	0	0	364	101	102	349	397	499	111	316	47,482	68	14,214	100,402	491	104,850	169	28,383
81ST FTR INTCP GP	12	F-86A	80	62	12	0	6	0	1,791	22	13	154	343	101	103	349	377	480	107	336	50,818	71	13,065	85,818	519	106,380	50	8,027
62ND TR CARR GP	4	C-54D	39	24	11	3	1	0	1,956	50	377	107	188	142	161	454	403	564	95	262	41,301	52	11,853	70,291	545	131,524	140	28,982
314TH TR CARR GP	14	C-82A C-119B	23 37	5 17	14 14	2 1	2 5	0 0	380 1,730	16 47	28 219	38 112	132 244	206	189	486	432	621	90	226	34,455	55	12,458	97,688	535	134,189	88	13,372
316TH TR CARR GP(H)**	14	C-82A	35	24	10	0	1	0	1,505	43	24	27	179	99	86	304	266	352	87	138	19,940	11	1,837	51,092	289	69,662	0	0
2601ST ASSAULT SQ	14	C-82A	10	4	6	0	0	0	269	27	12	9	145	43	45	138	119	164	91	63	9,222	(b) 21	6,341	24,232	138	32,688	0	0
84TH BMB SQ (L)	9	B-45A	15	6	7	0	2	0	352	23	15	122	1,270	55	46	193	189	235	95	158	25,025	(c) 13	2,552	59,056	217	48,257	0	0
85TH BMB SQ (L)***	9	B-45A	13	4	6	1	1	1	331	25	3	147	1,258	55	43	193	194	237	96	165	26,578	(c) 12	2,486	55,562	220	47,426	0	0
161ST TAC RCN SQ**	14	RF-80	20	15	3	0	2	0	566	28	6	46	331	28	30	115	105	135	94	63	9,424	(c) 20	4,608	35,470	109	22,706	0	0
363RD TAC RCN GP	9	RB-26	17	11	4	0	1	1	668	39	37	101	136	78	48	176	187	235	93	110	17,049	(c) 45	10,915	18,649	187	39,819	0	0

SOURCES: COST CONTROL REPORTS, AF FORMS 320 & 322 RCS: AF-FO-F22C
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
ConAC PERSONNEL STRENGTH REPORT, RCS: FS-P28

* ALL DATA INCLUDES 318TH SQ - McCHORD AFB
** ALL DATA INCLUDES ACFT TDY AIR MANUEVERS
*** DOES NOT INCLUDE 3 B-45A REPORTED BY 4TH M & S GP

(A) DOES NOT INCLUDE COST OF PERSONNEL TDY AIR MANUEVERS
(B) REPORTED UNDER ACCT CODE 1051 AND 7061
(C) REPORTED UNDER ACCT. CODE 1051

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DIRECTOR, PROGRAMS & COSTS
HQ CONAC
APRIL 1950

COMPARATIVE DATA FOR PROGRESS AND MANAGEMENT ANALYSIS

TENANT AIR FORCE RESERVE TRAINING CENTERS

CONTINENTAL AIR COMMAND

MARCH 1950

AFRTC	AIRCRAFT - FLYING HOUR FACTORS													PERSONNEL FACTORS							COST - FACTORS				
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	AIR FORCE	TYPE AIRCRAFT	AVG NO ACFT ON HAND	AVG NO ACFT IN COMM	AVG NO ACFT OUT (MAINT)	AVG NO ACFT OUT (T. O. COMP)	AVG NO ACFT OUT (AOCP)	AVG NO ACFT OUT (OTHER)	TOTAL HRS FLOWN	HRS FLOWN PER ACFT (ON HAND)	WEATHER HRS FLOWN	HOOD HRS FLOWN	GALLONS FUEL PER HR	NUMBER OFF AUTH	NUMBER OFF ASGD	NUMBER AMN AUTH	NUMBER AMN ASGD	TOTAL MIL PERS ASGD	% AUTH MIL PERS ASGD	TOTAL NO CIV EMPLOYED	TOTAL PERS ORGN MAINT (07110)	PAYROLL COST ORGN MAINT (07110)	COST OF FUEL - ASSIGNED ACFT (07102)	TOTAL PERS - MAINT & TRNG FUNCTION (07270)	PAYROLL COST - MAINT & TRNG FUNCTION (07270)
2230TH FLOYD BENNETT	1	C-47 T-7 T-11 T-6	14 19 8	10 15 7	4 3 1	- 1 -	- - -	- - -	834 645 177	60 34 22	23 2 -	265 165 -	87 40 28	25	24	314	338	362	107	122	184	37,493	20,772	191	39,896
2233RD MITCHEL	1	C-46 T-7 T-11 T-6	14 19 10	8 15 7	4 3 2	- - -	2 1 1	- - -	597 519 118	43 27 12	26 - -	84 123 16	147 40 37	24	27	215	231	258	108	34	187	35,706	22,283	189	36,623
2346TH HAMILTON	4	C-46 T-7 T-11 T-6	16 19 13	12 17 13	3 1 -	- - -	1 1 -	- - -	707 645 134	44 34 10	46 - -	235 341 8	143 39 31	24	25	215	224	249	104	59	185	41,767	25,555	220	51,174
2240TH CLEVELAND	9	C-46 T-7 T-11 T-6	16 19 9	11 15 7	3 3 2	- - -	2 1 -	- - -	711 386 108	44 20 12	109 7 -	104 94 28	149 35 28	32	25	368	332	357	89	7	160	32,235	24,419	170	37,310
2242ND SELFRIDGE	10	C-46 T-7 T-11 T-6	17 18 13	13 13 12	2 4 1	1 - -	1 1 -	- - -	560 500 31	33 28 2	41 3 -	199 242 5	166 42 35	24	23	215	191	214	90	60	153	35,381	22,474	166	39,680
2469TH SCOTT	10	C-46 T-7 T-11 T-6	19 20 10	14 15 8	4 4 1	- - -	1 1 -	- - 1	426 348 102	22 17 10	41 1 2	52 114 3	165 30 32	24	22	215	262	284	119	60	189	36,325	18,051	205	41,095
2473RD OFFUTT	10	C-46 T-7 T-11 T-6	15 19 11	11 17 10	2 2 1	2 - -	- - -	- - -	458 345 60	31 18 6	60 - -	99 106 2	154 42 34	24	25	215	217	242	101	60	158	27,026	17,543	171	30,968
2592ND TINKER	12	B-26 T-7 T-11 T-6	18 20 8	12 10 4	4 7 2	- 1 -	2 2 2	- - -	263 376 26	15 19 3	- 6 -	11 90 5	170 43 35	24	24	285	273	297	119	38	204	37,535	14,387	257	48,792
2596TH HENSLEY	12	C-46 T-7 T-11 T-6	16 18 9	11 13 7	4 4 1	- - -	1 1 1	- - -	873 631 53	55 35 6	88 30 -	285 177 6	144 43 32	32	34	368	420	454	114	93	188	37,732	34,777	211	43,903

SOURCES: COST CONTROL REPORTS, AF FORMS 320 & 322 RCS: AF-FO-F22C
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
CONAC PERSONNEL STRENGTH REPORT, RCS: PS-P28

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HQ, ConAC
APRIL 1950

COMPARATIVE DATA FOR PROGRESS AND MANAGEMENT ANALYSIS

NON-TENANT AIR FORCE RESERVE TRAINING CENTERS

CONTINENTAL AIR COMMAND

MARCH 1950

	AIRCRAFT - FLYING HOUR FACTORS													PERSONNEL FACTORS							COST - FACTORS				
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
AFRTC	AIR FORCE	TYPE AIRCRAFT	AVG NO ACFT ON HAND	AVG NO ACFT IN COMM	AVG NO ACFT OUT (MAINT)	AVG NO ACFT OUT (T. O. COMP)	AVG NO ACFT OUT (AOCP)	AVG NO ACFT OUT (OTHER)	TOTAL HRS FLOWN	HRS FLOWN PER ACFT (ON HAND)	WEATHER HRS FLOWN	HOOD HRS FLOWN	GALLONS FUEL PER HR	NUMBER OFF AUTH	NUMBER OFF ASGD	NUMBER AMN AUTH	NUMBER AMN ASGD	TOTAL MIL PERS ASGD	% AUTH MIL PERS ASGD	TOTAL NO CIV EMPLOYED	TOTAL PERS ORGN MAINT (07110)	PAYROLL COST ORGN MAINT (07110)	COST OF FUEL - ASSIGNED ACFT (07102)	TOTAL PERS - MAINT & TRNG FUNCTION (07270)	PAYROLL COST - MAINT & TRNG FUNCTION (07270)
2234TH HANSCOM	1	C-46 T-7 T-11 T-6	17 21 4	13 18 3	3 3 1	0 0 0	1 0 0	0 0 0	673 517 135	40 25 34	23 24 6	93 47 6	145 35 24	33	32	375	411	443	109	147	213	$39,828	$21,799	215	$40,850
2343RD PORTLAND	4	C-46 T-7 T-11 T-6	16 16 13	11 12 11	4 3 2	0 0 0	1 1 0	0 0 0	907 525 300	57 33 23	214 9 1	112 149 69	131 33 25	34	37	398	424	461	107	128	194	45,781	33,122	194	45,781
2347TH LONG BEACH	4	B-26 T-7 T-11 T-6	35 37 23	24 20 15	6 13 5	0 0 0	5 4 3	0 0 0	958 1,087 584	27 29 25	19 27 22	60 274 84	155 38 25	42	51	588	666	717	114	151	365	74,471	41,872	372	77,655
2236TH GODMAN	9	C-47 T-7 T-11 T-6	16 21 10	11 13 2	4 4 2	0 0 0	1 3 2	0 1 4	613 339 54	38 16 5	41 7 0	194 99 4	95 43 26	32	30	300	365	395	119	107	166	37,214	14,542	172	40,207
2237TH READING	9	C-46 T-7 T-11 T-6	15 17 10	9 11 8	4 5 2	0 0 0	2 1 0	0 0 0	673 527 114	45 31 11	54 4 0	82 133 15	121 38 30	32	23	368	410	433	108	99	166	33,189	20,905	177	36,240
2239TH GR. PITTSBURGH	9	C-46 T-7 T-11 T-6	16 16 10	11 7 7	3 3 0	0 0 0	1 6 3	1 0 0	724 461 274	45 29 7	97 2 1	113 192 84	138 33 24	32	27	368	414	441	110	107	192	37,855	24,104	212	44,192
2465TH WOLD - CHAMBERLAIN	10	C-46 T-7 T-11 T-6	17 16 12	10 11 8	5 4 4	0 0 0	2 1 0	0 0 0	578 543 145	34 34 12	61 14 2	163 230 9	169 36 27	33	36	371	386	422	104	123	171	34,214	24,173	203	42,113
2466TH ATTERBURY	10	C-46 T-7 T-11 T-6	15 29 19	6 9 12	6 19 7	0 0 0	3 1 0	0 0 0	330 436 191	22 15 10	22 2 0	61 162 47	163 41 30	33	36	396	414	450	105	121	152	29,094	17,579	162	32,677
2471ST O'HARE	10	C-46 T-7 T-11 T-6	34 30 23	20 19 17	7 8 5	3 0 0	4 3 1	0 0 0	813 805 283	24 27 12	113 21 0	264 88 34	144 35 33	44	49	606	518	567	87	338	259	56,805	31,218	296	65,869
2472ND FAIRFAX	10	C-47 T-7 T-11 T-6	14 19 10	10 14 8	1 3 1	0 0 0	3 2 1	0 0 0	643 372 178	46 20 18	63 6 10	201 139 4	91 44 29	32	29	368	405	434	109	94	190	35,004	17,728	198	36,738
2584TH MEMPHIS	14	C-46 T-7 T-11 T-6	16 19 10	13 15 9	1 3 1	0 0 0	1 1 0	1 0 0	597 469 60	37 25 6	29 19 1	169 126 4	148 45 26	32	30	368	385	415	104	120	170	37,515	21,810	170	37,515
2585TH MIAMI	14	C-46 T-7 T-11 T-6	13 17 9	10 13 7	3 3 1	0 0 0	0 1 1	0 0 0	740 691 265	57 41 29	72 5 1	89 230 5	149 50 30	33	41	370	446	487	121	113	215	42,666	23,705	239	49,957
2587TH BIRMINGHAM	14	B-26 C-46 T-7 T-11 T-6	17 6 20 10	7 4 9 7	4 1 5 2	0 0 0 0	6 1 6 1	0 0 0 0	454 25 621 41	27 4 31 4	13 6 23 0	23 0 192 0	147 140 42 37	33	32	380	436	468	113	97	180	39,280	19,165	190	41,676
2589TH DOBBINS	14	B-26 T-7 T-11 T-6	17 18 12	12 15 10	1 1 0	0 0 0	2 0 1	2 2 1	495 858 291	29 48 24	23 33 4	17 212 15	161 41 29	33	40	385	403	343	82	99	181	35,895	24,155	192	39,041

SOURCES: COST CONTROL REPORTS, AF FORMS 320 & 322 RCS: AF-FO-F22C
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
ConAC PERSONNEL STRENGTH REPORT, RCS: FS-P2B

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EXPLANATION OF GRAPHIC PRESENTATION ON

ANALYSIS OF NIGHT, WEATHER, & HOOD HOURS FLOWN

The data reflected in the accompanying chart represents the per cent of the total flying hours accomplished over the 3-month period, January - March 1950, at night, in weather, or during simulated instrument conditions (hood).

The tabular data reflects the number of flying hours accomplished in each of the above categories reported by units on AF Form 110A.

COMMENT

OF THE THIRTEEN GROUPS PORTRAYED, THE FOURTH FIGHTER GROUP HAS FLOWN NO WEATHER TIME AND NO HOOD TIME THROUGHOUT THE THREE-MONTH PERIOD AND THE 56TH FIGHTER GROUP HAS FLOWN LESS NIGHT, WEATHER, AND HOOD TIME THAN ANY OTHER GROUP, EXCEPT THE 4TH FIGHTER GROUP.

THE THREE-MONTH AVERAGES FOR THE COMBAT GROUPS ARE AS FOLLOWS:

	FIGHTER GROUPS		TROOP CARRIER GROUPS	
	Avg Hrs Flown	% of Avg Hrs Flown	Avg Hrs Flown	% of Avg Hrs Flown
Total	3,751	-	4,314	-
Night	206	5.5%	565	13.1%
Weather	104	2.8%	633	14.7%
Hood	253	6.7%	197	4.6%

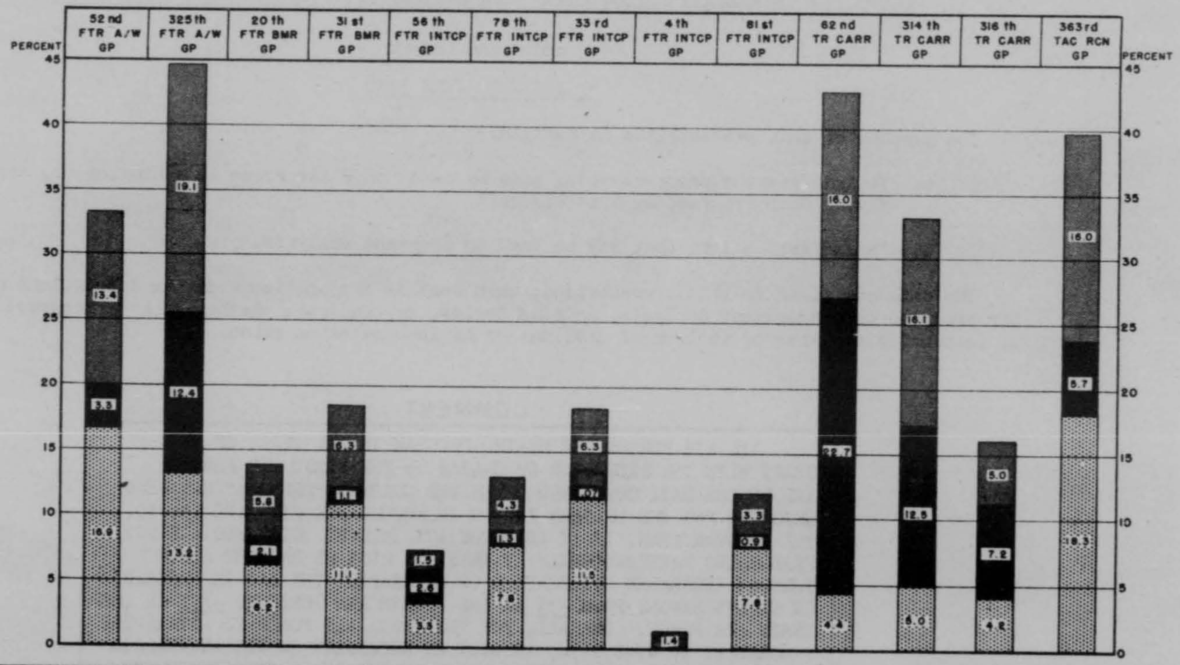
ANALYSIS OF NIGHT, WEATHER, AND HOOD HOURS FLOWN

PERCENT OF TOTAL HOURS FLOWN

COMBAT GROUPS

JAN – MAR 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
APRIL 1950



-LEGEND-

	52nd FTR A/W GP	325th FTR A/W GP	20th FTR BMR GP	31st FTR BMR GP	56th FTR INTCP GP	78th FTR INTCP GP	33rd FTR INTCP GP	4th FTR INTCP GP	81st FTR INTCP GP	62nd TR CARR GP	314th TR CARR GP	316th TR CARR GP	363rd TAC RCN GP
TOTAL HOURS FLOWN	1,623	1,737	6,171	2,914	3,644	4,628	4,749	3,615	4,677	4,558	4,932	3,453	1,218
▓ HOURS FLOWN - NIGHT	217	331	362	185	55	201	300	50	156	729	794	173	195
■ HOURS FLOWN - WX	54	206	133	31	96	60	32	-	43	1,036	617	247	69
░ HOURS FLOWN - HOOD	275	229	383	324	120	361	547	-	366	202	245	145	223

SOURCE: ACFT STATUS & FLYING TIME REPORT, AF FORM 110A,
RCS: AF-SC-A1A

EXPLANATION OF TABULATION ON

ALLOCATION OF RESERVE FLYING HOURS (CUMULATIVE) VS ACTUAL RESERVE HOURS FLOWN

CONAC AIR FORCES

1 JAN - 30 JUNE 1950

The purpose of this presentation is twofold:

a. To indicate the progress being made by each ConAC Air Force in achieving the Reserve Flying Hour Program, by type aircraft.

b. To indicate a form that may be used in progress analysis.

The data contained in this presentation, when used in conjunction with the tabulations on data for progress and management analysis, in this Review, may indicate whether lack of progress is due to in-commission rates or to lack of utilization of in-commission rates.

COMMENT

ALL AIR FORCES ARE BEHIND PROGRAM IN ALL TYPES OF AIRCRAFT WITH THE EXCEPTION OF C-47'S IN THE FIRST AIR FORCE. ALL OF THE DATA CONTAINED UNDER THE COLUMNS "PROGRAM" HAS BEEN WEIGHTED FOR THE WEATHER FACTOR IN ACCORDANCE WITH AFL 150-10. THE PROGRAM THEN, IF IT IS TO BE ATTAINED BY UNITS WHO ARE NOT PERFORMING SATISFACTORILY AT PRESENT, MUST BE BROUGHT ABOUT THROUGH INCREASED UTILIZATION OF AIRCRAFT. THE LAG IN PROGRAM IN C-46'S RANGES FROM -3% IN THE FOURTH AIR FORCE TO -17% IN THE TENTH AIR FORCE. OVERALL, FOR THE TENTH AIR FORCE TO ATTAIN THE PROGRAM BY 30 JUNE 1950, IT WILL BE NECESSARY TO FLY AN AVERAGE OF 51 HOURS PER AIRCRAFT PER MONTH, BASED ON AN AVERAGE OF 380 AIRCRAFT (ALL TYPES) ON HAND DURING MARCH 1950.

RESTRICTED

ALLOCATION OF RESERVE FLYING HOURS (CUMULATIVE)
VS.
ACTUAL RESERVE HOURS FLOWN
ConAC AIR FORCES
1 JAN - 30 JUNE 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, ConAC
APRIL 1950

		B-26			C-46			C-47			T-6			T-7			T-11			AGGREGATE		
AIR FORCE	MO.	PROGRAM	ACTUAL	OVER OR SHORT	PROGRAM	ACTUAL	OVER OR SHORT	PROGRAM	ACTUAL	OVER OR SHORT	PROGRAM	ACTUAL	OVER OR SHORT	PROGRAM	ACTUAL	OVER OR SHORT	PROGRAM	ACTUAL	OVER OR SHORT	PROGRAM	ACTUAL	OVER OR SHORT
FIRST	JAN				1,272	727	- 545	623	666	+ 43	592	715	+123	455	350	-105	1,147	796	- 351	4,089	3,254	- 835
	FEB				2,570	1,540	-1,030	1,260	1,403	+143	1,195	1,288	+ 93	920	826	- 94	2,325	1,740	- 585	8,270	6,797	-1,473
	MAR				4,130	2,810	-1,320	2,018	2,237	+219	1,917	1,718	-199	1,475	1,372	-103	3,725	2,875	- 850	13,265	11,012	-2,253
	APR				5,822			2,845			2,707			2,081			5,242			18,697		
	MAY				7,570			3,695			3,515			2,705			6,810			24,295		
	JUN				9,360			4,583			4,350			3,345			8,430			30,068		
FOURTH	JAN	1,017	353	- 664	1,272	1,007	- 265				789	443	-346	606	356	-250	1,528	649	- 879	5,212	2,808	-2,404
	FEB	2,055	745	-1,310	2,570	2,168	- 402				1,595	1,049	-546	1,225	713	-512	3,095	1,417	-1,678	10,540	6,092	-4,448
	MAR	3,300	1,703	-1,597	4,130	3,834	- 296				2,558	2,067	-491	1,965	1,365	-600	4,958	3,022	-1,936	16,911	11,991	-4,920
	APR	4,655			5,822						3,610			2,770			6,995			23,852		
	MAY	6,050			7,570						4,685			3,600			9,080			30,985		
	JUN	7,488			9,360						5,800			4,456			11,240			38,344		
NINTH	JAN				1,904	1,206	- 698	623	445	-178	709	402	-307	606	380	-226	1,528	634	- 894	5,370	3,147	-2,303
	FEB				3,847	2,843	-1,004	1,260	962	-298	1,595	1,024	-571	1,225	857	-368	3,095	1,485	-1,610	11,022	7,171	-3,851
	MAR				6,182	4,951	-1,231	2,018	1,575	-443	2,558	1,574	-984	1,965	1,405	-560	4,958	2,650	-2,308	17,681	12,155	-5,526
	APR				8,715			2,845			3,610			2,770			6,995			24,935		
	MAY				11,345			3,695			4,685			3,600			9,080			32,405		
	JUN				14,040			4,583			5,800			4,456			11,240			40,119		
TENTH	JAN				4,445	2,579	-1,866	623	672	+ 49	1,576	1,020	-556	1,213	741	-472	3,053	1,442	-1,611	10,910	6,454	-4,456
	FEB				9,098	5,751	-3,347	1,258	1,327	+ 69	3,185	2,327	-858	2,452	1,808	-644	6,170	3,383	-2,787	22,163	14,596	-7,567
	MAR				14,445	8,916	-5,529	2,022	1,970	- 52	5,110	3,327	-1,783	3,930	2,862	-1,068	9,900	5,668	-4,232	35,407	22,743	-12,664
	APR				20,380			2,851			7,202			5,342			13,970			49,945		
	MAY				26,490			3,705			9,360			7,200			18,150			64,905		
	JUN				32,760			4,582			11,597			8,912			22,477			80,328		
TWELFTH	JAN	509	285	- 224	637	636	- 1				394	73	-321	303	160	-143	765	639	- 126	2,608	1,793	- 815
	FEB	1,029	515	- 514	1,286	1,056	- 230				798	250	-548	613	485	-128	1,547	1,436	-111	5,273	3,742	-1,531
	MAR	1,651	778	- 873	2,062	1,929	- 133				1,278	329	-949	983	784	-199	2,485	2,143	- 342	8,459	5,964	-2,495
	APR	2,329			2,910						1,803			1,386			3,510			11,938		
	MAY	3,025			3,780						2,342			1,800			4,555			15,502		
	JUN	3,744			4,680						2,900			2,228			5,610			19,162		
FOURTEENTH	JAN	1,017	508	- 509	1,272	1,026	- 146				789	605	-184	606	442	-164	1,528	1,091	- 437	5,212	3,672	-1,440
	FEB	2,055	1,196	- 859	2,570	2,435	- 135				1,595	1,177	-418	1,225	1,155	- 70	3,095	2,883	- 212	10,540	8,846	-1,694
	MAR	3,300	2,145	-1,155	4,130	3,797	- 333				2,558	1,834	-724	1,965	1,830	-135	4,958	4,847	- 111	16,911	14,453	-2,458
	APR	4,655			5,822						3,610			2,770			6,995			23,852		
	MAY	6,050			7,570						4,685			3,600			9,080			30,985		
	JUN	7,488			9,360						5,800			4,456			11,240			38,344		
CONAC TOTAL	JAN	2,543	1,146	-1,397	10,802	7,181	-3,521	1,869	1,783	- 86	4,849	3,258	-1,591	3,789	2,429	-1,360	9,549	5,251	-4,298	33,481	21,128	-12,353
	FEB	5,139	2,456	-2,683	21,941	15,793	-6,148	3,778	3,692	- 86	9,963	7,115	-2,848	7,660	5,844	-1,816	19,327	12,344	-6,983	67,808	47,244	-20,564
	MAR	8,251	4,626	-3,625	35,079	26,537	-8,842	6,058	5,782	-276	15,979	10,849	-5,130	12,283	9,618	-2,665	30,984	21,205	-9,779	108,634	78,318	-30,316
	APR	11,639			49,471			8,541			22,542			17,319			43,707			160,352		
	MAY	15,125			64,325			11,095			29,272			22,505			56,755			199,077		
	JUN	18,720			79,560			13,748			36,247			27,853			70,237			246,365		

SOURCES: Ltr, Hq ConAC, O&T 360.1, dtd 27 Mar 50
Acft Status & Flying Time Report, AF Form 110A, RCS: PS-A1

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Continental Air Command
Management Analysis Review
April 1950

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CONTINENTAL AIR COMMAND

MANAGEMENT ANALYSIS REVIEW

APRIL 1950

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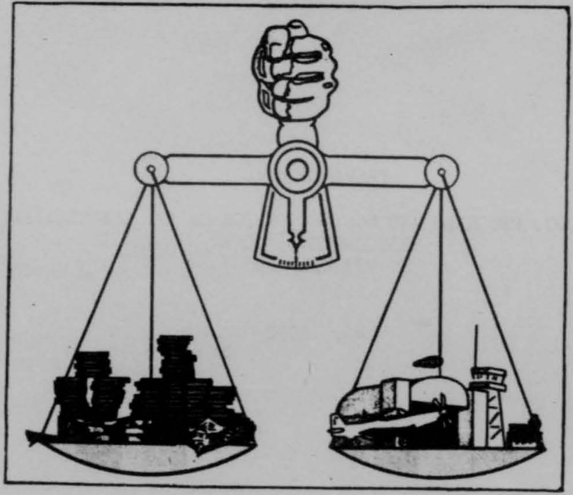

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PREPARED BY:

DIRECTOR, PROGRAMS AND COSTS - OFFICE OF THE COMPTROLLER
HEADQUARTERS, CONAC
MITCHEL AFB

May 1950

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INTRODUCTION

THE PURPOSE OF THE CONAC MANAGEMENT ANALYSIS REVIEW IS TO PROVIDE COMMANDERS AND THEIR STAFFS EACH MONTH WITH ANALYSES AND SELECTED DATA WHICH, WHEN PROPERLY INTERPRETED, WILL INDICATE ACHIEVEMENT WITHIN SPECIFIC FUNCTIONS OF THEIR ACTIVITY.

IT IS INTENDED THAT THIS REVIEW PRESENT FACTS IN SUCH A MANNER THAT COMMANDERS AND THEIR STAFFS CAN EVALUATE THE CONSISTENCY OF THEIR OPERATING ACTIONS, THE EFFICIENT AND ECONOMICAL USE OF RESOURCES AND THE PROGRESS OF THEIR VARIOUS ACTIVITIES TOWARD AUTHORIZED OBJECTIVES.

THE CONTENTS OF THIS REVIEW WILL VARY FROM MONTH TO MONTH. THIS WILL PERMIT GREATER COVERAGE OF COMMAND ACTIVITIES AND CONCENTRATION ON CURRENT ITEMS OF COMMAND INTEREST.

THE PRESENCE OF EXTREME CONDITIONS ARE READILY APPARENT TO COMMANDERS WHEN PROPERLY SHOWN IN GRAPHIC PRESENTATIONS. MANY OF THE EXTREME CONDITIONS INDICATED HEREIN MAY BE JUSTIFIED BY LOCAL SITUATIONS AND THE NATURE OF ASSIGNED MISSIONS. THESE ANALYSES, HOWEVER, SERVE AS A GUIDE TO AREAS AND ACTIVITIES WHERE FURTHER INVESTIGATIONS AND CORRECTIVE ACTIONS MAY RESULT IN BETTER MANAGEMENT.

THE ANALYSES CONTAINED HEREIN HAVE BEEN DERIVED FROM INFORMATION AS REPORTED TO THIS HEADQUARTERS.

EXPLANATION OF GRAPHIC PRESENTATION ON

TOTAL COST OF CONTINENTAL AIR COMMAND BY FUNCTIONAL GROUPING - MONTHLY DISTRIBUTION

The following activities are included in the functional groupings as shown on the chart:

COMMAND GROUP

Hq & Hq Sq. Continental Air Command
Hq & Hq Sq, Tactical Air Command
Hq & Hq Sq, Air Defense Forces
Hq & Hq Sq, ConAC Air Forces
Hq & Hq Sq, Air Divisions (Defense)
2220th Field Printing Plant (May through December 1950)
2220th Extension Group, Less Extension Course Activity (January through April 1950)
Hq & Hq Sq, Combat Wings

OPERATIONS GROUP

Combat - Total Operating Costs of Fighter Groups, Troop Carrier Groups, Tactical Recon Group, Bomb Squadrons (L), Assault Squadron.
Combat Support - Total Operating Costs of Liaison Squadrons and Flights, Aircraft Control and Warning Units, Tactical Control Groups, Shoran Beacon Unit.

SERVICE GROUP

Total operating costs of ConAC organizations less those included in Command, Operations and other Mission Groups.

OTHER MISSION GROUP

Air Force Reserve (AFRTC's only)
Air National Guard (includes Instructor Personnel)
Air ROTC (includes Instructor Personnel)
Air Explorer Liaison
Air Force Overseas Replacement Groups
All other (minor activities including Military Liaison Personnel with Army, Navy and other agencies)
Extension Course Activity of 2220th Extension Group (January through April 1950)

ADDITIONAL CHARGES

Cost of excess personnel and recruits awaiting shipment, AFORG Casuals, Detachment of Patients, Lump Sum Payments, reenlistment bonuses, initial issue of clothing, PCS, Supplies and Services furnished others, parts to salvage, extraordinary repairs and condemned inventory.

COMMENT

AN OVERALL DECREASE IN COSTS OF $855,728 FOR APRIL OVER MARCH IS INDICATED AND IS DIRECTLY DUE TO THE TERMINATION OF OPERATION PORTREX. HOWEVER, THERE IS AN INCREASE OF $25,034 IN THE COMMAND GROUP AND $20,251 IN OTHER MISSIONS GROUP. DECREASES OCCURRED IN THE OPERATIONS GROUP, $136,218, AND THE SERVICES GROUP, $192,320. DECREASES IN THE ADDITIONAL CHARGES GROUP WHICH AMOUNTED TO $572,475 WERE DUE TO REDUCTIONS IN THE FOLLOWING FUNCTIONS: DETACHMENT OF PATIENTS, $37,000, LUMP SUM PAYMENTS, $125,000, REENLISTMENT BONUSES, $97,000, INITIAL ISSUE OF CLOTHING, $98,000, AND PERMANENT CHANGE OF STATION, $108,000.

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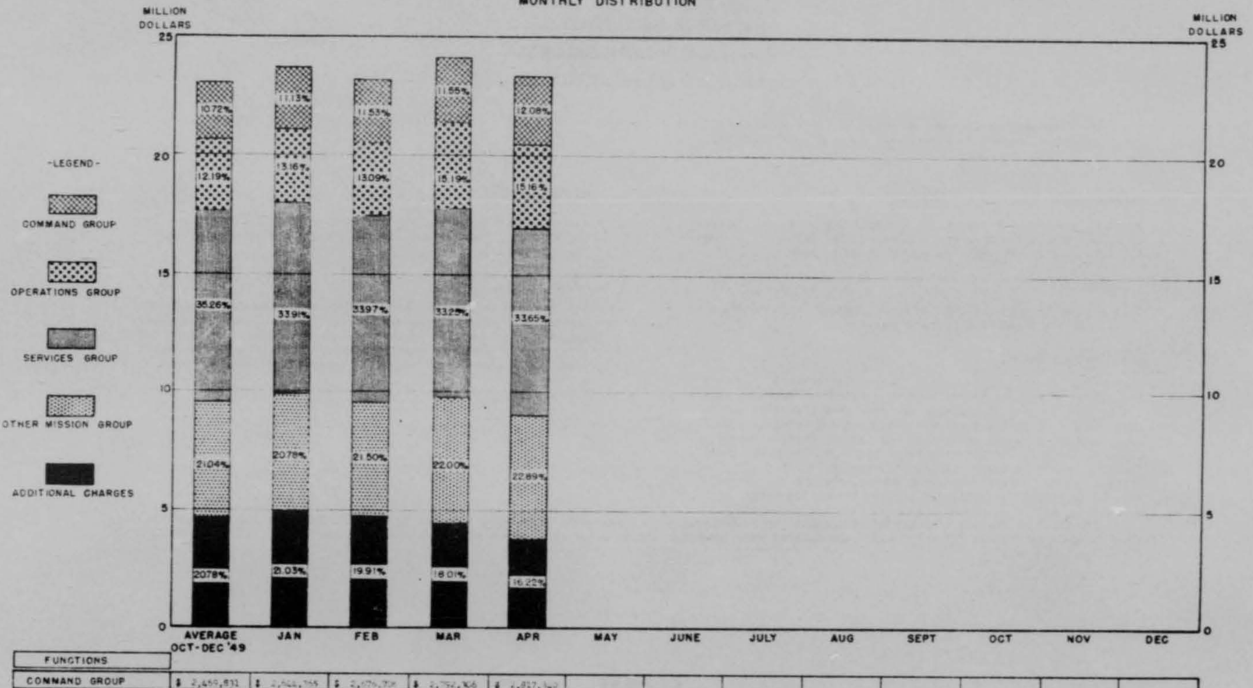
TOTAL COST OF CONTINENTAL AIR COMMAND BY FUNCTIONAL GROUPING

MONTHLY DISTRIBUTION

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



FUNCTIONS	AVERAGE OCT-DEC '49	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
COMMAND GROUP	$ 2,469,831	$ 2,644,365	$ 2,676,708	$ 2,792,306	$ 2,817,340								
OPERATIONS GROUP	2,808,108	3,127,950	3,038,494	3,672,826	3,536,608								
SERVICES GROUP	8,119,532	8,059,017	7,887,319	8,040,820	7,848,530								
OTHER MISSION GROUP	4,845,713	4,938,632	4,992,491	5,319,026	5,339,277								
ADDITIONAL CHARGES	4,785,965	4,998,779	4,621,056	4,355,214	3,784,739								
TOTAL COST	$ 23,029,149	$ 23,768,134	$ 23,216,066	$ 24,180,192	$ 23,324,464								

SOURCE: COST CONTROL REPORT, AF FORM 320, 321, 322
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON
TOTAL COST OF CONTINENTAL AIR COMMAND
BY ELEMENTS OF COST - MONTHLY DISTRIBUTION

The component costs shown on this chart are derived from costs reported by all units listed in the explanation of the "Total Cost of Continental Air Command By Functional Grouping", as follows:

MILITARY PAY

Military pay includes the pay of all military personnel, officer or airman, exclusive of rental allowance for officers, and rental allowance and separate rations payable to airmen.

CIVILIAN PAY

Civilian pay is computed for the report period based on gross annual rates and does not include overtime.

CONTRACTUAL SERVICES

Contractual services include all charges for services rendered regardless of whether or not paid from funds available at base level, such as cost of shipment of government property, contract repair of office machines, communication charges, etc. Where contracts exceed one month, the monthly charge is computed on the basis of the fractional part that the month is of the total period covered. Thus, for example, where a contractual amount covers a one year period, the monthly charge will be 1/12th of the total contractual amount specified.

MISCELLANEOUS

Miscellaneous costs include the cost of PCS, TDY, overtime, lump sum payments, reenlistment bonuses, and T/R's (including T/R's for dependents)

SUPPLY

Supply costs include all supply items except complete aircraft and complete aircraft engines; includes AF Supplies, QM Supplies, Engineer Supplies (Air Installations), Fuels and Lubricants for aircraft, for ground powered vehicles, for heating, etc. All other supplies, such as Signal, Chemical, Ordnance, Medical.

The total of the items on the chart include the dollar cost of the resources which were consumed by ConAC during each month, classified to show the general purpose for which such expenditures were incurred. Total costs by elements of cost agrees with the total cost shown by functional grouping.

COMMENT

AN OVERALL DECREASE IN COSTS OF $855,728 FOR APRIL OVER MARCH IS INDICATED. PAYROLL COSTS, MILITARY AND CIVILIAN INCREASED $325,288, WHILE NON-PERSONNEL COSTS (INCLUDES MISCELLANEOUS, CONTRACTUAL SERVICES AND SUPPLIES) DECREASED $1,181,016: THE MAJOR DECREASE BEING INDICATED IN SUPPLIES, $814,717, WHICH IS A REFLECTION OF THE CESSATION OF OPERATION PORTREX.

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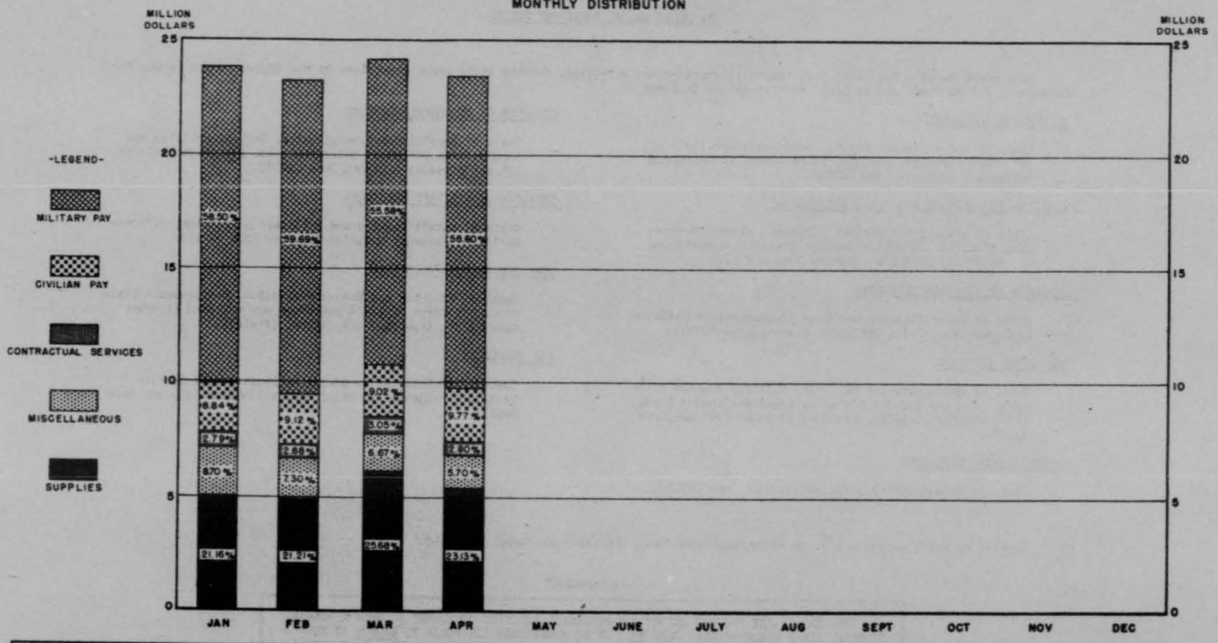
TOTAL COST OF CONTINENTAL AIR COMMAND BY ELEMENTS OF COST

MONTHLY DISTRIBUTION

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
MILITARY PAY	$ 13,905,202	$ 13,857,102	$ 13,439,016	$ 13,667,746								
CIVILIAN PAY	2,101,238	2,118,166	2,182,398	2,278,956								
CONTRACTUAL SERVICES	663,355	622,027	737,542	653,366								
MISCELLANEOUS	2,069,764	1,695,188	1,612,471	1,330,348								
SUPPLIES	5,028,575	4,923,583	6,208,765	5,394,048								
TOTAL COST	$ 23,768,134	$ 23,216,066	$ 24,180,192	$ 23,324,464								

SOURCE: COST CONTROL REPORT, AF FORM 320, 320A, 321, 321A, 322, 322A,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON
COSTS OF OFFICE OF THE DEPUTY FOR PERSONNEL
HQ CONAC AND HQ CONAC AIR FORCES

This chart depicts the total cost (payroll, supplies and services), for the staff group supervised by the Office of the Deputy for Personnel, for Hq ConAC and Hq ConAC Air Forces, as follows:

DEPUTY FOR PERSONNEL

Costs of the Assistant Deputy, Administrative Division, WAF Staff Director, Director of Personnel Planning and Management (Account Code 20203).

DIRECTOR OF MILITARY PERSONNEL PROCUREMENT

Costs of Officer Procurement Division, Airmen Procurement Division, Selective Service Division, Advertising and Publicity Division (Account Code 20221).

DIRECTOR OF CIVILIAN PERSONNEL

Costs of Classification and Wage Administration Division, Employee Utilization Division (Account Code 20229).

AIR JUDGE ADVOCATE

Costs of Administrative Division, Military Justice Division, Military Affairs Division, Legal Assistance Division, Reserve Division, Training Division (Account Code 20209).

GROUND SAFETY DIVISION

Costs of Ground Safety Division (Account Code 20223).

DIRECTOR OF PERSONNEL SERVICES

Costs of Special Services Division, Non-Appropriated and Sundry Funds Division, Information and Education Division, Library Division (Account Code 20217).

DIRECTOR OF MILITARY PERSONNEL

Costs of Classification and Utilization Division, Officers Division, Airmens' Division (Account Code 20227).

DIRECTOR OF AIR FORCE ROTC

Costs of Training and Research Division, Requirements Division, the costs of field personnel are excluded (Account Code 21009, less 21009.01, AFROTC (field)).

AIR CHAPLAIN

Costs of Administrative Division, Professional Service Division, Projects and Requirements Division (Account Code 20211)

Costing of staff activities is in accordance with ConAC Ltr 170-1 and ConAC Ltr 170-7.

COMMENT

THE TOTAL COST FOR THE DEPUTY FOR PERSONNEL FUNCTION CONTINUES TO SHOW A GENERAL INCREASE SINCE MARCH RANGING FROM $317 AT HQ FOURTEENTH AIR FORCE TO $2,879 AT HQ TENTH AIR FORCE. THE LOW COST OF THE DIRECTORATE OF MILITARY PERSONNEL, HQ FOURTH AIR FORCE, IN RELATION TO THE OTHER CONAC AIR FORCE HEADQUARTERS SHOWN, IS ATTRIBUTED TO THE METHOD OF DIVISION OF COSTS FOR RESERVE RECORDS ADMINISTRATION BETWEEN THE AIR ADJUTANT GENERAL AND THE DEPUTY FOR PERSONNEL.

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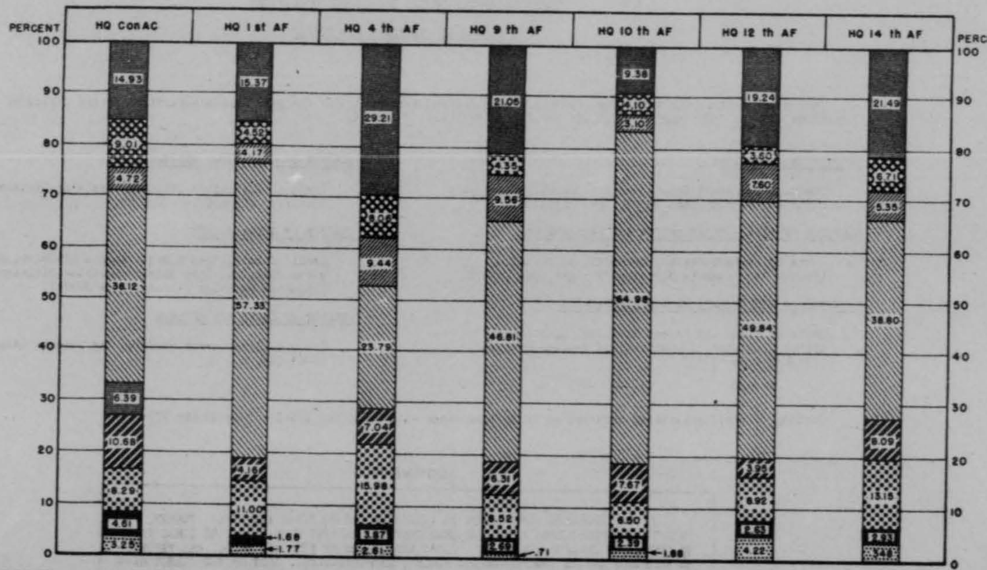
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

COST OF OFFICE OF THE DEPUTY FOR PERSONNEL

HQ ConAC AND HQ ConAC AIR FORCES

APRIL 1950



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		HQ ConAC	HQ 1st AF	HQ 4th AF	HQ 9th AF	HQ 10th AF	HQ 12th AF	HQ 14th AF
■	DEPUTY FOR PERSONNEL	$ 9,450	$ 5,963	$ 6,750	$ 6,309	$ 3,340	$ 5,063	$ 6,737
▩	DIRECTOR OF PERSONNEL SERVICES	5,705	1,753	1,862	1,303	1,460	946	2,104
▨	DIR. OF MIL. PERS. PROCUREMENT	2,990	1,617	2,181	2,867	1,103	2,000	1,678
▧	DIRECTOR OF MILITARY PERSONNEL	24,131	22,242	5,494	14,033	23,150	13,116	12,158
■	DIRECTOR OF CIVILIAN PERSONNEL	4,042	NR	NR	NR	NR	NR	NR
▨	DIRECTOR OF AIR FORCE ROTC	6,758	1,614	1,627	1,890	2,731	1,039	2,536
▩	AIR JUDGE ADVOCATE	5,247	4,267	3,692	2,554	2,315	2,347	4,122
■	AIR CHAPLAIN	2,917	652	895	805	851	692	917
▒	GROUND SAFETY DIVISION	2,057	688	604	213	671	1,110	1,092
	TOTAL	$ 63,297	$ 38,796	$ 23,105	$ 29,974	$ 35,621	$ 26,313	$ 31,344

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON
COSTS OF OFFICE OF THE DEPUTY FOR OPERATIONS
HQ CONAC AND HQ CONAC AIR FORCES

This chart depicts the total cost (payroll, supplies and services), for the staff group supervised by the Office of the Deputy for Operations, for Hq ConAC and Hq ConAC Air Forces, as follows:

DEPUTY FOR OPERATIONS

Costs of Assistant Deputy and the Operations Analysis Division (Account Code 20303, less 20303.01).

DIRECTOR OF PLANS, ORGANIZATION AND REQUIREMENTS

Costs of Plans Division, Organization Division, Mission Requirements Division (Account Code 20307).

DIRECTOR OF COMMUNICATIONS AND ELECTRONICS

Costs of Plans and Policy Division, Electronics Systems Division, Communications Systems Division (Account Code 20315).

DIRECTOR OF OPERATIONS AND TRAINING

Costs of Operations Division, Training Division, Armament Division (Account Code 20305).

DIRECTOR OF INTELLIGENCE

Costs of Intelligence Requirements Division, Photo Intelligence Division, Intelligence Doctrine Division, Intelligence Estimates Division (Account Code 20311).

DIRECTOR OF CIVIL AIR DEFENSE

Costs of Directorate of Civil Air Defense (Account Code 20303.01).

Costing of staff activities referred to is in accordance with ConAC Ltr 170-1 and ConAC Ltr 170-7.

COMMENT

A COST INCREASE SINCE MARCH IS INDICATED FOR HQ CONAC AND FIRST, FOURTH, TWELFTH AND FOURTEENTH AIR FORCE HEADQUARTERS, RANGING FROM $92 AT HQ CONAC TO $1,777 AT HQ TWELFTH AIR FORCE. (COST REDUCTIONS OF $771 AND $1,047 ARE REPORTED BY HQ NINGH AND HQ FOURTEENTH AIR FORCES, RESPECTIVELY). COST OF THE DIRECTORATE OF INTELLIGENCE, HQ FIRST AIR FORCE CONTINUES TO REFLECT LOW COST IN COMPARISON WITH THE SAME ACTIVITY AT OTHER REPORTING HEADQUARTERS.

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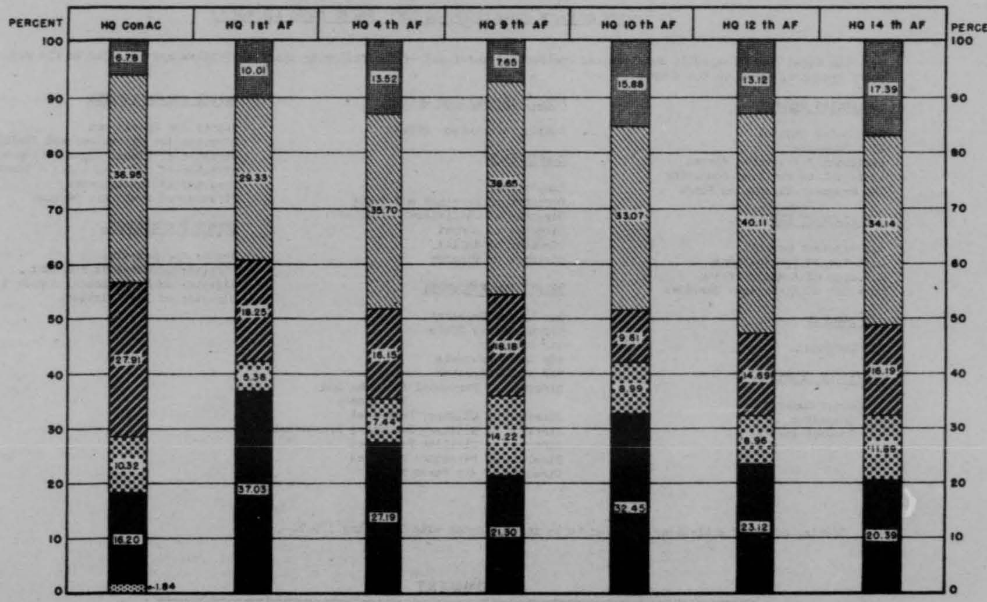
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

COST OF OFFICE OF THE DEPUTY FOR OPERATIONS

HQ ConAC AND HQ ConAC AIR FORCES

APRIL 1950



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		HQ ConAC	HQ 1st AF	HQ 4th AF	HQ 9th AF	HQ 10th AF	HQ 12th AF	HQ 14th AF
■	DEPUTY FOR OPERATIONS	$ 5,055	$ 1,839	$ 3,150	$ 1,241	$ 2,502	$ 2,096	$ 4,344
▧	DIR. OF OPERATIONS & TRAINING	27,563	5,392	8,314	6,265	5,211	6,410	8,530
▨	DIR. OF PLANS, ORGN, & RQNTS	20,818	3,354	3,762	2,947	1,515	2,347	4,044
▩	DIRECTOR OF INTELLIGENCE	7,694	989	1,732	2,306	1,417	1,431	2,971
■	DIR. OF COMM & ELECTRONICS	12,081	6,805	6,334	3,454	5,114	3,694	5,095
▦	DIR. OF CIVIL AIR DEFENSE	1,374	NR	NR	NR	NR	NR	NR
	TOTAL	$ 74,585	$ 18,379	$ 23,292	$ 16,213	$ 15,759	$ 15,978	$ 24,984

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON
COSTS OF MAJOR STAFF GROUPS HQ CONAC AND HQ CONAC AIR FORCES

The total costs (payroll, supplies and contractual services) of the following staff activities are included in the major staff groups as shown on the chart:

COMMANDING GENERAL

Commanding General
Vice Commander
Assistant for Reserve Forces
Assistant to the Vice Commander
The Manpower Evaluation Board

AIR ADJUTANT GENERAL

Air Adjutant General
Director of Publications
Director of Administration
Director of Historical Services

AIR SURGEON

Air Surgeon

INSPECTOR GENERAL

Inspector General
Air Inspector
Air Provost Marshal

PUBLIC INFORMATION OFFICER

Public Information Officer

COMPTROLLER

Comptroller
Director of Programs and Costs
Director of Statistical Services
Director of Budget
Director of Audits
Director of Finance

DEPUTY FOR PERSONNEL

Deputy for Personnel
Ground Safety Division
Air Chaplain
Air Judge Advocate
WAF Staff Director
Director of Personnel Planning and Management
Director of Military Personnel
Director of Military Personnel Procurement
Director of Civilian Personnel
Director of Personnel Services
Director of Air Force ROTC

DEPUTY FOR OPERATIONS

Deputy for Operations
Director for Operations and Training
Director of Plans, Organization & Requirements
Director of Communications & Electronics
Director of Intelligence
Director of Civil Air Defense

DEPUTY FOR MATERIEL

Deputy for Materiel
Director of Materiel Planning
Director of Maintenance, Supply & Services
Director of Installations

Costing of staff activities referred to is in accordance with ConAC Ltr 170-7.

COMMENT

THE DIFFERENCE IN TOTAL COST FOR THE AIR ADJUTANT GENERAL AND DEPUTY FOR PERSONNEL, PARTICULARLY AT HQ FIRST AIR FORCE AND HQ FOURTH AIR FORCE, AS COMPARED TO SIMILAR ACTIVITIES IN OTHER CONAC AIR FORCE HEADQUARTERS IS ATTRIBUTED TO THE DIVISION OF RESPONSIBILITY FOR COST OF RESERVE RECORDS ADMINISTRATION BETWEEN THE AIR ADJUTANT GENERAL AND THE DEPUTY FOR PERSONNEL. THE COMBINED COST OF THE AIR ADJUTANT GENERAL AND DEPUTY FOR PERSONNEL, OF EACH HEADQUARTERS, IS SUBSTANTIALLY THE SAME, AND TENDS TO SUPPORT THE ABOVE CONCLUSION. PARAGRAPH 3, AFR 45-17, DATED 9 MARCH 1949 AND PARAGRAPHS 2, 2a, AND 2b OF CONAC LETTER 45-1, 9 MAY 1949 CONTAIN DETAILED INFORMATION AND CLARIFY RESPONSIBILITIES FOR THE ADMINISTRATION OF RESERVE RECORDS.

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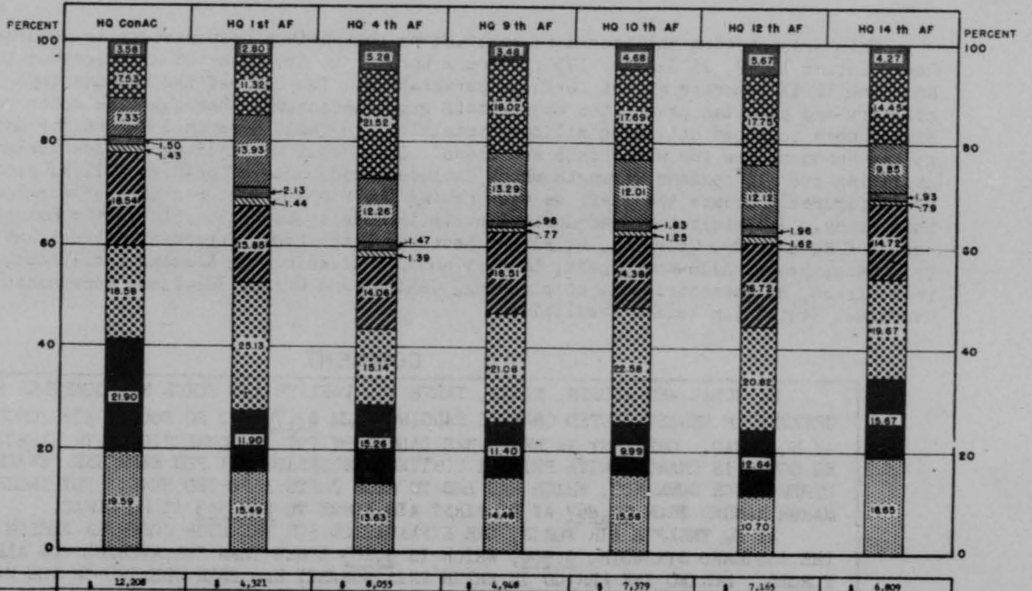
COST OF MAJOR STAFF GROUPS

HQ ConAC AND HQ ConAC AIR FORCES

APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



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		HQ ConAC	HQ 1st AF	HQ 4th AF	HQ 9th AF	HQ 10th AF	HQ 12th AF	HQ 14th AF
■	COMMANDING GENERAL	$ 12,208	$ 4,321	$ 8,055	$ 4,948	$ 7,379	$ 7,165	$ 6,809
▩	AIR ADJUTANT GENERAL	25,651	17,477	32,842	25,619	27,913	22,438	23,026
▨	INSPECTOR GENERAL	24,974	21,505	18,708	18,900	18,949	15,319	15,693
■	AIR SURGEON	5,114	3,291	2,238	1,367	2,890	2,471	3,082
▧	PUBLIC INFORMATION OFFICER	4,884	2,228	2,119	1,099	1,978	2,046	1,267
▨	COMPTROLLER	63,163	24,471	21,457	23,476	22,688	21,129	23,454
▩	DEPUTY FOR PERSONNEL	63,297	38,796	23,105	29,974	35,621	26,313	31,344
■	DEPUTY FOR OPERATIONS	74,585	18,379	23,292	16,213	15,759	15,978	24,984
▦	DEPUTY FOR MATERIEL	66,735	23,918	20,800	20,589	24,581	13,523	29,729
	TOTAL	$ 340,611	$ 154,386	$ 152,616	$ 142,185	$ 157,758	$ 126,382	$ 159,388

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF TABULAR PRESENTATION

ANALYSIS OF HEADQUARTERS COSTS - HQ CONAC AND HQ CONAC AIR FORCES

This presentation utilizes data reported by the various headquarters in accordance with ConAC Letter 170-7, 25 January 1950; items 2 through 10 are reported as described in paragraph 3, and item 11 is reported as set forth in paragraph 4. The Cost of the Headquarters Groups includes military and civilian pay of the major staff group indicated. Headquarters costs per person assigned were computed utilizing military totals of the ConAC Personnel Report for units comparable to the Headquarters for whom costs are shown. ConAC cost per military person assigned was computed utilizing overall command strength which includes Headquarters ConAC as well as each Air Force. Heavy figures indicate the staff section having the highest cost per unit of workload selected for this study. Undistributed Headquarters costs include costs applicable to the Headquarters such as costs of Hq Sq. Adm. Overhead, Hq Flight Section, Motor Pool, Personnel Without Duty Assignment, Prisoners, Rental Allowances paid, Laundry and Dry Cleaning, Hq Messing Facilities, Separate Rations paid airmen, Replacment issues of clothing, Janitor and Office Supplies, Communications, TDY costs, Overtime, Rental for leased facilities.

COMMENT

HQ CONAC AND FOURTH, NINTH, TENTH AND TWELFTH AIR FORCE HEADQUARTERS REPORT INCREASES IN UNDISTRIBUTED CHARGES RANGING FROM $3,795 AT HQ FOURTH AIR FORCE TO $31,198 AT HQ CONAC. GREATEST INCREASE WAS CAUSED BY TDY IN CONNECTION WITH EXERCISE "SWARMER". HQ CONAC IS CHARGED WITH PRIMARY COSTING RESPONSIBILITY FOR EXERCISE "SWARMER", FOR OTHER MAJOR COMMANDS, WHICH HAS LED TO HIGH COSTS REPORTED HERE. TDY INCREASES SINCE MARCH RANGED FROM $3,867 AT HQ FIRST AIR FORCE TO $25,563 AT HQ CONAC.

AT HQ TWELFTH AIR FORCE, ONE EXPLANATION FOR THE HIGH COST PER PERSON ASSIGNED IS THE ASSIGNED STRENGTH, 3,900, WHICH IS 6,109 LOWER THAN THE AVERAGE FOR ALL CONAC AIR FORCES. DURING THE PERIOD IN WHICH THIS SUBJECT HAS BEEN TREATED IN THE MANAGEMENT ANALYSIS REVIEW, TWELFTH AIR FORCE HEADQUARTERS COST HAS RANGED FROM $216,000 TO $246,000. IT APPEARS THAT ANY SUBSTANTIAL REDUCTION IN COST FOR A HEADQUARTERS OF THIS TYPE IS IMPRACTICABLE OF ACCOMPLISHMENT MERELY BY A REDUCTION IN FIELD FORCE STRENGTH.

COST INCREASES SINCE MARCH, FOR PERSONNEL WITHOUT DUTY ASSIGNMENT (ACCOUNT CODE 20511) WERE REPORTED AS FOLLOWS: HQ CONAC $1,199, HQ FIRST AIR FORCE $591, HQ NINTH AIR FORCE $4,686, AND HQ TWELFTH AIR FORCE $2,484. HQ FOURTH, TENTH, AND FOURTEENTH AIR FORCE REPORTED DECREASES OF $226, $316 AND $4,909, RESPECTIVELY, IN THE PERSONNEL WITHOUT DUTY ASSIGNMENT ACCOUNT.

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ANALYSIS OF HEADQUARTERS COSTS

HQ ConAC AND HQ ConAC AIR FORCES

APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

ASSIGNED MILITARY STRENGTH

	ConAC	1st AIR FORCE	4 th AIR FORCE	9 th AIR FORCE	10 th AIR FORCE	12 th AIR FORCE	14 th AIR FORCE
1 PERMANENT PARTY TOTAL (LESS PIPELINE)	62,292	11,866	14,173	8,234	8,820	3,900	13,061

COST OF HEADQUARTERS GROUPS

	HQ ConAC	HQ 1 st AF	HQ 4 th AF	HQ 9 th AF	HQ 10 th AF	HQ 12 th AF	HQ 14 th AF
2 COMMANDING GENERAL	$ 12,208	$ 4,321	$ 8,055	$ 4,948	$ 7,379	$ 7,165	$ 6,809
3 AIR ADJUTANT GENERAL	25,651	17,477	32,842	25,619	27,913	22,438	23,026
4 INSPECTOR GENERAL	24,974	21,505	18,708	18,900	18,949	15,319	15,693
5 AIR SURGEON	5,114	3,291	2,238	1,367	2,890	2,471	3,082
6 PUBLIC INFORMATION OFFICER	4,884	2,228	2,119	1,099	1,978	2,046	1,267
7 COMPTROLLER	63,163	24,471	21,457	23,476	22,688	21,129	23,454
8 DEPUTY FOR PERSONNEL	63,297	38,796	23,105	29,974	35,621	26,313	31,344
9 DEPUTY FOR OPERATIONS	74,565	18,379	23,292	16,213	15,759	15,978	24,984
10 DEPUTY FOR MATERIEL	66,735	23,918	20,800	20,589	24,581	13,523	29,729
11 UNDISTRIBUTED HQ COST	188,098	124,778	113,115	169,993	123,369	119,356	162,992
12 TOTAL HEADQUARTERS COST	$ 528,709	$ 279,164	$ 265,731	$ 312,178	$ 281,127	$ 245,738	$ 322,380

HEADQUARTERS COST PER PERSON ASSIGNED

13 COMMANDING GENERAL	$ .20	$ .36	$ .57	$ .60	$ .84	$ 1.84	$ .52
14 AIR ADJUTANT GENERAL	.41	1.47	2.32	3.11	3.16	5.75	1.76
15 INSPECTOR GENERAL	.40	1.81	1.32	2.30	2.15	3.93	1.20
16 AIR SURGEON	.08	.28	.16	.17	.33	.63	.24
17 PUBLIC INFORMATION OFFICER	.08	.19	.15	.13	.22	.52	.10
18 COMPTROLLER	1.01	2.06	1.51	2.85	2.57	5.42	1.80
19 DEPUTY FOR PERSONNEL	1.02	3.27	1.63	3.64	4.04	6.75	2.40
20 DEPUTY FOR OPERATIONS	1.20	1.55	1.64	1.97	1.79	4.10	1.91
21 DEPUTY FOR MATERIEL	1.07	2.02	1.47	2.50	2.79	3.47	2.28
22 UNDISTRIBUTED HQ COST	3.02	10.52	7.98	20.65	13.99	30.60	12.48
23 TOTAL HEADQUARTERS COSTS (PER PERSON ASSIGNED)	$ 8.49	$ 23.53	$ 18.75	$ 37.92	$ 31.88	$ 63.01	$ 24.69

SOURCE: COST CONTROL REPORT, AF FORM 321, RCS AF-FO-F22C
CONAC PERSONNEL STRENGTH REPORT, RCS FS-P2b

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EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF CONTRACTUAL COMMUNICATIONS - HQ CONAC AND HQ CONAC AIR FORCES

The cost of Contractual Communications reflects all payments to commercial organizations for services and includes charges for long distance telephone calls, trunk service, telegraph and cable service, teletype service, charges for rental of commercial telephone service, central office equipment, and the cost of installation of communications equipment as required.

Where commercial service for a headquarters is paid for by the base on which located, the headquarters proportionate share of contractual costs is posted to this account (20527).

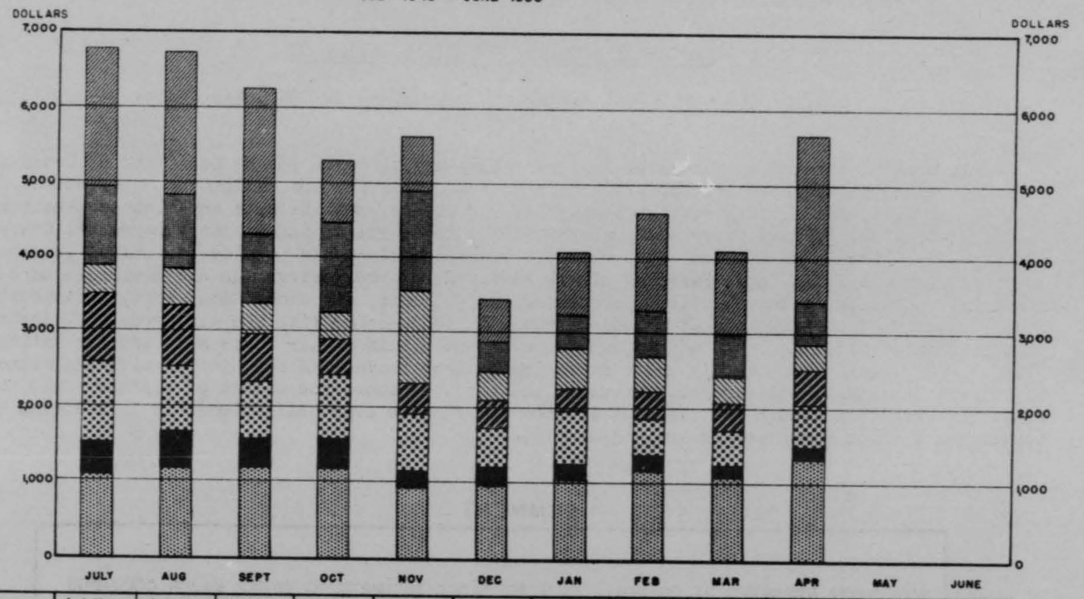
The chart reflects the cost variation to date for Contractual Communications since the beginning of Fiscal Year 1950.

COMMENT

EMPHASIS WAS PLACED ON THE REDUCTION IN COSTS OF CONTRACTUAL COMMUNICATION SERVICES IN SEPTEMBER 1949. THIS PRESENTATION DEPICTS COSTS INCURRED FOR THE FIRST TEN MONTHS OF FISCAL YEAR 1950. THE CHART INDICATES A 7% ($389) OVERALL INCREASE IN COMMUNICATIONS COSTS FOR APRIL OVER THE AVERAGE ($5,202) FOR THE PREVIOUS NINE MONTHS. HEADQUARTERS, CONAC REFLECTS A 76% ($952) INCREASE AND HQ FOURTEENTH AIR FORCE REPORTS A 23% ($252) INCREASE, FOR APRIL, OVER THE AVERAGE FOR THE PREVIOUS NINE MONTHS. OTHER CONAC AIR FORCE HEADQUARTERS INDICATE COMMUNICATIONS COST REDUCTIONS FROM AVERAGES TO DATE RANGING FROM 9% ($44) AT HQ NINTH AIR FORCE TO 39% ($115) AT HQ TWELFTH AIR FORCE.

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

COST OF CONTRACTUAL COMMUNICATIONS
HQ ConAC AND HQ ConAC AIR FORCES
JULY 1949 – JUNE 1950



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		JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
▨	HQ CONAC	$ 1,863	$ 1,953	$ 1,950	$ 866	$ 763	$ 577	$ 886	$ 1,301	$ 1,113	$ 2,204	$	$
■	HQ 1st AF	1,152	991	937	1,202	1,309	387	427	657	547	556		
▧	HQ 4th AF	376	535	413	355	1,262	386	508	455	353	351		
▨	HQ 9th AF	898	809	630	490	394	348	293	329	355	461		
▩	HQ 10th AF	1,038	840	751	829	784	530	698	448	477	555		
■	HQ 12th AF	378	499	375	377	199	228	207	200	174	178		
░	HQ 14th AF	1,088	1,206	1,178	1,179	911	953	1,056	1,189	1,081	1,334		
	TOTAL	$ 6,793	$ 6,733	$ 6,234	$ 5,298	$ 5,602	$ 3,409	$ 4,075	$ 4,579	$ 4,100	$ 5,639	$	$

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF TEMPORARY DUTY TRAVEL - HQ CONAC AND HQ CONAC AIR FORCES

This chart indicates the trend of Temporary Duty travel costs for Hq ConAC and Hq ConAC Air Forces. Expenditures shown include those from both specific and open allotments and include the cost of Per Diem, Rail Transportation of persons and things, meal tickets and minor expenditures (liquid coffee money, taxi fares and porter's tips), for civilian and military personnel traveling on official business (Account Code 20529). Specific allotments provide for travel in conjunction with the following: Ferrying of Air Force, Air Force Reserve and Air National Guard aircraft, Operation of installations, area cadet recruitment, air combat manuevers, individual or group movements for attendance at schools, travel in conjunction with the Air Force ROTC instruction program at civilian institutions, and summer encampments of Air Force ROTC and Air National Guard. Open allotments normally cover costs incident to travel and per diem of civilian witnesses in connection with courts-martial, travel of medical attendants and escort of military dead to the place of burial. Although cost figures include adjustments over obligations, it is believed that totals for a three month period are comparable.

COMMENT

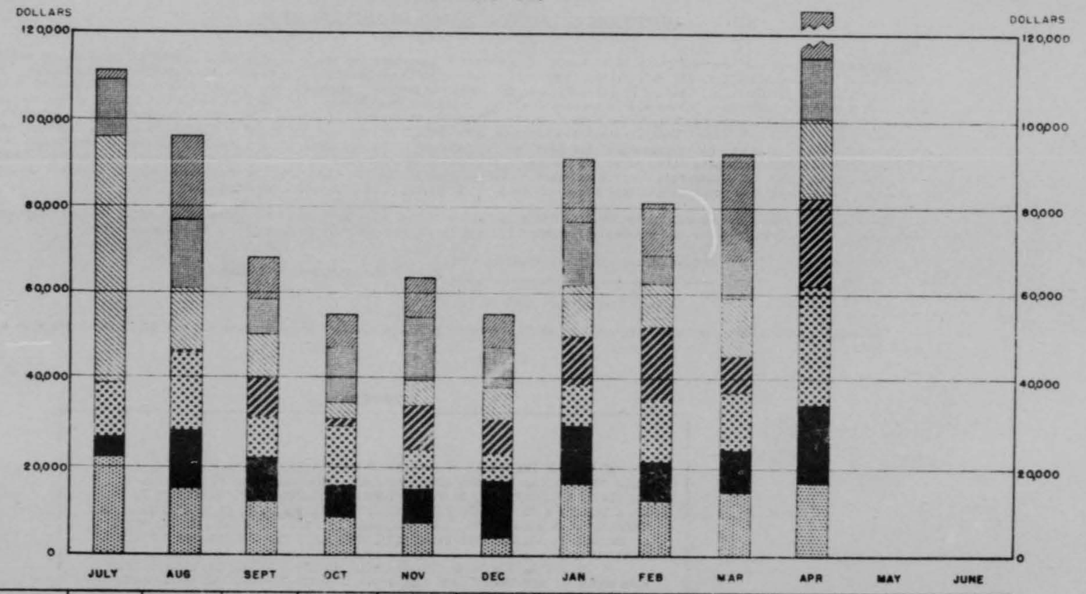
TDY COSTS REPORTED BY HQ CONAC INCLUDE THOSE INCURRED BY OTHER MAJOR COMMANDS DURING EXERCISE "SWARMER". INDIVIDUAL CONAC AIR FORCE HEADQUARTERS REPORT THEIR OWN TDY COSTS. INCREASES RANGE FROM 20% AT HQ FOURTH AIR FORCE TO 308% AT HQ CONAC OVER THE AVERAGE FOR THE PREVIOUS NINE MONTHS. INCREASE IN TOTAL EXPENDITURE WAS $85,384, AN INCREASE OF 108% OVER THE AVERAGE OF $79,029 FOR THE PREVIOUS NINE MONTHS.

COST OF TEMPORARY DUTY TRAVEL

HQ ConAC AND HQ ConAC AIR FORCES

JULY 1949 - JUNE 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



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		JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
▨	HQ CONAC	$ 1,856	$ 21,299	$ 9,229	$ 7,446	$ 9,557	$ 7,295	$ 17,581	$ 11,964	$ 24,770	$ 50,133	$	$
▤	HQ 1st AF	13,168	14,240	8,525	8,415	14,492	11,528	11,822	6,598	9,495	13,362		
▧	HQ 4th AF	57,668	15,087	9,632	7,405	5,286	4,696	12,203	10,491	13,207	18,055		
▨	HQ 9th AF	0	50	8,222	1,991	9,575	5,798	11,172	16,449	8,293	20,337		
▩	HQ 10th AF	11,871	18,698	9,406	13,089	9,365	9,051	8,570	17,722	12,396	27,249		
■	HQ 12th AF	4,125	11,524	9,876	7,513	7,489	12,198	13,199	8,979	9,409	17,536		
▦	HQ 14th AF	22,451	15,238	12,433	8,424	7,408	3,979	16,468	12,687	14,704	17,541		
	TOTAL	$ 111,210	$ 96,136	$ 67,687	$ 54,265	$ 63,172	$ 54,545	$ 91,015	$ 80,910	$ 92,274	$ 164,413	$	$

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON

RELATIVE WORK PERFORMANCE OF SQUADRON ADMINISTRATIVE OVERHEAD

The costs include the combined costs of squadron administrative functions for the following units and/or activities: Hq and Hq Squadrons of Wing Organizations, Air Base Groups (Separate), AFRTCs, Air Base Squadrons (Separate). Aircraft Control and Warning Organizations (Special Mission Group B), Liaison Flights, Fighter and Bomber Squadrons (Separate), and Standby Base Squadrons (Account Code 01020); Hq and Hq Squadrons of Air Base Groups when a component of Wing Organizations (Account Code 02013); Communications Squadrons, Motor Vehicle Squadrons, Installation Squadrons, Air Police Squadrons, Food Service Squadrons, Air Base Service Squadrons, Installation Squadrons, and Air Base Groups (Separate), except Medical Squadrons (Account Code 02014); Maintenance Squadrons of M&S Groups of Wing Organizations and the maintenance activities of M&S Squadrons of Air Base Groups (Separate). (Account Code 05012); Supply Squadrons of M&S Groups of Wing Organizations and the supply activities of M&S Squadrons of Air Base Groups (Separate), (Account Code 05014); Mission Units - Combat Squadrons, Operations Squadrons of Aircraft Control and Warning Groups (Special Mission Group B); Operating companies of Engineer Aviation Battalions (Special Mission Group B) and Operating Squadrons of Air Base Groups (Separate), (Account Code 07014).

The work performance is determined by dividing the total costs of the above mentioned activities by the total military personnel of these organizations (except major or intermediate command headquarters), and applying the results in the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Base Activity}} \times 100 = \text{Work Performance Rating}$$

The ConAC Standard Cost for these functions is $8.75 for bases having a military strength over 500 and $4.75 for bases with a population under 500.

COMMENT

AT MEMPHIS THE NUMBER OF PERSONS IN THE FUNCTION DECREASED FROM 24 TO 18, WHILE THE WORKLOAD REMAINED ABOUT THE SAME. THIS REDUCTION IN PERSONNEL IN THE FUNCTION IS REFLECTED IN IMPROVED WORK PERFORMANCE RATINGS FROM 75 TO 89, AND A REDUCTION IN COST PER PERSON SERVICED FROM $10.04 TO $8.42 OR 19%. THIS PROGRESS IS AN ENCOURAGING SIGN; HOWEVER, THE NUMBER OF PERSONS IN THE FUNCTION AS COMPARED TO SIMILAR TYPE BASES STILL APPEARS TO BE EXCESSIVE AND FURTHER IMPROVEMENT CAN BE SOUGHT.

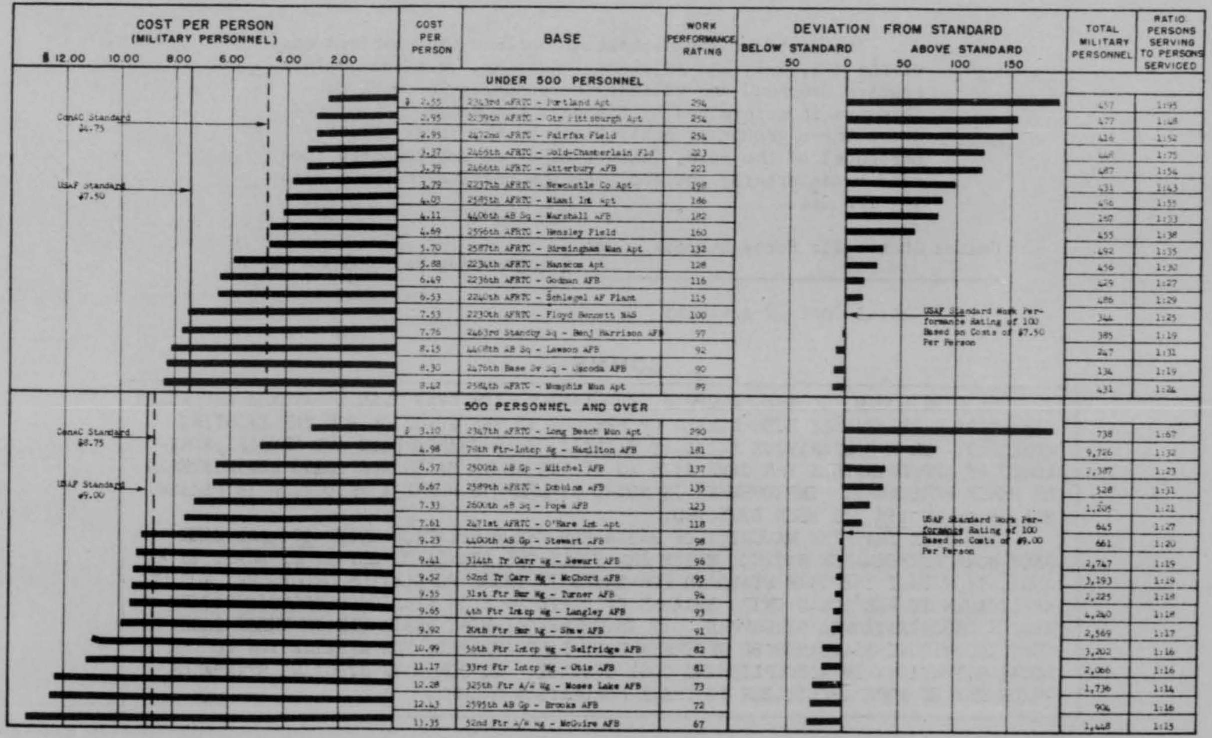
IN THE POPULATION GROUP 500 PERSONNEL AND OVER, BROOKS AND MCGUIRE AFB'S HAVE SHOWN NO IMPROVEMENT OVER LAST MONTH, WHEREAS TURNER SHOWS AN IMPROVED WORK PERFORMANCE RATING FROM 73 TO 94 DUE TO INCREASED WORKLOAD BEING HANDLED (PERSONNEL RETURNED FROM OPERATION PORTREX).

RESTRICTED

RELATIVE WORK PERFORMANCE OF SQUADRON ADMINISTRATIVE OVERHEAD

APRIL 1950

PREPARED BY
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



USAF Standard Work Performance Rating of 100 Based on Costs of $7.50 Per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $9.00 Per Person

COST PER PERSON	BASE	WORK PERFORMANCE RATING	TOTAL MILITARY PERSONNEL	RATIO PERSONS SERVING TO PERSONS SERVICED
	UNDER 500 PERSONNEL			
$ 2.55	2343rd AFRTC - Portland Apt	294	457	1:95
2.95	2239th AFRTC - Gtr Pittsburgh Apt	254	477	1:48
2.95	2472nd AFRTC - Fairfax Field	254	416	1:52
3.27	2465th AFRTC - Wold-Chamberlain Fld	223	448	1:75
3.39	2466th AFRTC - Atterbury AFB	221	487	1:54
3.79	2237th AFRTC - Newcastle Co Apt	198	431	1:43
4.03	2585th AFRTC - Miami Int Apt	186	456	1:55
4.11	4406th AB Sq - Marshall AFB	182	167	1:53
4.69	2596th AFRTC - Hensley Field	160	455	1:38
5.70	2587th AFRTC - Birmingham Mun Apt	132	492	1:35
5.88	2234th AFRTC - Hanscom Apt	128	456	1:30
6.49	2236th AFRTC - Godman AFB	116	429	1:27
6.53	2240th AFRTC - Schlegel AF Plant	115	486	1:29
7.53	2230th AFRTC - Floyd Bennett NAS	100	344	1:25
7.76	2463rd Standby Sq - Benj Harrison AFB	97	385	1:19
8.15	4408th AB Sq - Lawson AFB	92	247	1:31
8.30	2476th Base Sv Sq - Oscoda AFB	90	134	1:19
8.42	2584th AFRTC - Memphis Mun Apt	89	431	1:24
	500 PERSONNEL AND OVER			
$ 3.10	2347th AFRTC - Long Beach Mun Apt	290	738	1:67
4.98	78th Ftr-Intcp Wg - Hamilton AFB	181	9,726	1:32
6.57	2500th AB Gp - Mitchel AFB	137	2,387	1:23
6.67	2589th AFRTC - Dobbins AFB	135	528	1:31
7.33	2600th AB Sq - Pope AFB	123	1,205	1:21
7.61	2471st AFRTC - O'Hare Int Apt	118	645	1:27
9.23	4400th AB Gp - Stewart AFB	98	661	1:20
9.41	314th Tr Carr Wg - Sewart AFB	96	2,747	1:19
9.52	62nd Tr Carr Wg - McChord AFB	95	3,193	1:19
9.55	31st Ftr Bmr Wg - Turner AFB	94	2,225	1:18
9.65	4th Ftr Intcp Wg - Langley AFB	93	4,240	1:18
9.92	20th Ftr Bmr Wg - Shaw AFB	91	2,569	1:17
10.99	56th Ftr Intcp Wg - Selfridge AFB	82	3,202	1:16
11.17	33rd Ftr Intcp Wg - Otis AFB	81	2,066	1:16
12.28	325th Ftr A/W Wg - Moses Lake AFB	73	1,736	1:14
12.43	2595th AB Gp - Brooks AFB	72	904	1:16
13.35	52nd Ftr A/W Wg - McGuire AFB	67	1,448	1:15

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

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EXPLANATION OF GRAPHIC PRESENTATION ON RELATIVE WORK PERFORMANCE OF ADMINISTRATION

The costs of Administration include the combined cost of the A-1, S-1, and Adjutant functions, Squadron Administrative Overhead and Military Personnel. The work performance is determined by dividing the total cost of the above three groups of activities, by the total military personnel of the base, (except major or intermediate command headquarters) and applying the results in the following formula.

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Activity}} \times 100 = \text{Work Performance Rating}$$

COMMENT

AT BIRMINGHAM, GODMAN, MEMPHIS, AND LAWSON, LOW PERFORMANCE RATINGS ARE AGAIN CAUSED BY A RELATIVELY HIGH NUMBER OF PERSONS IN THE FUNCTION FOR THE EXISTING WORKLOAD. ON A COMPARATIVE BASIS, AT FAIRFAX, WOLD-CHAMBERLAIN AND HENSLEY, WORKLOADS OF APPROXIMATELY THE SAME SIZE AS AT THE ABOVE BASES ARE BEING ADMINISTERED BY FEWER PERSONNEL. IMPROVEMENT IS NOTED AT MEMPHIS WHERE A REDUCTION IN PERSONNEL OF ABOUT 15% HAS BEEN EFFECTED.

THE FACT THAT THE MAJORITY OF BASES FOR THE POPULATION GROUP 500 AND OVER SHOW WORK PERFORMANCE RATINGS WHICH ARE BELOW THE STANDARDS SET BY HQ USAF, IS AN INDICATION THAT THE USAF STANDARD FOR BASES IN THESE POPULATION GROUPS MAY NOT BE APPLICABLE TO ALL CONAC UNITS BECAUSE OF DIFFERENCE IN MISSION RESPONSIBILITIES AND/OR ORGANIZATIONAL STRUCTURE. IT IS THEREFORE MOST DESIRABLE IN THESE CASES THAT INDIVIDUAL STANDARDS BE DETERMINED BY BASE ANALYSTS FOR APPLICATION TO THE LOCAL SITUATIONS IN ACCOMPLISHING COST CONTROL. HQ CONAC IS STUDYING STANDARDS WHICH MAY BE MORE APPLICABLE TO THESE POPULATION GROUPS.

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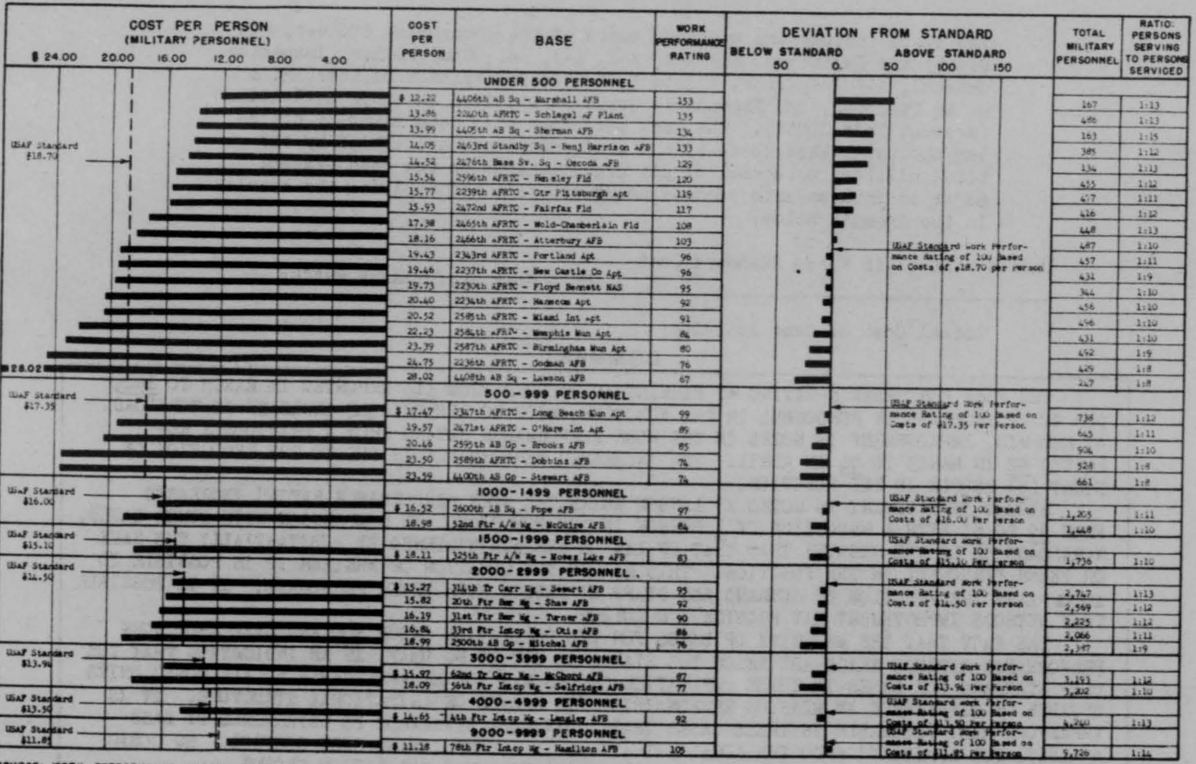
RELATIVE WORK PERFORMANCE OF ADMINISTRATION

APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



COST PER PERSON	BASE	WORK PERFORMANCE RATING	TOTAL MILITARY PERSONNEL	RATIO: PERSONS SERVING TO PERSONS SERVICED
	UNDER 500 PERSONNEL			
$ 12.22	4406th AB Sq - Marshall AFB	153	167	1:13
13.86	2240th AFRTC - Schlegel AF Plant	135	486	1:13
13.99	4405th AB Sq - Sherman AFB	134	163	1:15
14.05	2463rd Standby Sq - Benj Harrison AFB	133	385	1:12
14.52	2476th Base Sv. Sq - Oscoda AFB	129	134	1:13
15.54	2596th AFRTC - Hensley Fld	120	455	1:12
15.77	2239th AFRTC - Gtr Pittsburgh Apt	119	477	1:11
15.93	2472nd AFRTC - Fairfax Fld	117	416	1:12
17.38	2465th AFRTC - Wold-Chamberlain Fld	108	448	1:13
18.16	2466th AFRTC - Atterbury AFB	103	487	1:10
19.43	2343rd AFRTC - Portland Apt	96	457	1:11
19.46	2237th AFRTC - New Castle Co Apt	96	431	1:9
19.73	2230th AFRTC - Floyd Bennett NAS	95	344	1:10
20.40	2234th AFRTC - Hanscom Apt	92	456	1:10
20.52	2585th AFRTC - Miami Int Apt	91	496	1:10
22.23	2584th AFRTC - Memphis Mun Apt	84	431	1:10
23.39	2587th AFRTC - Birmingham Mun Apt	80	492	1:9
24.75	2236th AFRTC - Godman AFB	76	429	1:8
28.02	4408th AB Sq - Lawson AFB	67	247	1:8
	500 - 999 PERSONNEL			
$ 17.47	2347th AFRTC - Long Beach Mun Apt	99	738	1:12
19.57	2471st AFRTC - O'Hare Int Apt	89	645	1:11
20.46	2595th AB Gp - Brooks AFB	85	904	1:10
23.50	2589th AFRTC - Dobbins AFB	74	528	1:8
23.59	4400th AB Gp - Stewart AFB	74	661	1:8
	1000 - 1499 PERSONNEL			
$ 16.52	2600th AB Sq - Pope AFB	97	1,205	1:11
18.98	52nd Ftr A/W Wg - McGuire AFB	84	1,448	1:10
	1500 - 1999 PERSONNEL			
$ 18.11	325th Ftr A/W Wg - Moses Lake AFB	83	1,736	1:10
	2000 - 2999 PERSONNEL			
$ 15.27	314th Tr Carr Wg - Sewart AFB	95	2,747	1:13
15.82	20th Ftr Bmr Wg - Shaw AFB	92	2,569	1:12
16.19	31st Ftr Bmr Wg - Turner AFB	90	2,225	1:12
16.84	33rd Ftr Intcp Wg - Otis AFB	86	2,066	1:11
18.99	2500th AB Gp - Mitchel AFB	76	2,347	1:9
	3000 - 3999 PERSONNEL			
$ 15.97	62nd Tr Carr Wg - McChord AFB	87	3,193	1:12
18.09	56th Ftr Intcp Wg - Selfridge AFB	77	3,202	1:10
	4000 - 4999 PERSONNEL			
$ 14.65	4th Ftr Intcp Wg - Langley AFB	92	4,260	1:13
	9000 - 9999 PERSONNEL			
$ 11.18	78th Ftr Intcp Wg - Hamilton AFB	105	9,726	1:14

USAF Standard Work Performance Rating of 100 Based on Costs of $18.70 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $17.35 Per Person.

USAF Standard Work Performance Rating of 100 Based on Costs of $16.00 Per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $15.10 Per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $14.50 Per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $13.94 Per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $13.50 Per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $11.85 Per Person

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

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EXPLANATION OF GRAPHIC PRESENTATION ON

RELATIVE WORK PERFORMANCE OF COMMANDER AND STAFF

The costs include the combined costs of the Commanding Officer, his Deputy and Executive, the A-1, A-2, A-3, A-4, Comptroller, Inspector General, Air Inspector, Adjutant, Public Information Officer, Hq & Hq Sq Overhead, and Expendable Supplies utilized in these activities (Account Code 01051). The work performance is determined by dividing the total Base costs of the above mentioned activities by the total military personnel of all organizations on the base (except major or intermediate command headquarters), and applying the results in the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Base Activity}} \times 100 = \text{Work Performance Rating}$$

COMMENT

THE WORK PERFORMANCE RATING AT BIRMINGHAM DROPPED FROM 114 REPORTED IN MARCH TO 102, DUE TO AN INCREASE IN PERSONNEL IN THE FUNCTION, WITH NO APPRECIABLE INCREASE IN WORKLOAD. AT MEMPHIS, IMPROVEMENT IS NOTED IN THE WORK PERFORMANCE RATING FROM A PREVIOUSLY REPORTED 82 IN MARCH TO 94 IN APRIL. THE INCREASED PERFORMANCE IS DUE TO THE REDUCTION OF EIGHT (8) PEOPLE IN THE FUNCTION.

SLIGHT IMPROVEMENT IS NOTED AT LAWSON WHERE THE WORK PERFORMANCE RATING INCREASED FROM 59 TO 63 WITH A REDUCTION OF 1 PERSON IN THE FUNCTION. IN COMPARISON WITH OTHER BASES, WORKLOADS 50 TO 75% GREATER THAN THAT OF LAWSON ARE ADMINISTERED BY SUBSTANTIALLY THE SAME OR FEWER PERSONNEL IN THE FUNCTION. THIS RAISES THE QUESTION OF WHETHER IT IS POSSIBLE TO ACCOMPLISH THE FUNCTION OF COMMAND AND STAFF AT LAWSON WITH FEWER PERSONNEL. IT IS POSSIBLE THAT METHODS IMPROVEMENT MAY PROVIDE A SOLUTION.

THE FACT THAT THE MAJORITY OF BASES FOR THE POPULATION GROUP 500 AND OVER SHOW WORK PERFORMANCE RATINGS WHICH ARE BELOW THE STANDARDS SET BY HQ USAF, IS AN INDICATION THAT THE USAF STANDARD FOR BASES IN THESE POPULATION GROUPS MAY NOT BE APPLICABLE TO ALL CONAC UNITS BECAUSE OF DIFFERENCE IN MISSION RESPONSIBILITIES AND/OR ORGANIZATIONAL STRUCTURE. IT IS THEREFORE MOST DESIRABLE IN THESE CASES THAT INDIVIDUAL STANDARDS BE DETERMINED BY BASE ANALYSTS FOR APPLICATION TO THE LOCAL SITUATIONS IN ACCOMPLISHING COST CONTROL. HQ CONAC IS STUDYING STANDARDS WHICH MAY BE MORE APPLICABLE TO THESE POPULATION GROUPS.

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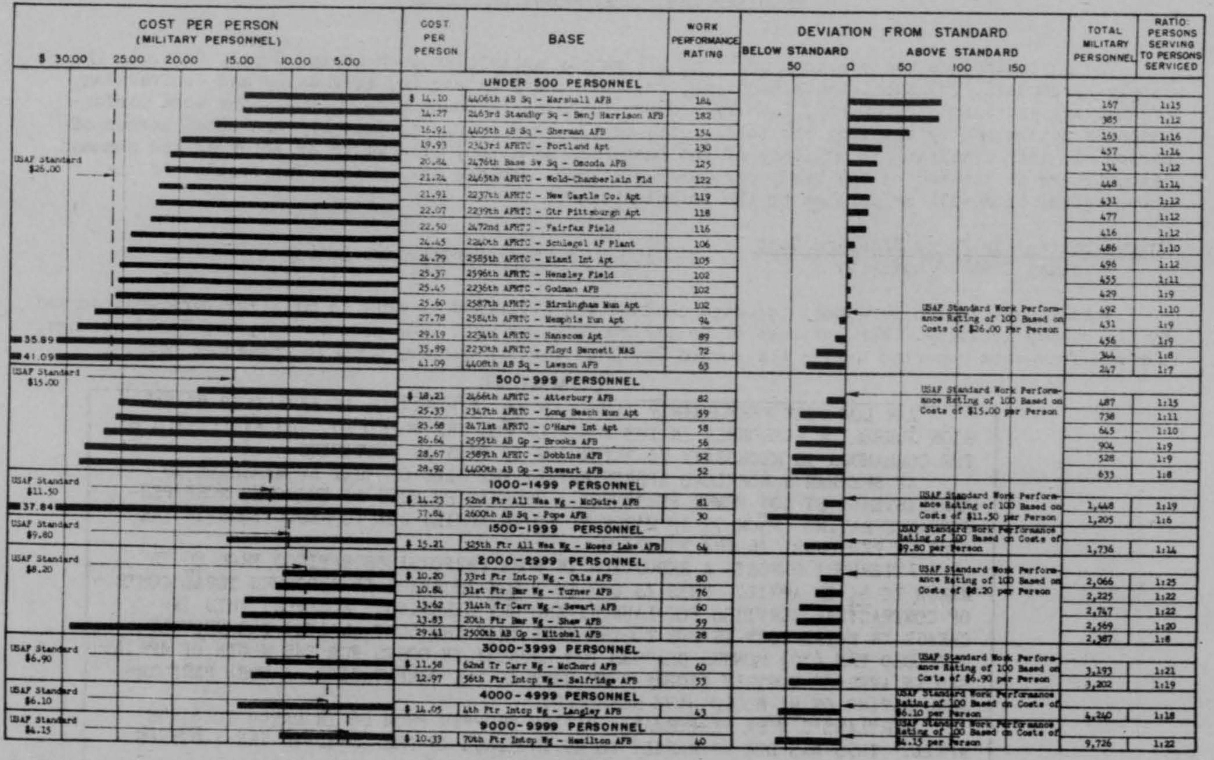
RELATIVE WORK PERFORMANCE OF COMMANDER AND STAFF

APRIL 1950

PREPARED BY
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



USAF Standard Work Performance Rating of 100 Based on Costs of $26.00 Per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $15.00 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $11.50 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $9.80 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $8.20 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $6.90 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $6.10 per Person

USAF Standard Work Performance Rating of 100 Based on Costs of $4.15 per Person

COST PER PERSON	BASE	WORK PERFORMANCE RATING	TOTAL MILITARY PERSONNEL	RATIO: PERSONS SERVING TO PERSONS SERVICED
	UNDER 500 PERSONNEL			
$ 14.10	4406th AB Sq - Marshall AFB	184	167	1:15
14.27	2463rd Standby Sq - Benj Harrison AFB	182	385	1:12
16.91	4405th AB Sq - Sherman AFB	154	163	1:16
19.93	2343rd AFRTC - Portland Apt	130	457	1:14
20.84	2476th Base Sv Sq - Oscoda AFB	125	134	1:12
21.24	2465th AFRTC - Wold-Chamberlain Fld	122	448	1:14
21.91	2237th AFRTC - New Castle Co. Apt	119	431	1:12
22.07	2239th AFRTC - Gtr Pittsburgh Apt	118	477	1:12
22.50	2472nd AFRTC - Fairfax Field	116	416	1:12
24.45	2240th AFRTC - Schlegel AF Plant	106	486	1:10
24.79	2585th AFRTC - Miami Int Apt	105	496	1:12
25.37	2596th AFRTC - Hensley Field	102	455	1:11
25.45	2236th AFRTC - Godman AFB	102	429	1:9
25.60	2587th AFRTC - Birmingham Mun Apt	102	492	1:10
27.78	2584th AFRTC - Memphis Mun Apt	94	431	1:9
29.19	2234th AFRTC - Hanscom Apt	89	456	1:9
35.89	2230th AFRTC - Floyd Bennett NAS	72	344	1:8
41.09	4408th AB Sq - Lawson AFB	63	247	1:7
	500-999 PERSONNEL			
$ 18.21	2466th AFRTC - Atterbury AFB	82	487	1:15
25.33	2347th AFRTC - Long Beach Mun Apt	59	738	1:11
25.68	2471st AFRTC - O'Hare Int Apt	58	645	1:10
26.64	2595th AB Gp - Brooks AFB	56	904	1:9
28.67	2589th AFRTC - Dobbins AFB	52	528	1:9
28.92	4400th AB Gp - Stewart AFB	52	633	1:8
	1000-1499 PERSONNEL			
$ 14.23	52nd Ftr All Wea Wg - McGuire AFB	81	1,448	1:19
37.84	2600th AB Sq - Pope AFB	30	1,205	1:6
	1500-1999 PERSONNEL			
$ 15.21	325th Ftr All Wea Wg - Moses Lake AFB	64	1,736	1:14
	2000-2999 PERSONNEL			
$ 10.20	33rd Ftr Intcp Wg - Otis AFB	80	2,066	1:25
10.84	31st Ftr Bmr Wg - Turner AFB	76	2,225	1:22
13.62	314th Tr Carr Wg - Sewart AFB	60	2,747	1:22
13.83	20th Ftr Bmr Wg - Shaw AFB	59	2,569	1:20
29.41	2500th AB Gp - Mitchel AFB	28	2,387	1:8
	3000-3999 PERSONNEL			
$ 11.58	62nd Tr Carr Wg - McChord AFB	60	3,193	1:21
12.97	56th Ftr Intcp Wg - Selfridge AFB	53	3,202	1:19
	4000-4999 PERSONNEL			
$ 14.05	4th Ftr Intcp Wg - Langley AFB	43	4,240	1:18
	9000-9999 PERSONNEL			
$ 10.33	70th Ftr Intcp Wg - Hamilton AFB	40	9,726	1:22

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

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EXPLANATION OF GRAPHIC PRESENTATION ON RELATIVE WORK PERFORMANCE OF SUPPLY

The costs include the combined costs of all supply activities such as (a) Supply Control, (b) Supply Warehouses, (c) Subsistence Handling, (d) Commissary Sales, (e) Purchasing and Contracting, (f) Salvage and Surplus Property, Laundry and Dry Cleaning (Account Code 05450). The work performance is determined by dividing the total costs of the base supply activity by the total number of personnel, both civilian and military of the base. In addition, if a major or intermediate command headquarters is located on the base, personnel of those commands are added. The results of the above calculation will be applied to the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Activity}} \quad X \quad 100 \quad = \quad \text{Work Performance Rating}$$

Total installation personnel reported include all civilians as well as military personnel served by the supply activity. For purposes of comparison with overall USAF performance, the ConAC Average, derived from data reported during the period May 1949 through January 1950 is presented hereon.

COMMENT

THE LOW WORK PERFORMANCE RATING OF 46 AT MARSHALL IS EXPLAINED BY THE HIGH NUMBER OF PERSONNEL IN THE FUNCTION FOR THE WORKLOAD. AN EVALUATION BY THE COMMANDER IS NECESSARY TO DETERMINE IF THIS IS JUSTIFIED.

AT SHERMAN A WORKLOAD APPROXIMATELY THE SIZE OF THAT AT MARSHALL IS ADMINISTERED BY 40% FEWER PERSONNEL. SHERMAN REPORTS AN IMPROVED WORK PERFORMANCE RATING (FROM 75 IN MARCH TO 87 IN APRIL) DUE TO REDUCTIONS IN THE COST OF PERSONNEL IN THE FUNCTION.

ATTERBURY REPORTS A REDUCTION IN WORK PERFORMANCE RATINGS FROM 86 IN MARCH TO 61 IN APRIL. THIS IS DUE TO A 40% INCREASE IN REPORTED TOTAL COSTS OF CONTRACTUAL SERVICES FOR LAUNDRY AND DRY CLEANING. HOWEVER, THIS INCREASE IN TOTAL COST IS DUE TO THE FACT THAT THE COST ANALYST ERRONEOUSLY INCLUDED TEN (10) MONTHS CHARGES FOR LAUNDRY IN COSTS FOR THE MONTH OF APRIL. HAD AN AVERAGE MONTHLY FIGURE BEEN USED IN THE COMPUTATION, A WORK PERFORMANCE RATING OF 81 WOULD HAVE RESULTED.

PORTLAND'S WORK PERFORMANCE RATING DROPPED FROM 66 IN MARCH TO 61 IN APRIL. THIS WAS DUE PRIMARILY TO AN INCREASE IN PERSONNEL IN THE FUNCTION WITH APPROXIMATELY THE SAME WORKLOAD.

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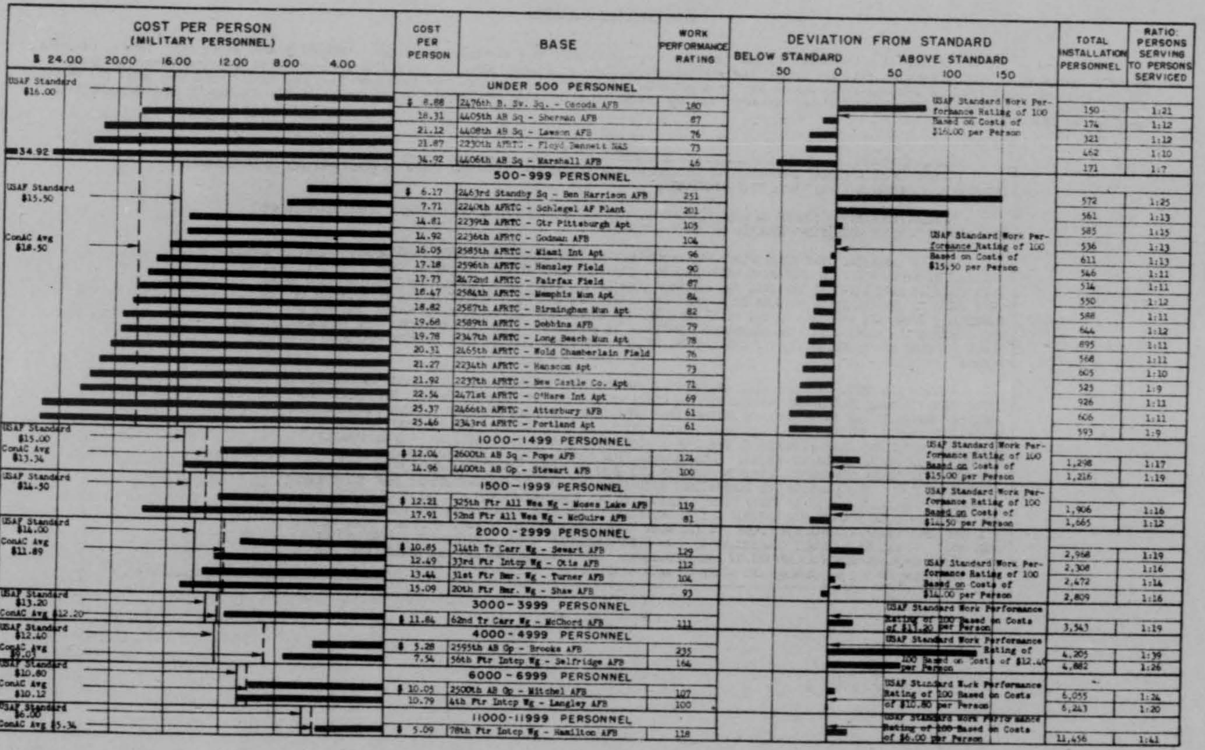
RELATIVE WORK PERFORMANCE OF SUPPLY

APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



COST PER PERSON	BASE	WORK PERFORMANCE RATING	DEVIATION FROM STANDARD	TOTAL INSTALLATION PERSONNEL	RATIO: PERSONS SERVING TO PERSONS SERVICED
	UNDER 500 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $16.00 per Person		
$ 6.88	2476th B. Sv. Sq. - Oscoda AFB	180		150	1:21
18.31	4405th AB Sq - Sherman AFB	87		174	1:12
21.12	4408th AB Sq - Lawson AFB	76		321	1:12
21.87	2230th AFRTC - Floyd Bennett NAS	73		462	1:10
34.92	4406th AB Sq - Marshall AFB	46		171	1:7
	500-999 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $15.50 per Person		
$ 6.17	2463rd Standby Sq - Ben Harrison AFB	251		572	1:25
7.71	2240th AFRTC - Schlegel AF Plant	201		561	1:13
14.81	2239th AFRTC - Gtr Pittsburgh Apt	105		585	1:15
14.92	2236th AFRTC - Godman AFB	104		536	1:13
16.05	2585th AFRTC - Miami Int Apt	96		611	1:13
17.18	2596th AFRTC - Hensley Field	90		546	1:11
17.73	2472nd AFRTC - Fairfax Field	87		514	1:11
18.47	2584th AFRTC - Memphis Mun Apt	84		550	1:12
18.82	2587th AFRTC - Birmingham Mun Apt	82		588	1:11
19.68	2589th AFRTC - Dobbins AFB	79		644	1:12
19.78	2347th AFRTC - Long Beach Mun Apt	78		895	1:11
20.31	2465th AFRTC - Wold Chamberlain Field	76		568	1:11
21.27	2234th AFRTC - Hanscom Apt	73		605	1:10
21.92	2237th AFRTC - New Castle Co. Apt	71		525	1:9
22.54	2471st AFRTC - O'Hare Int Apt	69		926	1:11
25.37	2466th AFRTC - Atterbury AFB	61		606	1:11
25.46	2343rd AFRTC - Portland Apt	61		593	1:9
	1000-1499 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $15.00 per Person		
$ 12.04	2600th AB Sq - Pope AFB	124		1,298	1:17
14.96	4400th AB Gp - Stewart AFB	100		1,216	1:19
	1500-1999 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $14.50 per Person		
$ 12.21	325th Ftr All Wea Wg - Moses Lake AFB	119		1,906	1:16
17.91	52nd Ftr All Wea Wg - McGuire AFB	81		1,665	1:12
	2000-2999 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $14.00 per Person		
$ 10.85	314th Tr Carr Wg - Sewart AFB	129		2,968	1:19
12.49	33rd Ftr Intcp Wg - Otis AFB	112		2,308	1:16
13.44	31st Ftr Bmr. Wg - Turner AFB	104		2,472	1:14
15.09	20th Ftr Bmr. Wg - Shaw AFB	93		2,809	1:16
	3000-3999 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $13.20 per Person		
$ 11.84	62nd Tr Carr Wg - McChord AFB	111		3,543	1:19
	4000-4999 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $12.40 per Person		
$ 5.28	2595th AB Gp - Brooks AFB	235		4,205	1:39
7.54	56th Ftr Intcp Wg - Selfridge AFB	164		4,882	1:26
	6000-6999 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $10.80 per Person		
$ 10.05	2500th AB Gp - Mitchel AFB	107		6,055	1:24
10.79	4th Ftr Intcp Wg - Langley AFB	100		6,243	1:20
	11000-11999 PERSONNEL		USAF Standard Work Performance Rating of 100 Based on Costs of $6.00 per Person		
$ 5.09	78th Ftr Intcp Wg - Hamilton AFB	118		11,456	1:41

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

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EXPLANATION OF TABULAR PRESENTATION ON WORK PERFORMANCE RATINGS

Presented on the facing page is a tabulation by Air Force and organization of Work Performance ratings extracted from AF Forms 323. This is designed to permit appraisal of unit efficiency relative to the USAF performance of 100. A minimum number of corrections, as indicated by notes, have been made. Due to time limitations, only a sampling audit can be performed prior to publication. No explanations have been furnished by the reporting units for ratings shown in heavy type. With reference to the proper procedure for the accumulation of costs for Group 3, attention is invited to item 20 of Attachment 1 to ConAC Letter 170-1B.

COMMENT

THERE IS AN APPARENT INCONSISTENCY BETWEEN MAINTAINING TOTAL PERSONNEL AUTHORIZATIONS AND THE ACCOMPLISHMENT OF WORK PERFORMANCE RATINGS ABOVE USAF STANDARDS.

EVALUATIONS BASED SOLELY ON WORK PERFORMANCE RATINGS SHOULD NOT BE CONCLUSIVE. CONSIDERATION MUST BE GIVEN TO VARIOUS CONDITIONS RELATED TO THESE RATINGS.

IT IS ESSENTIAL THAT TERMINOLOGY AND PROCEDURES BE UNDERSTOOD. THE WORK PERFORMANCE RATING IS MERELY A NUMERICAL EXPRESSION FOR COMPARING UNIT COST TO A STANDARD COST ESTABLISHED BY HQ USAF. THE UNIT COST IS DETERMINED AT BASE LEVEL BY DIVIDING THE FUNCTION COST BY THE UNITS OF WORKLOAD (THE WORKLOAD USED BEING THAT WHICH IS CONSIDERED BY HQ USAF TO BE MOST REPRESENTATIVE OF DIRECT OUTPUT IN THE PERFORMANCE OF THE FUNCTION); NORMALLY, THE GREATER THE FUNCTION COST, THE LOWER THE WORK PERFORMANCE RATING AND THE GREATER THE WORKLOAD THE HIGHER THE WORK PERFORMANCE RATING. IT SHOULD BE CLEAR THAT THE MORE WORK PRODUCED AND THE LOWER THE COST OF PRODUCING IT, THE GREATER THE INDEX OF ECONOMIC EFFICIENCY (THE WORK PERFORMANCE RATING) BECOMES.

SINCE ALL UNITS OF EQUAL SIZE AND/OR TYPE USE THE SAME STANDARD COST AS A BASIS OF COMPARISON, IT IS THUS POSSIBLE TO COMPARE ONE AGAINST THE OTHER AND SEE IF "A" IS MORE, OR LESS EFFICIENT THAN "B". HOWEVER, BEFORE IT CAN BE DETERMINED WHETHER TRUE EFFICIENCY HAS BEEN ACHIEVED, EITHER THE NORM (THE MEASURE OF WHAT IS TYPICAL, OR STANDARD FOR EACH PARTICULAR UNIT) OR THE USAF STANDARD MUST BE EXAMINED. SINCE THE USAF STANDARD IS BASED ON A WIDE AREA OF REPORTED COSTS, IT IS QUESTIONABLE WHETHER IT IS THE NORM FOR ALL UNITS. EACH ORGANIZATION SHOULD DEVELOP ITS INDIVIDUAL NORM OR STANDARD WHEN IT IS DESIRED TO DETERMINE WHETHER THE UNIT IS TRULY EFFICIENT BASED ON ITS WORK PERFORMANCE RATING. THERE MAY BE TWO INEFFICIENT ACTIVITIES YET ONE IS MORE EFFICIENT THAN THE OTHER; IT IS ALSO LIKELY THAT WHAT IS INEFFICIENT COMPARED TO THE NORM (STANDARD) FOR ALL USAF UNITS (HAVING A LOW WORK PERFORMANCE RATING) MAY BE TRULY EFFICIENT WHEN EXAMINED IN THE LIGHT OF ITS MISSIONS AND ORGANIZATIONAL STRUCTURE. A LOW WORK PERFORMANCE RATING IS NOT, "PER SE", POOR PERFORMANCE. IT MAY BE ENTIRELY CONSISTENT TO HAVE SIMULTANEOUSLY, A LOW PERFORMANCE RATING AND AN EVALUATION OF PERFORMANCE AS EFFICIENT AND ECONOMICAL. SUCH EVALUATIONS ARE THE PREROGATIVE AND RESPONSIBILITY OF THE MANAGEMENT AND STAFF OF EACH ACTIVITY.

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WORK PERFORMANCE RATINGS *
CONTINENTAL AIR COMMAND

APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

BASE	FUNCTION OR GROUP										
	A-1 S-1 & ADJUTANT (GROUP 1)	SQ ADM OVERHEAD (GROUP 2)	MILITARY PERSONNEL (GROUP 3)	COST OF ADMINISTRATION (GROUP 4)	COMMANDER & STAFF (GROUP 5)	TOTAL ADM & SERVICES (GROUP 6)	SUPPLY (GROUP 7)	TOT MAINT & SUPPLY (1) (GROUP 8)	MOTOR POOL (GROUP 9)	MAINT-AUTO & G.P.E. (GROUP 10)	PERSONNEL SERVICES (GROUP 11)
FIRST AIR FORCE											
33rd Ftr-Intcp Wg - Otis AFB	101	81	83	86	80	74	112	100	116	82	82
52nd Ftr A/W Wg - McGuire AFB	84	67	NPC (3)	84	81	76	81	(1)	74	84	90
2230th AFRTC - Floyd Bennett NAS	61	100	152	95	72	131	73 (2)	(1)	71	51	372
2234th AFRTC - Hanscom Apt	111	128	62	92	89	79	73	(1)	109	109	91
2500th AB Gp - Mitchel AFB	41	137	68	76	28	79	107	121	92	73	93
4400th AB Gp - Stewart AFB	63	98	53	74	52	79	100	(1)	89	55	81
FOURTH AIR FORCE											
78th Ftr-Intcp Wg - Hamilton AFB	85	180	10	105	(4) 40	91	118	132	38	90	117
62nd Tr Carr Wg - McChord AFB	64	95	NPC (3)	87	60	60	111	105	69	87	139
325th Ftr A/W Wg - Moses Lake AFB	79	73	NPC (3)	83	64	61	119	(1)	148	132	102
2343rd AFRTC - Portland Apt	103	(4) 294	51	96	130	73	61	(1)	90	224	69
2347th AFRTC - Long Beach Mun Apt	119	290	34	99	59	79	78	(1)	61	106	92
NINTH AIR FORCE											
4th Ftr-Intcp Wg - Langley AFB	77	93	NPC (3)	92	43	81	100	102	112	94	89
2236th AFRTC - Godman AFB	78	116	52	76	102	104	104	(1)	55	69	80
2237th AFRTC - New Castle Co Apt	73	198	70	96	118	81	71	(1)	175	213	103
2239th AFRTC - Gtr Pittsburgh Apt	104	(4) 254	77	(4) 119	117	81	104	(1)	49	69	145
2240th AFRTC - Schlegel AF Plant	625	113	95	135	106	108	201	(1)	114	117	86
TENTH AIR FORCE											
56th Ftr-Intcp Wg - Selfridge AFB	72	82	58	77	53	94	164	136	107	134	137
2465th AFRTC - Wold-Chamberlain Fld	111	222	65	108	122	94	(2) 76	(1)	58	809	106
2466th AFRTC - Atterbury AFB	160	(2) 221	30	(2) 103	82	74	61	(1)	51	80	261
2471st AFRTC - O'Hare Int Apt	96	118	50	89	58	62	69	(1)	109	61	99
2472nd AFRTC - Fairfax Fld	128	254	68	117	116	107	(2) 87	(1)	87	86	167
4405th AB Sq - Sherman AFB	51	NPC (3)	145	134	154	45	87	(1)	90	106	246
4406th AB Sq - Marshall AFB	107	182	181	153	184	60	45	(1)	138	140	367
2463rd Standby Base Sq - Benj Harr AFB	102	97	44	133	182	109	251	(1)	174	149	NPC (3)
2476th Base Sv. Sq - Oscoda AFB	80	90	NPC (3)	129	125	58	180	(1)	104	NPC (3)	204
TWELFTH AIR FORCE											
2596th AFRTC - Hensley Fld	110	160	98	120	102	92	90	(1)	136	61	73
2595th AB Gp - Brooks AFB	79	72	187	85	56	180	235	322	92	115	177
FOURTEENTH AIR FORCE											
314th Tr Carr Wg - Sewart AFB	81	96	268	95	60	107	129	110	83	174	113
20th Ftr-Bmr Wg - Shaw AFB	75	91	NPC (3)	92	59	92	93	126	96	140	100
31st Ftr-Bmr Wg - Turner AFB	83	94	NPC (3)	90	76	100	104	127	95	105	128
2584th AFRTC - Memphis Mun Apt	87	89	77	84	94	63	84	(1)	112	88	208
2585th AFRTC - Miami Int Apt	87	186	58	91	105	95	97	(1)	118	69	100
2587th AFRTC - Birmingham Mun Apt	42	132	63	80	102	90	82	(1)	125	74	72
2589th AFRTC - Dobbins AFB	83	135	32	74	52	77	79	(1)	110	126	47
2600th AB Sq - Pope AFB	69	123	98	97	31	68	124	(1)	221	303	281
4408th AB Sq - Lawson AFB	42	92	77	67	63	47	76	(1)	122	129	128

NOTE: (1) Less than 2000 total population not required to report for Group 8
(2) Corrected Rating computed at Hq ConAC - Incorrect standards applied by Base Analyst accomplishing AF Form 323
(3) No personnel costed (NPC)
(4) Mathematical error, corrected at Hq ConAC

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

* RATING FOR COST EQUAL TO USAF STANDARD IS 100

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EXPLANATION OF GRAPHIC PRESENTATION ON
COST OF SERVING THE RATION

This chart shows the cost of serving the ration at Continental Air Command Bases reporting Food Service, Subsistence Handling and Subsistence Costs. Costs of the Food Supervisor, Hq ConAC and Hq ConAC Air Forces are not included since these functions service all units of the respective commands and do not materially affect the costs of the function described in this presentation.

The Food Service account includes the cost of the Base Food Supervisor and personnel necessary to direct and operate dining halls for airmen, the officer's mess and other central food activities such as bakeries. The Subsistence Handling account includes the costs incurred in the receipt, issue and distribution of subsistence. The Subsistence account includes the cost of the ration; this cost was not added as a cost, to the cost of serving the ration but was used as explained below. Subsistence costs of headquarters, tenant and special mission organizations as described in AF Manual 170-5 are reported under the organization providing the services, such as the Wings, Air Base Groups or Squadrons, or AFRTC's.

The number of rations served was obtained from the Commissary Operating Statement (WD AGO Form 10-133) for those bases submitting this statement. Where bases did not submit the Commissary Operating Statement, the number of rations was computed by dividing the total cost of subsistence by the ration value. If the field ration value was not available, the garrison ration value was used.

The cost of serving the ration was computed by dividing the total cost of the function (Food Service Costs plus Subsistence Handling Costs) by the number of rations served. The cost of the ration furnished is not included in costs of the function presented here, but was used to determine the number of rations served as explained above.

The ConAC Standard shown on the chart is $.46 per ration applicable to all bases regardless of type. The decision to use a single standard applicable to all units was made after statistical tests indicated that there is no correlation between the size of the workload (number of rations served) and the cost per unit. High and low cost per unit of workload for both large and small workloads was evidenced for all three types of bases. An average for the four months period 1 November 1949 - 28 February 1950, after elimination of extreme deviations, was established. The median is approximately the same as the mean.

COMMENT

AN OVERALL REDUCTION OF $.04 IN THE COST OF SERVING THE RATION IN MARCH COMPARED TO THE PRIOR FOUR MONTHS PERIOD IS SHOWN. WINGS GENERALLY SHOW AN INCREASE IN COST OF SERVING THE RATION IN MARCH COMPARED TO THE PRIOR FOUR MONTHS. THIS IS ATTRIBUTED TO AN INCREASE IN PERSONNEL, PRINCIPALLY AT MCCHORD, SHAW, OTIS, SELFRIDGE AND HAMILTON. WITH THE EXCEPTION OF MITCHEL AND POPE, AIR BASE GROUPS AND SQUADRONS SHOW DECREASED COSTS AND NUMBERS OF PERSONNEL IN THE FUNCTION WITH A GREATER WORKLOAD, RESULTING IN A LOWER UNIT COST. THE CURTAILMENT OF ACTIVITY AT BEN HARRISON AND THE REDUCTION IN COST AT BROOKS AND LAWSON MATERIALLY AFFECTED THE AVERAGE FOR THIS GROUP.

WORKLOAD AT THE AFRTC'S INCREASED CONSIDERABLY WHILE THE OVERALL PERSONNEL FOR THE GROUP DECREASED SOMEWHAT. A CONSIDERABLE REDUCTION IN PERSONNEL AT PORTLAND, BIRMINGHAM, HENSLEY, AND MEMPHIS IS NOTED.

WHILE TOTAL COST INCREASED $16,000 AND NUMBER OF PERSONNEL INCREASED BY 51 IN MARCH OVER THE FOUR MONTHS PRIOR PERIOD, THE WORKLOAD INCREASE AT AIR BASE GROUPS, SQUADRONS AND AFRTC'S CONTRIBUTED TO THE OVERALL REDUCTION IN UNIT COST OF SERVING THE RATION. ACTION HAS BEEN TAKEN BY DIRECTOR OF MAINTENANCE, SUPPLY AND SERVICES, HQ CONAC TO REDUCE THE HIGH COST AT BIRMINGHAM.

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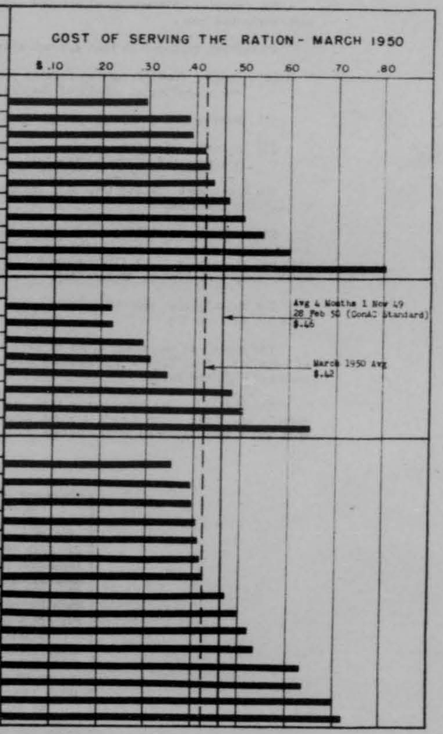
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

COST OF SERVING THE RATION

MARCH 1950 COMPARED TO MONTHLY AVERAGE OF 1 NOVEMBER TO 28 FEBRUARY 1950

MONTHLY AVERAGE FOR THE PERIOD 1 NOVEMBER 1949 - 28 FEBRUARY 1950				BASE	MARCH 1950				COST OF SERVING THE RATION	
NUMBER OF PERSONNEL IN FUNCTION	TOTAL COST OF FUNCTION	AVG COST PER PERSON	NUMBER OF RATIONS		NUMBER OF PERSONNEL IN FUNCTION	TOTAL COST OF FUNCTION	AVG COST PER PERSON	NUMBER OF RATIONS SERVED	AVG 4 MOS. 1 NOV 49 - 28 FEB 50	MARCH 1950
				WINGS						
215	$ 33,784	$ 157	133,989	78th Ftr Intcp Wg - Hamilton AFB	224	$ 34,620	$ 155	116,620	$.252	$.297
78	10,132	130	27,452	61st Ftr Intcp Wg - Kirtland AFB	79	10,326	131	26,503	.347	* .39
87	12,759	146	32,689	33rd Ftr Intcp Wg - Otis AFB	90	14,188	158	35,914	.390	.395
129	17,824	139	41,759	62nd Tr Carr Wg - McChord AFB	144	20,593	143	48,769	.243	.422
114	15,867	139	39,455	56th Ftr Intcp Wg - Selfridge AFB	119	17,776	149	41,641	.402	.427
93	11,754	127	32,847	325th Ftr All Wea Wg - Moses Lake AFB	94	12,612	136	28,714	.358	.439
86	11,349	131	24,502	52nd Ftr All Wea Wg - McGuire AFB	88	11,795	134	25,008	.463	* .472
105	15,558	148	35,733	20th Ftr Bmr Wg - Shaw AFB	120	19,247	160	38,267	.435	.503
250	37,788	151	64,345	4th Ftr Intcp Wg - Langley AFB	253	37,715	149	69,211	.587	.545
112	14,911	133	25,559	314th Tr Carr Wg (Med) - Sewart AFB	110	15,936	145	26,544	.583	** .60
104	15,734	152	25,992	31st Ftr Bmr Wg - Turner AFB	103	15,439	150	19,238	.605	** * .803
				AIR BASE GROUPS AND SQUADRONS						
10	$ 1,334	$ 127	4,367	4406th AB Sq - Marshall AFB	9	$ 1,090	**$ 121	4,813	$.306	** *$.226
6	917	** 115	3,730	2476th Base Sv Sq - Oscoda AFB	11	1,309	** 119	5,770	(1) .246	** * .227
65	10,332	159	17,186	2595th AB Gp - Brooks AFB	56	9,374	167	32,193	.601	.291
30	4,504	149	10,699	4400th AB Gp - Stewart AFB	26	4,120	159	13,442	.421	* .307
47	7,458	159	13,500	2463rd Stby B Sq - Ben Harrison AFB	18	2,670	148	7,680	.552	* .348
182	25,464	140	56,987	2500th AB Gp - Mitchel AFB	196	28,558	146	59,427	.447	.481
14	2,361	** 171	3,144	4408th AB Sq - Lawson AFB	8	1,426	** 178	2,824	** .751	* .505
66	10,926	** 166	19,889	2600th AB Sq - Pope AFB	76	12,751	** 168	19,679	.549	** * .648
				AFRTC'S						
19	$ 2,951	$ 157	7,812	2230th AFRTC - Floyd Bennett NAS	16	$ 2,305	$ 144	6,448	$.378	* $.357
18	2,602	142	7,878	2237th AFRTC - Reading Mun Apt	24	3,766	157	9,559	.330	* .394
24	3,439	145	6,385	2585th AFRTC - Miami Int Apt	19	2,879	151	7,256	.539	.397
20	2,835	140	5,685	2584th AFRTC - Memphis Mun Apt	16	2,405	150	5,896	.499	.408
13	2,078	162	6,179	2234th AFRTC - Hanscom Apt	17	2,727	160	6,623	.336	* .412
17	2,596	159	6,283	2236th AFRTC - Godman AFB	18	2,877	159	6,886	.413	* .418
23	2,910	125	7,203	2239th AFRTC - Gtr Pittsburgh Apt	23	3,144	137	7,488	.404	* .420
27	3,651	138	7,175	2471st AFRTC - O'Hare Int Apt	28	3,789	135	8,055	.509	* .471
26	4,008	154	7,511	2466th AFRTC - Atterbury AFB	28	4,176	149	8,373	.534	* .499
19	2,702	144	5,756	2589th AFRTC - Dobbins AFB	19	3,190	** 168	6,141	.469	* .519
25	3,676	145	5,953	2596th AFRTC - Hensley Field	21	3,177	151	5,971	.618	* .532
34	5,260	155	7,195	2343rd AFRTC - Portland Apt	24	4,162	** 173	6,609	** .731	** .630
16	2,218	136	3,430	2472nd AFRTC - Fairfax Field	19	2,713	143	4,271	.647	** * .635
28	4,245	153	4,675	2587th AFRTC - Birmingham Mun Apt	24	3,816	159	5,449	** .908	** .70
26	3,437	133	8,870	2347th AFRTC - Long Beach Mun Apt	33	4,629	140	6,421	.388	** * .721



SOURCE: COST CONTROL REPORT, AF FORM 320, 321, 322, RCS AF-FO-F22C
COMMISSARY OPERATING STATEMENT, WD-AGO FORM 10-133, RCS: QMC-1

NOTE (1)-ONE MONTH AVERAGE

* GARRISON RATION VALUE USED FOR THESE BASES
** EXTREME DEVIATIONS FROM AVERAGES

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EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF REFUSE COLLECTION

The function of "Refuse Collection" includes the collection of refuse, salvageable scrap and waste materiel and the washing of garbage containers and cans.

Activities included in this account are:

(1) Loading from designated pick-up points the garbage, trash, salvageable scrap, and waste materials into suitable vehicles, delivering and unloading at points of disposal.

(2) Washing and replacing garbage cans.

(3) Refuse collection and disposal accomplished under contract at a cost to the government. Credits collected under such agreements are not reported in the Refuse Collection account.

The bases were divided into USAF and USAFR groups. This division was made because of the strength difference in the number of personnel at USAF and USAFR bases.

Military labor, which makes up about 70% of the total cost of Refuse Collection for USAF bases and about 25% for USAFR bases may include some prison labor. In those instances where military prisoners accomplish refuse collection, the cost of such labor should be included in the cost report as this is an AIC responsibility. However, there is no way of differentiating between prison labor and other military labor on the Monthly Cost Report, AF Form 329. All labor is costed at civilian pay rates.

The monthly cost and the monthly number of cubic yards collected shown on this chart are reported in the Refuse Collection account (08303), AF Form 329.

The number of personnel shown on this chart is taken from the work unit quantity column for the Mess and Kitchen Equipment account (02102), AF Form 329. This figure includes the number of military and civilian personnel quartered on the base plus 1/2 the military and civilians quartered off the base.

The installations included in this analysis are those which submit a detailed AF Form 329. Installations which submit Army or Navy type reports and those which submit a short form report on AF Form 329 were omitted. Birmingham Municipal Airport was excluded because no costs or work units were reported in the Refuse Collection account.

COMMENT

FOR USAF BASES THE AVERAGE COST PER CUBIC YARD COLLECTED, $1.12 IS 5.7% GREATER THAN THE CONAC STANDARD ($1.06). THIS IN ITSELF IS NOT A SIGNIFICANT INCREASE. CERTAIN BASES HOWEVER DO SHOW LARGE INCREASES. HAMILTON WENT FROM $1.50 TO $2.28 AN INCREASE OF OVER 50%; SELFRIDGE WENT FROM $1.74 TO $2.41, AN INCREASE OF 39%; STEWART INCREASED FROM $4.01 TO $4.56 AN INCREASE OF ONLY 12%. THE UNIT COST FOR STEWART IS EXCEEDINGLY HIGH, OVER 4 TIMES GREATER THAN THE CONAC STANDARD. THE PER CAPITA COST FOR STEWART IS ALMOST 3 TIMES GREATER THAN THE APRIL AVERAGE. AN INVESTIGATION OF THIS ACTIVITY COST IS SUGGESTED FOR INCLUSION IN THE MONTHLY NARRATIVE ANALYSIS. ON THE OTHER HAND LANGLEY DECREASED FROM $1.21 TO $.67, A DECREASE OF 36%.

EXAMINATION OF THE USAFR BASES SHOWS A DECREASE IN THE AVERAGE OF $.08, OR 6% UNDER THE CONAC STANDARD. MIAMI SHOWS AN INCREASE FROM $1.27 TO $2.29 (80%) PER CUBIC YARD OF REFUSE COLLECTED. WOLD-CHAMBERLAIN ROSE FROM $2.77 TO $6.55, AN INCREASE OF $3.78 OR 136%. FAIRFAX AND NEW CASTLE (2237th AFRTC AT READING UNTIL 18 APRIL 1950) SHOW DECREASES OF 55% AND 36% RESPECTIVELY.

AT THOSE BASES WHERE APPRECIABLE INCREASES HAVE OCCURRED OR WHERE HIGH UNIT COSTS EXIST, INVESTIGATION SHOULD BE MADE INTO THE ACTIVITY TO SEE WHERE MORE EFFICIENT AND ECONOMICAL OPERATIONS CAN BE EFFECTED. REFERENCE CAN BE MADE TO ANY ACTION TAKEN, IN THE MONTHLY NARRATIVE ANALYSIS.

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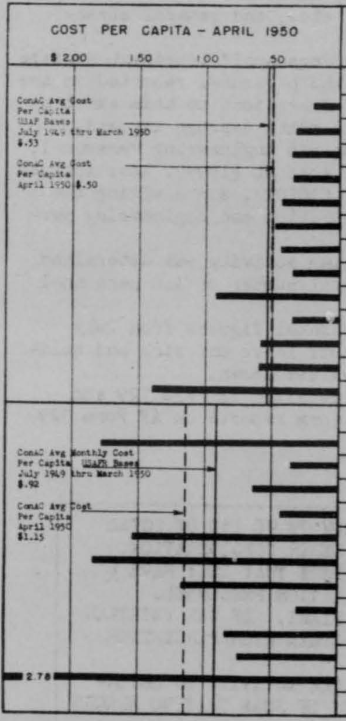
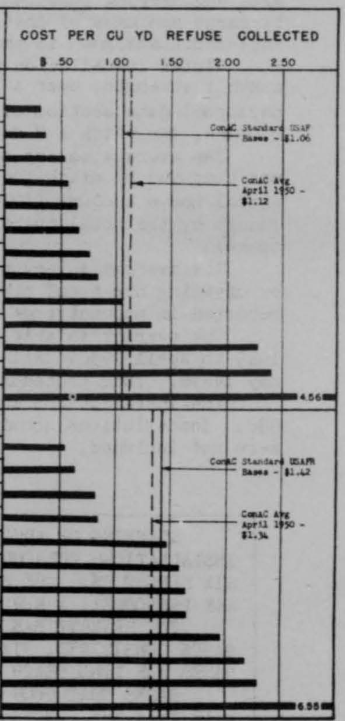
COST OF REFUSE COLLECTION
SELECTED INSTALLATIONS
APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



COST PER CAPITA	PERSONNEL WORKLOAD	BASE	TOTAL COST	CU YDS REFUSE COLLECTED	COST PER CU YD
		USAF INSTALLATIONS			
$ .18	1,560	Turner AFB	$ 275	825	$ .33
.31	265	Osooda AFB	82	223	.37
.34	2,529	McChord AFB	853	1,596	.53
.33	1,606	Moses Lake AFB	529	941	.56
.42	2,162	Sewart AFB	912	1,405	.65
.47	7,070	Langley AFB	3,344	5,013	.67
.42	2,579	Shaw AFB	1,084	1,382	.78
.33	2,399	Brooks AFB	800	948	.84
.93	1,441	McGuire AFB	1,338	1,261	1.06
.33	4,212	Mitchel AFB	1,379	1,040	1.33
.59	9,255	Hamilton AFB	5,422	2,378	2.28
.60	5,386	Selfridge AFB	3,217	1,335	2.41
1.40	1,172	Stewart AFB	1,643	360	4.56
		USAFR INSTALLATIONS			
$1.79	289	Portland AFB	$ 517	961	$ .54
.34	648	Long Beach Mun Apt	220	352	.63
.64	415	Atterbury AFB	264	317	.83
.42	842	O'Hare Int Apt	357	420	.85
1.55	338	Gtr Pittsburg Apt	525	354	1.48
1.85	387	Hanscom Apt	717	452	1.59
1.18	466	Memphis Mun Apt	548	335	1.64
.29	277	Fairfax Field	79	48	1.65
.85	374	Hensley Field	317	162	1.96
.75	301	New Castle County Apt	227	104	2.18
2.78	293	Miami Int Apt	815	356	2.29
-	-	Wold-Chamberlain Field	720	110	6.55



SOURCE: REAL ESTATE FACILITIES MONTHLY COST REPORT,
AF FORM 329, RCS: AF-MD-F33A
DAILY LOG OF REFUSE & SALVAGE COLLECTION -WD- AGO 5-126, RCS: ENG 14 (R1) A

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EXPLANATION OF GRAPHIC PRESENTATION

OVERHEAD OF AIR INSTALLATIONS ACTIVITY

"Overhead" personnel are those reported in the Administrative and Engineering Account (10103). It includes military and civilian administration and clerical personnel, personnel engaged in general engineering functions such as the preparation of project estimates, maintenance of real property cards and maps of installations, preparation of engineering reports, etc., and general superintendents assigned to the air installation activity.

"Total Installation Personnel" and "Administrative and Engineering Personnel" represent average monthly strength, over a 10 month period, (July 1949 - April 1950), of the personnel reported in the personnel data section of the report, (Account Codes 30001 and 30099). Exceptions to this exist at McGuire, for which a 7 month average is used and Portland, for which a 6 month average is used.

The average salary per civilian employed, other than Administration and Engineering Personnel, was computed by using the total civilian labor costs in the Grand Total account (19999) less Accrued Annual Leave account (10101), and Sick and Holiday Leave Taken account, (10102), and dividing the result by the total number of installations personnel, less the administration and engineering personnel.

The average salary per civilian in the administration and engineering activity was determined by dividing the total civilian labor costs in the A&E account by the total number of A&E personnel reported in account code 30001.

The average salaries shown are based upon ten months costs and personnel figures from July 1949 to April 1950. All average salaries exclude costs for accrued annual leave and sick and holiday leave. This procedure does not restrict the comparability of the values shown.

The installations included in this study are those which submit a detailed AF Form 329 and 330. Installations submitting Army or Navy type cost reports or short form reports on AF Form 329 were not included.

COMMENT

STAFFING OF ADMINISTRATIVE AND ENGINEERING PERSONNEL RANGES FROM 7% TO 15% OF TOTAL INSTALLATIONS PERSONNEL FOR USAF BASES: OF THE THIRTEEN USAF BASES UNDER CONSIDERATION, SIX REPORT 9%. THE HIGH POSITION OF OSCODA MAY BE EXPLAINED BY THE FACT THAT THEY HAVE 4 A&E PERSONNEL, A NUMBER WHICH APPEARS TO BE A MINIMUM FOR 26 INSTALLATION PERSONNEL.

FOR RESERVE BASES THE RANGE IS FROM 7% FOR MEMPHIS TO 16% FOR MIAMI. OF THE THIRTEEN BASES CONSIDERED, SIX REPORT 9% - 11% AS THEIR PERCENTAGE FACTOR. OTHER HIGH PERCENTAGE BASES ARE LONG BEACH - 15%, AND WOLD-CHAMBERLAIN - 14%.

BASES THAT SHOW THESE HIGH PERCENT FACTORS SHOULD INVESTIGATE THE ACTIVITY TO DETERMINE THAT THE FUNCTION IS NOT OVERSTAFFED, AND THE COST REPORTING TO BE SURE THAT NO ERRORS OF COSTING ARE BEING MADE.

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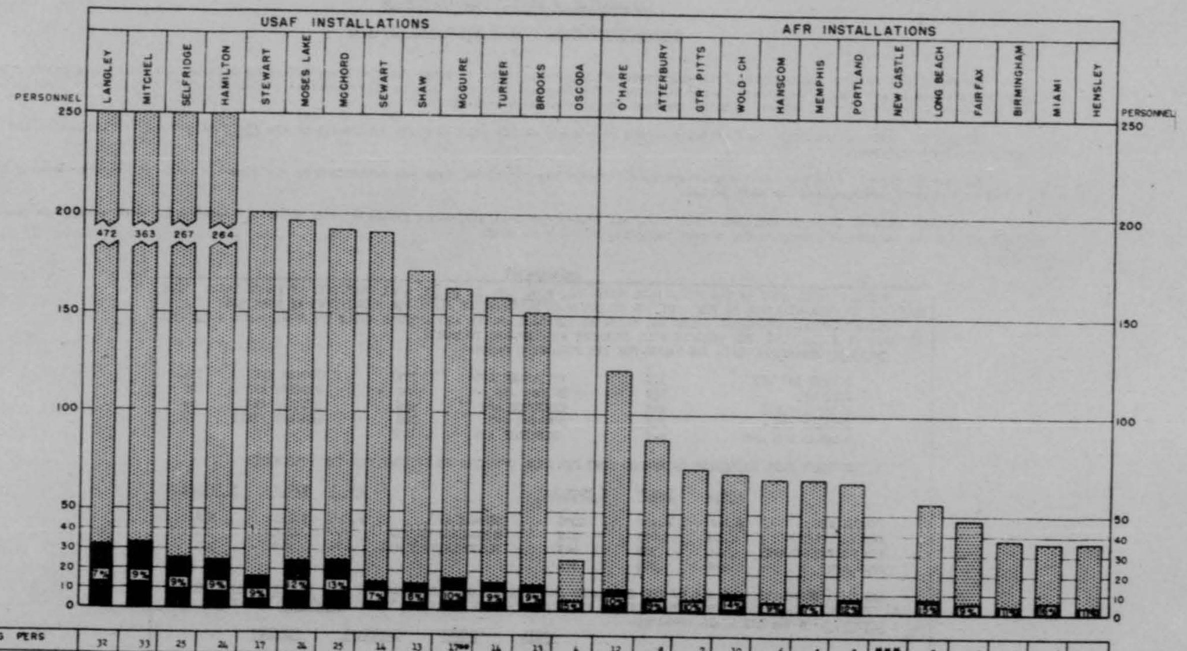
PREPARED BY
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

OVERHEAD OF AIR INSTALLATIONS ACTIVITY

SELECTED INSTALLATIONS

JULY 1949 – APRIL 1950



	LANGLEY	MITCHEL	SELFRIDGE	HAMILTON	STEWART	MOSES LAKE	MCCHORD	SEWART	SHAW	MCGUIRE	TURNER	BROOKS	OSCODA	O'HARE	ATTERBURY	GTR PITTS	WOLD-CH	HANSCOM	MEMPHIS	PORTLAND	NEW CASTLE	LONG BEACH	FAIRFAX	BIRMINGHAM	MIAMI	HENSLEY
■ ADM & ENG PERS	32	33	25	24	17	24	25	14	13	17**	14	13	4	12	8	7	10	6	5	8	***	8	4	4	6	4
TOTAL INST PERSONNEL	472	363	267	264	200	196	192	191	172	163**	158	151	26	122	87	72	70	67	67	66	***	55	47	38	37	37
*AVG SALARY CIV OTHER THAN A&E PERS	234	270	237	216	227	239	240	230	244	229**	246	230	168	242	191	242	237	239	285	239	***	314	195	251	242	198
*AVG SALARY - A & E PERSONNEL (CIV)	$ 221	$ 275	$ 270	$ 275	$ 221	$ 250	$ 272	$ 212	$ 192	$ 184**	$ 169	$ 205	$ 258	$ 226	$ 205	$ 207	$ 251	$ 224	$ 196	$ 239	***	$ 196	$ 229	$ 182	$ 189	$ 179

SOURCE: REAL ESTATE FACILITIES MONTHLY COST REPORT, AF FORMS 329 & 330,
RCS: AF - MD - F33A

* EXCLUDES ACCRUED ANNUAL LEAVE, & SICK & HOLIDAY LEAVE TAKEN
** BASED ON 7 MONTHS RECORDS

*** NOT APPLICABLE DURING PERIOD; BASE ACTIVATED 18 APRIL 1950

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EXPLANATION OF GRAPHIC PRESENTATION ON

COMPARATIVE PAYROLL COST OF MOTOR POOL ACTIVITY

The Motor Pool Account includes the following costs of operation: Cost of Motor Pool Officer, Refueling Officer, dispatchers, clerks, drivers, service personnel, and cost of fuels and lubricants used. The "Payroll Cost per Vehicle Mile Operated" is determined by dividing the Payroll Cost of the above activities by the number of miles operated as reported on AF Form 122A.

The payroll costs of the Motor Pool activity do not include any of the payroll costs applicable to the field maintenance of Automotive and ground powered equipment.

The average payroll cost per vehicle mile operated for each organizational type was determined by dividing the total of average costs by the total of average miles operated for each period.

The factor "Payroll Cost" rather than Total Cost, was chosen for analysis, since personnel discrepancies revealed can more readily be "controlled" for the purpose of accomplishing a cost reduction of value to USAF.

COMMENT

TOTAL PAYROLL COST OF THE MOTOR POOL ACTIVITY, $266,310, IS $7,931 MORE THAN THAT OF MARCH 1950. THIS INCREASE IS PRIMARILY DUE TO THE ADDITION OF COSTS AT SCHLEGEL AF PLANT NOW SUBMITTING AF FORM 320.

SLIGHT OVERALL DECREASED COSTS ARE SHOWN BY AIR BASE GROUPS AND AFRTC'S WHILE THE WINGS SHOW A PAYROLL INCREASE OF $.028 (16%) PER VEHICLE MILE OPERATED AS COMPARED TO MARCH.

IMPROVED OPERATING COSTS ARE SHOWN FOR THE FOLLOWING BASES:

O'HARE INT APT	32%	ATTERBURY AFB	17%	GODMAN AFB	13%
POPE AFB	28%	BROOKS AFB	16%	MCGUIRE AFB	11%
FAIRFAX FIELD	22%	HAMILTON AFB	16%	SHERMAN AFB	9%
STEWART AFB	21%	DOBBINS AFB	16%	HENSLEY FIELD	7%
MEMPHIS MUN APT	21%	SELFRIDGE AFB	14%		

ON THE OTHER HAND EXCESSIVE INCREASED COST PER MILE OPERATED IS EVIDENT FOR THE FOLLOWING:

	APRIL	MARCH	% INCREASE		APRIL	MARCH	% INCREASE
TURNER AFB	$.246	$.120	105%	SEWART AFB	$.296	$.193	53%
MARSHALL AFB	.166	.091	82%	WOLD-CHAMBERLAIN	.297	.198	50%
GTR PITTSBURG APT	.545	.325	68%	FLOYD BENNETT NAS	.255	.183	39%
SHAW AFB	.466	.279	67%				

ANALYSIS INDICATES THAT ALL OF THE INCREASES SHOWN ABOVE ARE DUE PRIMARILY TO A REDUCTION OF VEHICLE MILES OPERATED INCREASED COSTS PER MILE FOR THE FOLLOWING CAN BE ATTRIBUTED TO INCREASED PAYROLL AS WELL AS A REDUCTION IN VEHICLE MILES OPERATED:

	APRIL	MARCH	INCREASE	PERCENT
WOLD-CHAMBERLAIN FIELD	$ 3,824	$ 2,773	$ 1,051	38%
TURNER AFB	15,095	11,286	3,809	34%
SEWART AFB	13,577	11,506	2,071	18%

FURTHER INVESTIGATION OF THE ACTIVITY AT THESE BASES IS WARRANTED. IF EXCESSIVE PERSONNEL AUTHORIZATIONS EXIST, IMMEDIATE ACTION SHOULD BE TAKEN TO REDUCE STAFFING, AS WELL AS AUTHORIZATIONS TO A POINT CONSISTENT WITH WORKLOAD.

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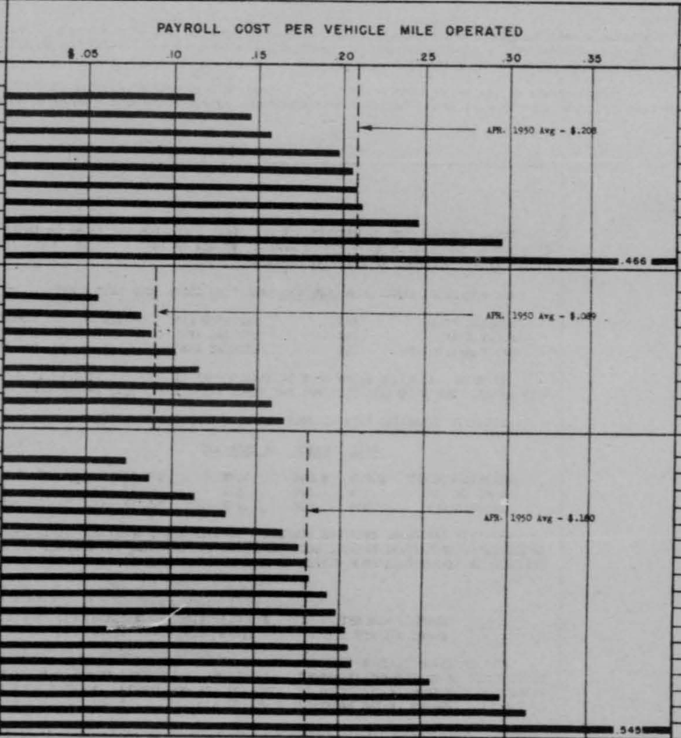
COMPARATIVE PAYROLL COST OF MOTOR POOL ACTIVITY

APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

MOTOR POOL PAYROLL COST	VEHICLE MILES OPERATED	BASE	PAYROLL COST PER VEHICLE MILE OPERATED	NON PERSONNEL COST PER VEHICLE MILE OPERATED
		WINGS		
$ 7,250	65,412	325th Ftr All Wea Wg - Moses Lake AFB	$.111	$.057
19,843	136,976	4th Ftr Intcp Wg - Langley AFB	.145	.034
10,557	67,073	33rd Ftr Intcp Wg - Otis AFB	.157	.039
14,268	72,429	56th Ftr Intcp Wg - Selfridge AFB	.197	.052
10,927	53,216	52nd Ftr All Wea Wg - McGuire AFB	.205	.021
25,540	122,793	62nd Tr Carr Wg - McChord AFB	.208	.063
23,778	112,439	78th Ftr Intcp Wg - Hamilton AFB	.211	.015
15,095	61,443	31st Ftr Bmr Wg - Turner AFB	.246	.046
13,577	45,837	314th Tr Carr Wg - Sewart AFB	.296	.070
23,381	50,209	20th Ftr Bmr Wg - Shaw AFB	.466	.106
		AIR BASE GPS & SQS		
$ 5,967	106,145	2595th AB Gp - Brooks AFB	$.056	$.018
1,818	22,563	2463rd Stdby B Sq - Benj Harrison AFB	.081	.031
15,778	178,696	2500th AB Gp - Mitchel AFB	.088	.015
6,117	60,554	4400th AB Gp - Stewart AFB	.101	.027
7,151	62,396	2600th AB Sq - Pope AFB	.115	.064
2,272	15,221	4408th AB Sq - Lawson AFB	.149	.036
1,131	7,133	4405th AB Sq - Sherman AFB	.159	.022
423	2,553	4404th AB Sq - Marshall AFB	.166	.037
		AFRTC'S		
$ 2,114	33,390	2585th AFRTC - Miami Intl Apt	$.063	$.013
3,329	38,157	2237th AFRTC - New Castle Co. Apt	.087	.035
3,777	33,433	2589th AFRTC - Dobbins AFB	.113	.023
2,253	17,091	2596th AFRTC - Hensley Field	.132	.031
3,535	21,477	2471st AFRTC - O'Hare Intl Apt	.165	.032
2,190	12,585	2472nd AFRTC - Fairfax Field	.174	.031
2,689	14,911	2234th AFRTC - Hanscom Apt	.180	.023
2,383	13,193	2584th AFRTC - Memphis Mun Apt	.181	.045
4,558	23,753	2343rd AFRTC - Portland Apt	.192	.047
2,669	13,486	2587th AFRTC - Birmingham Mun Apt	.198	.040
2,823	13,233	2240th AFRTC - Schlegel AF Plant	.213	.042
7,491	34,900	2347th AFRTC - Long Beach Mun Apt	.215	.032
5,868	26,985	2466th AFRTC - Atterbury AFB	.217	.036
2,659	10,419	2230th AFRTC - Floyd Bennett NAS	.255	.032
3,824	12,867	2465th AFRTC - Wold-Chamberlain Field	.297	.077
3,715	11,913	2236th AFRTC - Godman AFB	.312	.026
5,560	10,200	2239th AFRTC - Gtr Pittsburgh Apt	.345	.056



SOURCE: COST CONTROL REPORTS, AF FORMS 320, 321, 322, RCS: AF-FO-F22C
USAF GROUND ACCIDENT EXPERIENCE SUMMARY AND ANALYSIS,
AF FORM 122A, RCS: AF-AP-U8

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EXPLANATION OF GRAPHIC PRESENTATION ON

COMPARATIVE PAYROLL COST OF MAINTENANCE - AUTOMOTIVE AND GROUND POWERED EQUIPMENT

Automotive and Ground Powered Equipment Maintenance Costs include cost of personnel and supplies utilized in the accomplishment of field maintenance. The "payroll cost per vehicle mile operated" is determined by dividing the payroll cost of the above activities by the number of miles operated as reported on AF Form 142a.

The payroll costs of the Maintenance activity do not include any costs applicable to the Motor Pool. The average payroll cost per mile for each group was determined by dividing the total of average payroll costs by the total of average miles operated for each period.

COMMENT

TOTAL PAYROLL COST OF MAINTENANCE FOR APRIL 1950, FOR THE 35 BASES UNDER REVIEW, AMOUNTS TO $226,838 AS COMPARED TO $215,109 IN MARCH. $2,912 OF THIS INCREASE COVERS THE NEWLY REPORTED 2240TH AFRTC, SCHLEGEL AF PLANT AT CLEVELAND.

THE FOLLOWING BASES SHOW IMPROVED OPERATING COSTS OVER LAST MONTH:

HENSLEY FIELD	39%	HAMILTON AFB	22%	STEWART AFB	13%
SHERMAN AFB	39%	DOBBINS AFB	18%	SELFRIDGE AFB	9%
BEN HARRISON AFB	24%	MCGUIRE AFB	15%	O'HARE INT APT	5%

ALL THREE GROUPS OF BASES SHOW INCREASED OVERALL COST PER VEHICLE MILE OPERATED AS COMPARED WITH MARCH. THE INCREASED COST FOR THE WINGS WAS 13% AND THAT OF THE AFRTC'S WAS 10%.

EXCESSIVE INCREASED PAYROLL COST PER MILE OPERATED IS EVIDENT AT THE FOLLOWING BASES:

	APRIL	MARCH	% INCREASE		APRIL	MARCH	% INCREASE
MEMPHIS MUN APT	$.229	$.092	149%	GTR PITTSBURGH APT	$.339	$.180	88%
MIAMI INT APT	.118	.049	141%	SEWART AFB	.174	.115	51%
MARSHALL AFB	.089	.039	128%	TURNER AFB	.239	.159	50%

ANALYSIS INDICATES THAT THE WORKLOAD "VEHICLE MILES OPERATED" DIMINISHED AT EACH OF THE BASES. IN ADDITION, EXORBITANT PAYROLL COST INCREASES ARE REPORTED FOR MEMPHIS AND MIAMI, AS FOLLOWS: (FIGURES IN PARENTHESIS SHOW NUMBER OF PERSONS IN FUNCTION)

	APRIL	MARCH	INCREASE	PERCENT
MEMPHIS MUN APT	$ 3,015 (15)	$ 1,366 (5)	$ 1,646	121%
MIAMI INT APT	3,954 (19)	1,924 (9)	2,030	106%

FURTHER INVESTIGATION TO DETERMINE THE REASON FOR THESE ADDITIONAL PERSONNEL IS WARRANTED. POSSIBILITY OF ADJUSTMENT IN REPORTING PROCEDURE IS EVIDENT, IN THE CASE OF MEMPHIS, SINCE THE PAYROLL REPORT SHOWS A REDUCTION OF SEVEN (7) PERSONS SERVING IN MOTOR POOL ALONG WITH AN INCREASE OF TEN (10) PERSONS IN THE MAINTENANCE FUNCTION.

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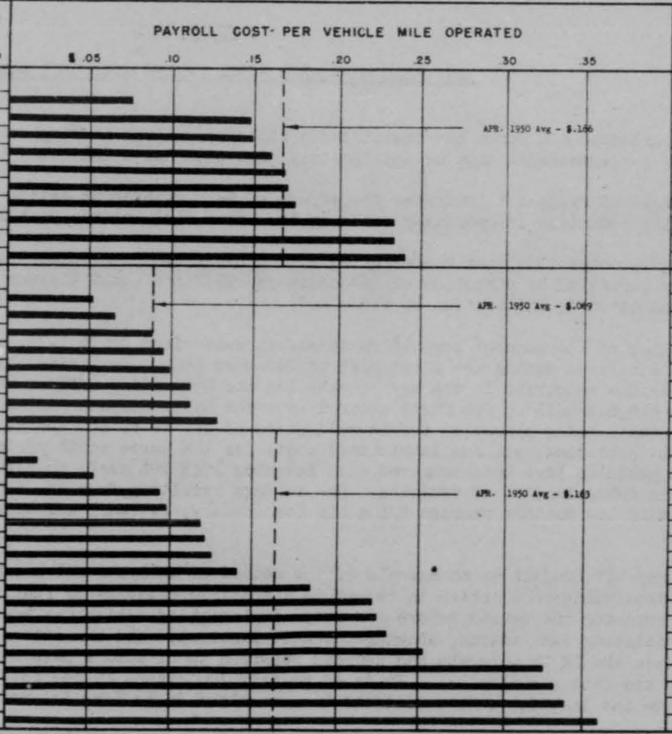
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

COMPARATIVE PAYROLL COST OF MAINTENANCE-AUTOMOTIVE AND GROUND POWERED EQUIPMENT

APRIL 1950



MAINTENANCE PAYROLL COST	VEHICLE MILES OPERATED	BASE	PAYROLL COST PER VEHICLE MILE OPERATED	NON PERSONNEL COST PER VEHICLE MILE OPERATED
		WINGS		
$ 8,595	112,439	78th Ftr Intcp Wg - Hamilton AFB	$.076	$.017
18,233	122,793	62nd Tr Carr Wg - McChord AFB	.148	.044
7,952	53,216	52nd Ftr All Wea Wg - McGuire AFB	.149	.048
10,436	65,412	325th Ftr All Wea Wg - Moses Lake AFB	.160	.026
23,054	136,976	4th Ftr Intcp Wg - Langley AFB	.168	.043
12,331	72,429	56th Ftr Intcp Wg - Selfridge AFB	.170	.024
7,974	45,837	314th Tr Carr Wg - Sewart AFB	.174	.035
15,597	67,073	33rd Ftr Intcp Wg - Otis AFB	.233	.044
11,678	50,209	20th Ftr Bmr Wg - Shaw AFB	.233	.153
14,669	61,443	31st Ftr Bmr Wg - Turner AFB	.239	.022
		AIR BASE GPS AND SQS		
$ 5,537	106,145	2595th AB Gp - Brooks AFB	$.052	$.015
457	7,133	4405th AB Sq - Sherman AFB	.064	.068
228	2,553	4406th AB Sq - Marshall AFB	.089	.108
16,912	178,696	2500th AB Gp - Mitchel AFB	.095	.027
6,187	62,396	2600th AB Sq - Pope AFB	.099	.031
1,685	15,221	4408th AB Sq - Lawson AFB	.111	.060
6,704	60,554	4400th AB Gp - Stewart AFB	.111	.052
2,899	22,563	2463rd Stdby B Sq - Benj Harrison AFB	.128	.001
		AFRTC's		
$ 233	12,867	2465th AFRTC - Wold-Chamberlain Field	$.018	$.009
1,257	23,753	2343rd AFRTC - Portland AFB	.053	.042
3,157	33,433	2589th AFRTC - Dobbins AFB	.094	.023
3,735	38,157	2237th AFRTC - New Castle Co. Apt	.098	.002
3,954	33,390	2585th AFRTC - Miami Intl Apt	.118	.011
4,234	34,900	2347th AFRTC - Long Beach Mun Apt	.121	.020
3,363	26,985	2466th AFRTC - Atterbury AFB	.125	.036
1,777	12,585	2272nd AFRTC - Fairfax Field	.141	.063
2,742	14,911	2234th AFRTC - Hanscom Apt	.184	.018
2,912	13,233	2240th AFRTC - Schlegel AF Plant	.220	.028
2,657	11,913	2236th AFRTC - Godman AFB	.223	.043
3,015	13,193	2584th AFRTC - Memphis Mun Apt	.229	.056
5,431	21,477	2471st AFRTC - O'Hare Intl Apt	.253	.092
5,560	17,091	2596th AFRTC - Hensley Field	.325	.034
4,483	13,486	2587th AFRTC - Birmingham Mun Apt	.332	.064
3,453	10,200	2239th AFRTC - Gtr Pittsburgh Apt	.339	.089
3,745	10,419	2230th AFRTC - Floyd Bennett NAS	.359	.036

SOURCE: COST CONTROL REPORTS, AF FORMS 320, 321, 322, RCS: AF-FO-F22C
USAF GROUND ACCIDENT EXPERIENCE SUMMARY AND ANALYSIS,
AF FORM 122A, RCS: AF-AP-U8

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EXPLANATION OF PAY-OFF PROJECT

CONAC SAVINGS IN COST OF FUELS AND LUBES

MOTOR POOL

31ST FIGHTER-BOMBER WING, TURNER AIR FORCE BASE, GEORGIA

The Fourteenth Air Force has instituted a vigorous program seeking cost reductions in all activities where subnormal work performance ratings or inordinately high costs have indicated the need for management action.

This Pay-Off Project illustrates the effect of such management action and the savings accruing to the USAF as a result of the reduction in operating costs in the Motor Pool, at the 31st Fighter-Bomber Wing at Turner Air Force Base.

During November 1949, the number of general purpose vehicles authorized for use by the 31st Fighter-Bomber Wing was sharply curtailed by direction of Headquarters, USAF and ConAC (letter Hq ConAC, MatS 451, dated 26 Sept 1949, subject "Reduction in Utilization of Vehicles").

A ceiling of 131 general purpose vehicles, as authorized by TA 1-75, was approved by a team from Headquarters, Fourteenth Air Force during the first part of December 1949. Realizing that this ceiling did not represent the maximum possible reduction in the use of vehicles the Commanding Officer of the 31st M&S Group concurrently instituted a program calling for rigid control over the daily dispatch of vehicles from the Motor Pool, with particular emphasis being placed on the consolidation of all trips and the restriction of off-base trips. Average monthly POL (petroleum, oil and lubricants) costs for the three month period immediately preceding the reduction in authorized vehicles have been compared with December 1949 POL costs to determine the savings resulting from the reduction in authorization of vehicles. The savings resulting from the M&S group program have then been determined by subtracting the monthly average POL costs for January, February and March 1950 from the December cost of fuel and lubes.

This Pay-Off Project is an example of the method of analysis which can be used to indicate savings to the USAF resulting from management action in regard to a specific activity or function. Pay-Off Projects should include cost data covering the period before and after implementing action has been taken, and a reference to directives or program initiating such action, showing the date instituted and the authority for the program or action. Cost and workload data should be accurate and sources referred to of such a nature that ready reference may be made to reports from which the data was obtained. It is of primary importance in the reporting of "Pay-Off Projects" that the situation be one in which cost reductions have resulted in no loss in operating efficiency or mission performance.

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PAY-OFF PROJECT

ANALYSIS OF CONAC SAVINGS IN COST OF FUELS AND LUBES, MOTOR POOL

31ST FIGHTER-BOMBER WING

1 JAN - 31 MAR 1950 COMPARED WITH 1 SEP - 30 NOV 1949

Three months average cost of fuels and lubes before reduction in number of vehicles and institution of 31st M&S Group program (Sep - Nov 1949)	$ 2,708	
Cost of fuels and lubes, December 1949, after reduction in general purpose vehicles authorized by TA 1-75 and approved by Hq 14th AF	2,355	
Reduction in monthly cost of fuels and lubes attributable to reduction in number of vehicles		$ 353
Three months average cost of fuels and lubes (Jan - Mar 1950) during institution of M&S Group program	1,933	
Additional reduction in monthly cost of fuels and lubes attributed to M&S program (Jan - Mar 1950 compared with Dec 1949)		422
Total average monthly savings in cost of fuels and lubes accomplished by reduction in vehicles and maintenance of M&S group program, or an		775

ESTIMATED ANNUAL SAVINGS TO THE USAF OF $ 9,300

SOURCE: Analysis - 31st Fighter-Bomber Wing, March 1950

This Pay-Off Project is presented from data reported to Hq ConAC by the Commanding General, Fourteenth Air Force

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EXPLANATION OF TABULATIONS OF COMPARATIVE DATA
FOR PROGRESS AND MANAGEMENT ANALYSIS
COMBAT GROUPS, SEPARATE SQUADRONS AND
AIR FORCE RESERVE TRAINING CENTERS

The purpose of the tabulations presented on the following three pages is to provide, to commanders and management analysts, at unit level, selected performance data. These tabulations provide a basis for local progress and management analysis.

The data contained in these tabulations does not replace, but rather supplements Comptroller Chart #6 and the presentations in this Review. Additional data will be included in future issues of this Review upon request. Information classified above RESTRICTED will not be included.

Examples of analyses possible from data shown here are:

a. Cost of Organizational Maintenance per Flying Hour (ConAC Cost Analysis Review, August).

b. Cost of Fuels and Lubes per Flying Hour (Page 16, ConAC Cost Analysis Review, July).

c. Utilization of in-commission rates.

d. Analysis of Fuel Consumption per hour.

e. Cost of organizational maintenance per unit of flying, AFRTC (Page 11, ConAC Cost Analysis Review, November).

f. Hours flown per person assigned to organizational maintenance function.

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COMPARATIVE DATA FOR PROGRESS AND MANAGEMENT ANALYSIS

COMBAT GROUPS AND SEPARATE SQUADRONS

CONTINENTAL AIR COMMAND

APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

	AIRCRAFT - FLYING HOUR FACTORS													PERSONNEL FACTORS						COST-FACTORS								
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
COMBAT GROUP	AIR FORCE	TYPE ACFT	AVG NO ACFT ON HAND	AVG NO ACFT IN COMM	AVG NO ACFT OUT (MAINT)	AVG NO ACFT OUT (T.O. COMP)	AVG NO ACFT OUT (AOCP)	AVG NO ACFT OUT (OTHER)	TOTAL HRS FLOWN	HRS FLOWN PER ACFT (ON HAND)	WEATHER HRS FLOWN	HOOD HRS FLOWN	GALLONS FUEL PER HR	NUMBER OFF AUTH	NUMBER OFF ASGD	NUMBER AMN AUTH	NUMBER AMN ASGD	TOTAL PERS ASGD	% AUTH PERS ASGD	TOTAL PERS ORG MAINT (07110)	PAYROLL COST ORG MAINT (07110)	TOTAL PERS UNIT OVERHEAD (07061)	PAYROLL COST UNIT OVERHEAD (07061)	COST OF FUEL CMBT ACFT (07102)	TOTAL PERS CMBT UNIT (07270)	PAYROLL COST - COMBAT UNIT (07270)	TOTAL PERS - MISSION ACFT (05102-05104)	PAYROLL COST - MISSION ACFT (05102-05104)
56TH FTR INTCP GP	10	F-80	74	57	16	-	1	-	1,832	25			348	101	92	349	360	452	100%	297	$44,264	63	$14,782	$74,325	435	$91,671	43	$8,010
52ND FTR A/W GP	1	F-82	24	17	6	-	1	-	622	26			128	78	68	219	215	283	95%	165	25,496	55	11,796	15,343	272	61,306	64	11,840
325TH FTR A/W GP (a)	4	F-82	36	19	9	-	8	-	761	21	N	N	154	111	91	316	299	390	91%	218	33,454	39	9,803	27,774	351	77,846	75	12,929
20TH FTR BMR GP	14	F-84	65	44	19	-	2	-	2,469	38	O	O	405	101	104	367	419	523	112%	333	47,324	58	11,128	126,239	486	100,360	57	10,023
31ST FTR BMR GP (b)	14	F-84	69	49	18	-	1	1	2,634	38	T	T	345	101	125	367	375	490	105%	305	43,072	44	8,258	119,114	479	100,391	94	15,265
78TH FTR INTCP GP (c)	4	F-84	57	35	17	-	4	1	1,830	32			379	101	112	367	358	470	100%	301	43,735	42	9,944	26,943	447	97,001	108	20,786
33RD FTR INTCP GP	1	F-84 F-86	23 79	16 66	4 10	- -	2 3	1 -	159 1,839	7 23	A	A	292 312	101	114	367	402	516	110%	323	47,853	73	14,659	102,390	510	105,600	110	16,388
4TH FTR INTCP GP	9	F-86	77	62	8	-	5	2	1,591	21	V	V	340	101	104	349	391	495	110%	299	44,902	60	13,414	70,462	460	99,262	162	26,437
81ST FTR INTCP GP	4	F-86	75	53	16	1	5	-	1,055	14	A	A	346	101	103	349	433	536	119%	328	50,590	65	13,044	51,270	489	99,939	57	8,629
62ND TR CARR GP (d)	4	C-54	39	28	11	-	-	-	1,000	26	I	I	179	142	148	452	433	581	97%	255	40,748	50	11,630	48,268	529	127,798	100	21,486
314TH TR CARR GP (e)	14	C-82 C-119	29 52	13 34	7 13	2 1	3 4	9 -	878 2,425	30 47	L	L	148 305	206	193	486	477	670	97%	279	42,182	59	13,968	33,504	620	152,304	78	12,077
316TH TR CARR GP (H)	14	C-82	21	8	12	-	1	-	525	25	A	A	196	99	100	304	286	386	96%	159	24,463	16	2,739	25,820	318	75,130	-	-
2601ST ASSAULT SQ	14	C-82	13	5	7	-	1	-	283	22	B	B	169	43	44	138	135	179	99%	75	10,953	5	684	9,370	150	34,114	-	-
84TH BMB SQ (L)	9	B-45	16	12	2	-	2	-	339	11	L	L	1,463	55	51	193	195	246	99%	154	24,870	-	-	64,854	221	[illegible]	-	-
85TH BMB SQ (L)	9	B-45	17	11	5	-	1	-	294	17	E	E	1,497	55	47	193	197	244	98%	165	26,432	-	-	57,369	220	47,278	-	-
161ST TAC RCN SQ	14	RF-80	17	15	1	-	1	-	957	56			351	28	30	115	111	141	99%	68	10,103	-	-	44,180	114	23,273	-	-
363RD TAC RCN GP	9	RB-26	16	12	3	-	1	-	625	39			160	78	48	176	188	236	93%	102	16,327	1	498	20,160	177	38,492	-	-

SOURCE: COST CONTROL REPORTS, AF FORMS 320 & 322 RCS: AF-FO-F220
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
CONAC PERSONNEL STRENGTH REPORT, RCS: FS-P2B

NOTES:
(a) Includes 318th and 319th Ftr Sqdns
(b) Includes 18 acft TDY Oper SWARMER (Langley)
(c) Includes 82nd Ftr Sq - TDY Oper SWARMER (Langley)
(d) Includes 4th TC Sq - TDY Oper SWARMER
(e) Includes 19 C-119's, and 13 C-82's - TDY Oper SWARMER (Lawson)

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COMPARATIVE DATA FOR
PROGRESS AND MANAGEMENT ANALYSIS
TENANT AIR FORCE RESERVE TRAINING CENTERS
CONTINENTAL AIR COMMAND
APRIL 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

	AIRCRAFT-FLYING HOUR FACTORS													PERSONNEL FACTORS							COST-FACTORS				
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
AFRTC	AIR FORCE	TYPE AIRCRAFT	AVG NO ACFT ON HAND	AVG NO ACFT IN COMM	AVG NO ACFT OUT (MAINT)	AVG NO ACFT OUT (T.O. COMP)	AVG NO ACFT OUT (AOCP)	AVG NO ACFT OUT (OTHER)	TOTAL HRS FLOWN	HRS FLOWN PER ACFT (ON HAND)	WEATHER HRS FLOWN	HOOD HRS FLOWN	GALLONS FUEL PER HR	NUMBER OFF AUTH	NUMBER OFF ASGD	NUMBER AMN AUTH	NUMBER AMN ASGD	TOTAL MIL PERS ASGD	% AUTH MIL PERS ASGD	TOTAL NO CIV EMPLOYED	TOTAL PERS ORG MAINT (07110)	PAYROLL COST ORG MAINT (07110)	COST OF FUEL-ASSIGNED ACFT (07102)	TOTAL PERS-MAINT & TRNG FUNCTION (07270)	PAYROLL COST-MAINT & TRNG FUNCTION (07270)
2230TH FLOYD BENNETT	1	C-47 T-7, T-11 T-6	15 20 2	13 17 2	2 3 -	- - -	- - -	- - -	656 587 3	44 29 2			88 40 35	26	27	300	318	345	106	111	178	$ 36,741	$ 11,624 4,695	184	$ 38,637
2233RD MITCHEL	1	C-46 T-7, T-11 T-6	15 20 10	12 16 9	3 2 1	- - -	1 2 -	- - -	774 491 52	52 25 5	NOT AVAILABLE	NOT AVAILABLE	124 26 37	22	27	215	234	261	110	41	191	36,782	19,294 2,737	195	38,661
2346TH HAMILTON	4	C-46 T-7, T-11 T-6	16 20 9	14 18 9	1 1 -	- - -	1 1 -	- - -	464 813 87	29 41 10			175 38 32	22	24	189	215	239	113	59	184	41,781	23,492 6,204	220	51,558
2240TH CLEVELAND	9	C-46 T-7, T-11 T-6	15 20 3	10 16 3	4 2 -	- - -	1 2 -	- - -	677 421 125	45 21 42			143 40 29	33	30	368	471	501	125	74	231	42,529	19,373 2,059	250	49,454
2242ND SELFRIDGE	10	C-46 T-7, T-11 T-6	18 20 5	15 15 5	3 3 -	- - -	- 2 -	- - -	1,099 583 2	61 29 1			146 40 32	21	23	215	181	204	86	59	155	35,645	32,036 4,343	168	40,018
2469TH SCOTT	10	C-46 T-7, T-11 T-6	18 18 5	11 16 5	5 1 -	- - -	2 1 -	- - -	457 468 125	25 26 25			164 40 27	22	23	215	254	277	117	59	205	41,092	14,460 4,393	218	45,050
2473RD OFFUTT	10	C-46 T-7, T-11 T-6	16 20 5	12 18 5	4 2 -	- - -	- - -	- - -	598 546 78	37 27 16			142 44 28	22	25	215	219	244	103	64	168	30,397	17,131 5,159	177	33,532
2592ND TINKER	12	B-26 T-7, T-11 T-6	18 20 6	11 16 4	3 2 1	- - -	4 2 1	- - -	579 428 27	32 21 5			148 37 33	22	24	225	267	291	118	59	193	38,567	23,607	245	50,530
2596TH HENSLEY	12	C-46 T-7, T-11 T-6	17 19 7	12 16 7	2 2 -	- - -	3 1 -	- - -	864 717 54	51 38 8			151 42 32	33	31	368	408	439	109	91	163	32,884	23,396 6,025	184	38,344

SOURCE: COST CONTROL REPORTS, AF FORMS 320 & 322 RCS: AF-FO-F22C
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
CONAC PERSONNEL STRENGTH REPORT, RCS: FS-P28

NOTE: Column 23 Broken out by tactical and trainer type aircraft where data was available

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PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950

COMPARATIVE DATA FOR PROGRESS AND MANAGEMENT ANALYSIS

NON-TENANT AIR FORCE RESERVE TRAINING CENTERS

CONTINENTAL AIR COMMAND

APRIL 1950

AFRTC	AIRCRAFT - FLYING HOUR FACTORS													PERSONNEL FACTORS							COST-FACTORS				
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	AIR FORCE	TYPE AIRCRAFT	AVG NO ACFT ON HAND	AVG NO ACFT IN COMM	AVG NO ACFT OUT (MAINT)	AVG NO ACFT OUT (T.O COMP)	AVG NO ACFT OUT (AOCP)	AVG NO ACFT OUT (OTHER)	TOTAL HRS FLOWN	HRS FLOWN PER ACFT (ON HAND)	WEATHER HRS FLOWN	HOOD HRS FLOWN	GALLONS FUEL PER HR	NUMBER OFF AUTH	NUMBER OFF ASGD	NUMBER AMN AUTH	NUMBER AMN ASGD	TOTAL MIL PERS ASGD	% AUTH MIL PERS ASGD	TOTAL NO CIV EMPLOYED	TOTAL PERS ORGN MAINT (07110)	PAYROLL COST ORGN MAINT (07110)	COST OF FUEL - ASSIGNED ACFT (07102)	TOTAL PERS - MAINT & TRNG FUNCTION (07270)	PAYROLL COST - MAINT & TRNG FUNCTION (07270)
2234 TH HANSCOM	1	C-46	16	15	1	-	-	-	681	42			145	33	34	375	398	432	106	146	208	$ 39,164	$ 17,203 7,250	209	$ 39,668
		T-7 & T-11	21	19	1	1	-	-	910	43			37												
		T-6	7	7	-	-	-	-	142	20			25												
2343 RD PORTLAND	4	C-46	16	14	2	-	-	-	926	58	N	N	166	34	39	400	413	452	104	143	190	43,722	30,758 5,860	190	43,722
		T-7, T-11	18	17	1	-	-	-	665	37			44												
		T-6	9	8	1	-	-	-	220	24			28												
2347 TH LONG BEACH	4	B-26	36	20	13	-	3	-	1,283	36	O	O	159	42	53	589	657	710	113	162	362	75,400	41,555 12,360	369	78,721
		T-7, T-11	39	23	14	-	2	-	1,084	28			42												
		T-6	19	13	5	-	1	-	301	17			24												
2236 TH GODMAN	9	C-47	16	12	3	-	1	-	663	41	T	T	99	33	29	300	376	405	122	107	178	40,221	13,089 2,689	184	43,228
		T-7, T-11	20	13	4	-	3	-	313	16			42												
		T-6	6	3	1	-	-	2	26	4			31												
2237 TH READING	9	C-46	15	10	3	-	2	-	421	28			106	33	23	368	396	419	104	86	156	31,534	8,873 2,952	168	35,101
		T-7, T-11	18	14	3	-	1	-	405	22			34												
		T-6	7	7	-	-	-	-	46	7			21												
2239 TH GR. PITTSBURGH	9	C-46	15	13	2	-	-	-	411	27	A	A	147	33	27	368	404	431	107	112	161	31,699	12,146 4,056	182	35,982
		T-7, T-11	19	13	1	-	5	-	578	30			38												
		T-6	6	5	1	-	-	-	129	22			31												
2465 TH WOLD-CHAMBERLAIN	10	C-46	16	13	2	-	1	-	837	52	V	V	152	35	35	371	391	426	105	122	184	37,440	25,648 5,074	208	43,371
		T-7, T-11	15	13	2	-	-	-	673	45			35												
		T-6	8	6	2	-	-	-	106	13			28												
2466 TH ATTERBURY	10	C-46	15	11	3	-	1	-	547	36	A	A	152	34	34	396	426	460	107	135	150	29,573	19,060 5,071	162	33,807
		T-7, T-11	30	13	17	-	-	-	525	18			36												
		T-6	11	8	3	-	-	-	116	11			28												
2471 ST O'HARE	10	C-46	34	27	6	-	1	-	1,076	32	I	I	146	45	50	606	547	597	92	266	268	54,049	31,195 8,197	304	62,940
		T-7, T-11	30	18	9	-	3	-	844	28			40												
		T-6	16	11	4	-	1	-	251	16			22												
2472 ND FAIRFAX	10	C-47	15	10	2	1	1	1	739	49	L	L	90	33	28	368	374	402	100	97	187	37,411	16,430 6,219	195	39,560
		T-7, T-11	20	15	3	-	2	-	623	31			42												
		T-6	8	6	-	1	1	-	129	16			24												
2584 TH MEMPHIS	14	C-46	20	14	2	-	3	1	546	27	A	A	141	34	30	368	384	414	103	119	180	35,683	15,426 3,720	180	35,683
		T-7, T-11	19	10	4	-	1	4	523	28			38												
		T-6	8	7	1	-	-	-	54	7			28												
2585 TH MIAMI	14	C-46	15	12	2	-	1	-	765	51	B	B	149	33	44	370	372	416	103	119	212	42,056	22,831 7,785	235	49,414
		T-7, T-11	17	13	2	-	2	-	638	38			53												
		T-6	8	7	1	-	-	-	182	23			30												
2587 TH BIRMINGHAM	14	B-26	17	11	3	-	3	-	553	33	L	L	141	33	37	380	405	442	107	92	191	42,620	14,335 3,914	204	46,160
		C-46	2	1	-	-	1	-	-	-			-												
		T-7, T-11	21	10	5	-	6	-	606	29			38												
		T-6	8	6	2	-	-	-	47	6			31												
2589 TH DOBBINS	14	B-26	17	12	1	-	2	2	659	39	E	E	162	34	39	385	385	424	101	101	186	36,567	21,506 6,521	196	40,216
		T-7, T-11	18	14	1	-	1	2	806	45			40												
		T-6	7	6	-	-	-	1	107	15			29												

SOURCE: COST CONTROL REPORTS, AF FORMS 320 & 322 RCS: AF-FO-F22C
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
CONAC PERSONNEL STRENGTH REPORT, RCS: FS-P28

NOTE: Column 23 Broken out by tactical and trainer type aircraft where data was available

RESTRICTED

EXPLANATION OF GRAPHIC PRESENTATION ON
RELATIVE MAINTENANCE EFFECTIVENESS - COMBAT GROUPS

The "Average Number of Personnel in Maintenance Function" was determined from account codes 07110 (Maintenance Performend by the Combat Group) and 05102 (Field Maintenance of the Predominant Type Aircraft in the Combat Group).

"Hours of Flying Per Person in Function" is the basic unit of measure charted in this presentation. This figure is obtained by dividing Average Hours of Flying per Month by Average Number of Personnel in Maintenance Function.

COMMENT

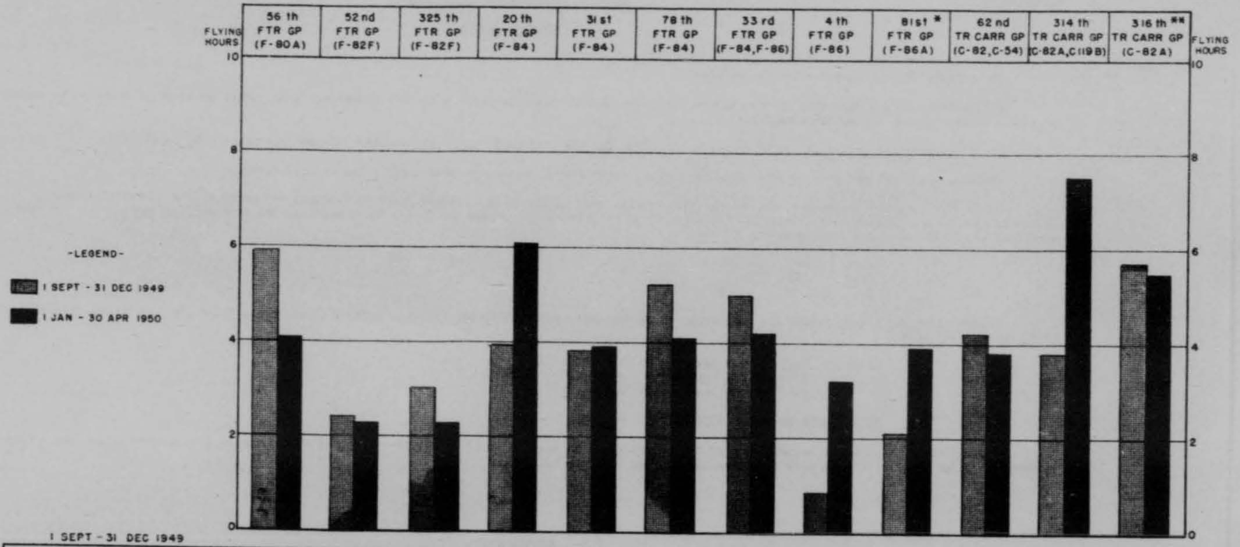
FOUR OF THE TWELVE COMBAT GROUPS CHARTED (20TH, 4TH, 314TH, 81ST) SHOW A SUBSTANTIAL INCREASE IN HOURS OF FLYING PER PERSON IN THE MAINTENANCE FUNCTION, WHILE THREE (56TH, 78TH, AND 325TH) SHOW A SUBSTANTIAL DECREASE. THE 56TH GP WITH AN INCREASE IN AVERAGE NUMBER OF MAINTENANCE PERSONNEL (286 TO 338), SHOWS PRACTICALLY NO INCREASE IN IN-COMMISSION RATE AND CONSEQUENTLY A SIZEABLE DROP IN HOURS FLOWN PER PERSON IN THE MAINTENANCE FUNCTION. THE 325TH GP, WHILE INCREASING FROM AN AVERAGE OF 259 TO 275 MAINTENANCE PERSONNEL, SHOWS A DECREASE IN IN-COMMISSION RATES (FROM 47% TO 41%) AND A DECREASE IN HOURS OF FLYING PER PERSON IN MAINTENANCE FUNCTION. ALTHOUGH THE IN-COMMISSION RATE DID INCREASE SLIGHTLY, THE 78TH GP FOLLOWS THE SAME PATTERN.

THE AVERAGE ZI WEATHER INDEX (AFL 150-10) FOR 1 SEPT - 31 DEC 49 WAS 97% AND FOR 1 JAN - 30 APR 50, 91%. ON THE AVERAGE, 6% OF ANY DECREASE IN FLYING FROM THE NORMAL PROGRAM MIGHT BE EXPLAINED BY WEATHER. THE ABOVE DECREASES ARE CONSIDERABLY MORE THAN 6%, (RANGING FROM 21% AT THE 78TH TO 31% AT THE 56TH GROUP) AND THEREFORE MUST BE ATTRIBUTED TO RELATIVELY LARGE INCREASES IN PERSONNEL.

RESTRICTED

RELATIVE MAINTENANCE EFFECTIVENESS
COMBAT GROUPS
FOUR MONTH AVERAGES
I SEPT - 31 DEC 1949 VS. I JAN - 30 APR 1950

PREPARED BY
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



I SEPT - 31 DEC 1949

	56 th FTR GP (F-80A)	52 nd FTR GP (F-82F)	325 th FTR GP (F-82F)	20 th FTR GP (F-84)	31 st FTR GP (F-84)	78 th FTR GP (F-84)	33 rd FTR GP (F-84, F-86)	4 th FTR GP (F-86)	81 st * FTR GP (F-86A)	62 nd TR CARR GP (C-82, C-54)	314 th TR CARR GP (C-82A, C119B)	316 th ** TR CARR GP (C-82A)
AVG HRS OF FLYING PER MONTH	1,680	510	783	1,301	1,170	1,661	1,277	260	459	1,336	901	1,202
AVG NO OF PERS IN MAINT FUNCTION	286	211	259	336	311	312	252	311	215	320	240	212
▨ HRS OF FLYING PER PERSON IN FUNCTION	5.9	2.4	3.0	3.9	3.8	5.2	5.0	.8	2.1	4.2	3.8	5.7
AVG % ACFT IN COMMISSION	65%	50%	47%	69%	57%	54%	53%	17%	47%	54%	29%	44%

I JAN - 30 APR 1950

	56 th FTR GP (F-80A)	52 nd FTR GP (F-82F)	325 th FTR GP (F-82F)	20 th FTR GP (F-84)	31 st FTR GP (F-84)	78 th FTR GP (F-84)	33 rd FTR GP (F-84, F-86)	4 th FTR GP (F-86)	81 st * FTR GP (F-86A)	62 nd TR CARR GP (C-82, C-54)	314 th TR CARR GP (C-82A, C119B)	316 th ** TR CARR GP (C-82A)
AVG HRS OF FLYING PER MONTH	1,374	561	625	2,158	1,388	1,616	1,675	1,302	1,433	1,389	2,060	1,007
AVG NO OF PERS IN MAINT FUNCTION	338	241	275	351	356	391	399	411	370	361	276	183
■ HRS OF FLYING PER PERSON IN FUNCTION	4.1	2.3	2.3	6.1	3.9	4.1	4.2	3.2	3.9	3.8	7.5	5.5
AVG % ACFT IN COMMISSION	66%	63%	41%	61%	51%	58%	75%	60%	68%	57%	43%	43%

SOURCE: COST CONTROL REPORTS, AF FORMS 320, 322, RCS: AF-FO-F22C
REPORT OF SELECTED AIRCRAFT AND STATUS OPERATIONS
AF FORM 110A, RCS: FS-A1

NOTES: * FIELD MAINTENANCE PERSONNEL FOR MONTHS OF FEB, MAR & APR ONLY ARE REPORTED
** INCLUDES PROPORTIONAL PART OF 314 TH FIELD MAINTENANCE PERSONNEL

RESTRICTED

EXPLANATION OF
RELATIVE MAINTENANCE EFFECTIVENESS
TENANT AFRTC'S

The purpose of this presentation is twofold:

a. To indicate the variation between Tenant Air Force Reserve Training Centers for the number of flying units produced in relation to number of personnel assigned in the maintenance function.

b. To compare the trends of performance at each AFRTC for the periods 1 July - 31 December 1949 and 1 January - 30 April 1950.

"Maintenance Function" data is obtained from Account Code 07110 (Maintenance performed by the organization).

Units of Flying are weighted flying hours. The weights used (Aircraft Maintenance Workload Factors) are based on the number of T/O&E authorizations in maintenance SSN's (modified for AFRTC's) in relation to the number of flying hours expected per aircraft, by type, as specified in AFL 150-10. The factors are as follows:

B-26 = 1
C-46 = .82
C-45, T-7, T-11 = .80
C-47 = .68
T-6 = .53

"Units of Flying Accomplished" are then computed as follows: Workload Factor (By type acft) X Actual Hours Flown (By type acft) = Total Units of Flying Accomplished

EXAMPLE: C-47 - 147 hrs x .68 = 99.96
T-7 - 196 hrs x .80 = 156.80
T-6 - 239 hrs x .53 = 126.67

TOTAL UNITS OF FLYING ACCOMPLISHED = 383.43

The 2230th AFRTC at Floyd Bennett NAS and the 2596th AFRTC at Hensley Field, heretofore included with Tenants, have been excluded since they perform the major portion of Base Services normally required by their activity.

COMMENT

IN THIS GROUP, THE AFRTC AT OFFUTT ALONE IMPROVED ITS "MAINTENANCE EFFECTIVENESS" OVER THE PRIOR PERIOD. THE GREATEST DECREASE IN EFFECTIVENESS (33%) IS SHOWN FOR HAMILTON. THE AVERAGE ZI WEATHER FACTOR (AFL 150-10) DECLINED 11% DURING THE SAME PERIOD. THIS FACTORIAL DECREASE WOULD EXPLAIN THE DECREASED FLYING, THEREFORE WE MIGHT CONCLUDE THAT THE INCREASE IN PERSONNEL AT HAMILTON IS THE DIRECT CAUSE OF DECREASED MAINTENANCE EFFECTIVENESS.

THE 2240TH AFRTC ACTUALLY HAD AN INCREASE IN FLYING, YET THE INCREASE IN MAINTENANCE PERSONNEL (119 TO 174) OVERCAME THIS INFLUENCE AND PRODUCED A SUBSTANTIAL DECREASE IN "MAINTENANCE EFFECTIVENESS".

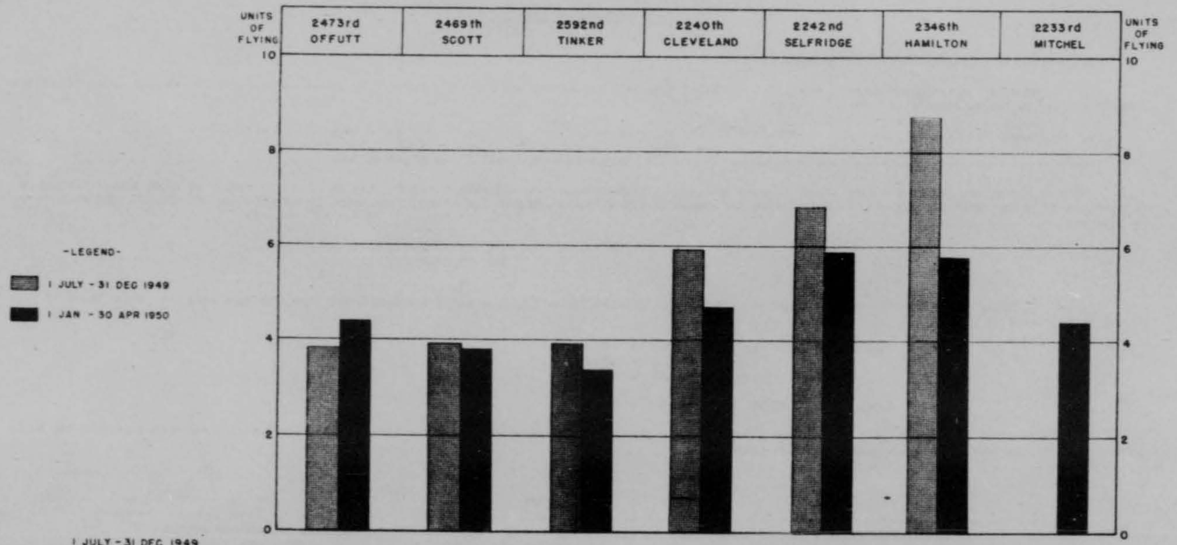
RESTRICTED

RELATIVE MAINTENANCE EFFECTIVENESS

TENANT AFRTC's

1 JULY - 31 DEC 1949 VS 1 JAN - 30 APR 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



1 JULY - 31 DEC 1949

		2473rd OFFUTT	2469th SCOTT	2592nd TINKER	2240th CLEVELAND	2242nd SELFRIDGE	2346th HAMILTON	2233rd MITCHEL
▨	AVG UNITS OF FLYING ACCOMPLISHED PER MO	535	535	611	706	992	1,244	-
	AVG NO OF PERSONNEL IN MAINT FUNCTION	138	136	158	119	145	143	-
	UNITS OF FLYING PER PERSON IN FUNCTION	3.8	3.9	3.9	5.9	6.8	8.7	-
	AVG % ACFT IN COMMISSION	81%	68%	75%	81%	63%	86%	-

1 JAN - 30 APR 1950

		2473rd OFFUTT	2469th SCOTT	2592nd TINKER	2240th CLEVELAND	2242nd SELFRIDGE	2346th HAMILTON	2233rd MITCHEL
■	AVG UNITS OF FLYING ACCOMPLISHED PER MO	711	720	722	821	931	1,009	802
	AVG NO OF PERSONNEL IN MAINT FUNCTION	161	190	212	174	157	173	184
	UNITS OF FLYING PER PERSON IN FUNCTION	4.4	3.8	3.4	4.7	5.9	5.8	4.4
	AVG % ACFT IN COMMISSION	84%	74%	64%	78%	77%	89%	69%

SOURCE: COST CONTROL REPORTS, AF FORMS 320, 322, RCS: AF-FO-F22C
REPORT OF SELECTED ACFT & STATUS OPERATIONS, AF FORMS 110A, RCS: FS-A1

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EXPLANATION OF

RELATIVE MAINTENANCE EFFECTIVENESS

NON-TENANT AFRTC'S

The purpose of this presentation is twofold:

a. To indicate the variation between Non-Tenant Air Force Reserve Training Centers for the number of flying units produced in relation to number of personnel assigned in the maintenance function.

b. To compare the trends of performance at each AFRTC for the periods 1 July - 31 December 1949 and 1 January - 30 April 1950.

"Maintenance Function" data is obtained from Account Code 07110 (Maintenance performed by the organization)

Units of Flying are weighted flying hours. The weights used (Aircraft Maintenance Worklaod Factors) are based on the number of T/O&E authorizations in maintenance SSN's (modified for AFRTC's) in relation to the number of flying hours expected per aircraft, by type, as specified in AFL 150-10. The factors are as follows:

B-26 = 1
C-46 = .82
C-45, T-7, T-11 = .80
C-47 = .68
T-6 = .53

"Units of Flying Accomplished" are then computed as follows: Workload Factor (By type acft) X Actual Hours Flown (By type acft) = Total Units of Flying Accomplished

```
EXAMP[illegible] C-47  -  147 hrs  x  .68  =   99.96
          T-7   -  196 hrs  x  .80  =  156.80
          T-6   -  239 hrs  x  .53  =  126.67

TOTAL UNITS OF FLYING ACCOMPLISHED  =  383.43
```

The 2230th AFRTC at Floyd Bennett NAS and the 2596th AFRTC at Hensley Field, heretofore included with Tenants, are included since they perform the major portion of Base services normally required by their activity.

COMMENT

OF THE SIXTEEN AFRTC'S IN THIS GROUP, ONLY TWO (2230TH AND 2237TH) SHOW A SUBSTANTIAL INCREASE IN UNITS OF FLYING PER PERSON IN FUNCTION FOR THE PERIOD 1 JAN - 30 APR OVER THE PREVIOUS SIX MONTHS. THE FOLLOWING AFRTC'S SHOW A SUBSTANTIAL DECREASE:

2236TH	GODMAN AFB	2585TH	MIAMI INTERNATIONAL AIRPORT	2466TH	ATTERBURY AFB
2234TH	HANSCOM AFB	2471ST	O'HARE INTERNATIONAL AIRPORT	2347TH	NEW CASTLE COUNTY AIRPORT
2472D	FAIRFAX FIELD	2465TH	WOLD-CHAMBERLAIN FIELD	2596TH	HENSLEY FIELD

THE AVERAGE ZI WEATHER INDEX (AFL 150-10) FOR 1 JUL - 31 DEC WAS 102% AND FOR 1 JAN -30 APR, 91%. ON THE AVERAGE, THEREFORE, 11% OF ANY DROP IN FLYING COULD BE EXPLAINED BY WEATHER. THESE DECREASES ARE CONSIDERABLY MORE THAN 11%, RANGING FROM A 15% DECREASE AT HANSCOM TO A 48% DECREASE AT LONG BEACH. THE DECREASE IN EFFICIENCY AT LONG BEACH WAS DUE TO BOTH A LARGE INCREASE IN MAINTENANCE PERSONNEL (245 TO 341) AND A DECREASE IN FLYING HOURS, DESPITE AN INCREASE OF PERCENT IN COMMISSION. THE DROP OF 46% AT ATTERBURY WAS DUE ENTIRELY TO DECREASED FLYING.

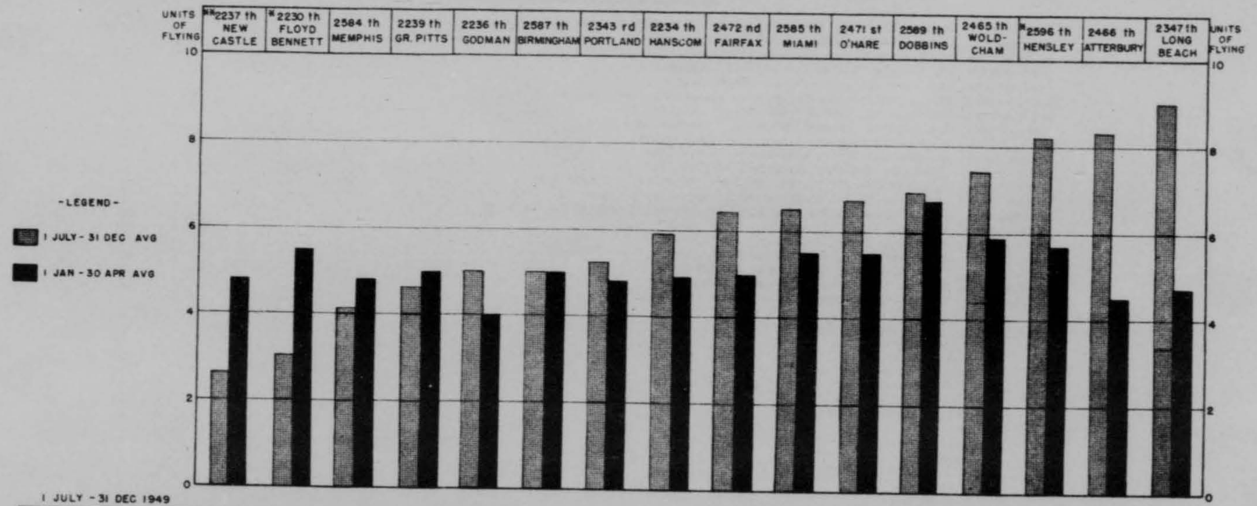
IT IS INTERESTING TO NOTE THAT THE AFRTC'S WHICH WERE HIGH FOR THE 1 JUL - 31 DEC 49 PERIOD ALL DECREASED, AND THOSE WHICH WERE LOW MOSTLY SHOWED INCREASES.

RELATIVE MAINTENANCE EFFECTIVENESS

NON-TENANT AFRTC's

1 JUL - 31 DEC 1949 VS. 1 JAN - 30 APR 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
MAY 1950



1 JULY - 31 DEC 1949

	**2237 th NEW CASTLE	*2230 th FLOYD BENNETT	2584 th MEMPHIS	2239 th GR. PITTS	2236 th GODMAN	2587 th BIRMINGHAM	2343 rd PORTLAND	2234 th HANSCOM	2472 nd FAIRFAX	2585 th MIAMI	2471 st O'HARE	2589 th DOBBINS	2465 th WOLD-CHAM	*2596 th HENSLEY	2466 th ATTERBURY	2347 th LONG BEACH
AVG UNITS OF FLYING ACCOMPLISHED PER MONTH	323	607	584	756	610	702	866	1,082	889	760	1,350	1,082	979	1,060	1,366	2,205
AVG NO OF PERSONNEL IN MAINT FUNCTION	125	205	141	163	122	139	166	184	138	116	200	157	132	129	164	245
UNITS OF FLYING PER PERSON IN FUNCTION	2.6	3.0	4.1	4.6	5.0	5.0	5.2	5.9	6.4	6.5	6.7	6.9	7.4	8.2	8.3	9.0
AVG % ACFT IN COMMISSION	69%	78%	81%	71%	63%	54%	78%	70%	73%	66%	80%	73%	74%	76%	48%	48%

1 JAN - 30 APR 1950

	**2237 th NEW CASTLE	*2230 th FLOYD BENNETT	2584 th MEMPHIS	2239 th GR. PITTS	2236 th GODMAN	2587 th BIRMINGHAM	2343 rd PORTLAND	2234 th HANSCOM	2472 nd FAIRFAX	2585 th MIAMI	2471 st O'HARE	2589 th DOBBINS	2465 th WOLD-CHAM	*2596 th HENSLEY	2466 th ATTERBURY	2347 th LONG BEACH
AVG UNITS OF FLYING ACCOMPLISHED PER MONTH	745	1,028	822	914	617	903	919	1,003	916	1,143	1,397	1,163	974	1,053	692	1,658
AVG NO OF PERSONNEL IN MAINT FUNCTION	156	187	170	184	154	182	193	209	182	206	253	174	166	185	154	351
UNITS OF FLYING PER PERSON IN FUNCTION	4.8	5.5	4.8	5.0	4.0	5.0	4.8	4.9	5.0	5.5	5.5	6.7	5.9	5.7	4.5	4.7
AVG % ACFT IN COMMISSION	67%	83%	77%	67%	59%	55%	86%	86%	77%	75%	65%	79%	61%	73%	44%	61%

SOURCE: COST CONTROL REPORTS, AF FORMS 320, 322, RCS: AF-FO-F22C
REPORT OF SELECTED ACFT & STATUS OPERATIONS, AF FORMS 110A, RCS: FS-A1

NOTES: * CLASSIFIED AS NON-TENANT SINCE THEY PERFORM OWN BASE SERVICES
** MOVED FROM READING, PA. TO NEW CASTLE, DEL. 18 APR 1950

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Vice Commander	1
The Manpower Evaluation Board	1
Air Adjutant General	1
Director of Publications	1
Director of Historical Services	1
Air Surgeon	1
Inspector General	1
Air Inspector	5
Public Information Officer	1
Comptroller	2
Director of Budget	1
Director of Programs and Costs	15
Director of Statistical Services	1
Director of Audits	1
Deputy for Personnel	1
Director of Personnel Planning and Management	2
Director of Military Personnel	1
Director of Personnel Services	1
Director of Air Force ROTC	1
Deputy for Operations	1
Director of Operations and Training	2
Director of Plans, Organization and Requirements	3
Director of Communications and Electronics	1
Deputy for Materiel	1
Director of Materiel Planning	1
Director of Maintenance, Supply and Services	5
Director of Installations	1

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Con AC Management Analysis
Review –
June 1950

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INTRODUCTION

THE PURPOSE OF THE CONAC MANAGEMENT ANALYSIS REVIEW IS TO PROVIDE COMMANDERS AND THEIR STAFFS EACH MONTH WITH ANALYSES AND SELECTED DATA WHICH, WHEN PROPERLY INTERPRETED, WILL INDICATE ACHIEVEMENT WITHIN SPECIFIC FUNCTIONS OF THEIR ACTIVITY.

IT IS INTENDED THAT THIS REVIEW PRESENT FACTS IN SUCH A MANNER THAT COMMANDERS AND THEIR STAFFS CAN EVALUATE THE CONSISTENCY OF THEIR OPERATING ACTIONS, THE EFFICIENT AND ECONOMICAL USE OF RESOURCES AND THE PROGRESS OF THEIR VARIOUS ACTIVITIES TOWARD AUTHORIZED OBJECTIVES.

THE CONTENTS OF THIS REVIEW WILL VARY FROM MONTH TO MONTH. THIS WILL PERMIT GREATER COVERAGE OF COMMAND ACTIVITIES AND CONCENTRATION ON CURRENT ITEMS OF COMMAND INTEREST.

THE PRESENCE OF EXTREME CONDITIONS ARE READILY APPARENT TO COMMANDERS WHEN PROPERLY SHOWN IN GRAPHIC PRESENTATIONS. MANY OF THE EXTREME CONDITIONS INDICATED HEREIN MAY BE JUSTIFIED BY LOCAL SITUATIONS AND THE NATURE OF ASSIGNED MISSIONS. THESE ANALYSES, HOWEVER, SERVE AS A GUIDE TO AREAS AND ACTIVITIES WHERE FURTHER INVESTIGATIONS AND CORRECTIVE ACTIONS MAY RESULT IN BETTER MANAGEMENT.

THE ANALYSES CONTAINED HEREIN HAVE BEEN DERIVED FROM INFORMATION AS REPORTED TO THIS HEADQUARTERS.

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EXPLANATION OF GRAPHIC PRESENTATION ON
TOTAL COST OF CONTINENTAL AIR COMMAND BY FUNCTIONAL GROUPING - MONTHLY DISTRIBUTION

The following activities are included in the functional groupings as shown on the chart:

COMMAND GROUP

Hq & Hq Sq, Continental Air Command
Hq & Hq Sq, Tactical Air Command
Hq & Hq Sq, Air Defense Forces
Hq & Hq Sq, ConAC Air Forces
Hq & Hq Sq, Air Divisions (Defense)
2220th Field Printing Plant (May through December 1950)
2220th Extension Group, Less Extension Course Activity
(January through April 1950)
Hq & Hq Sq, Combat Wings

OPERATIONS GROUP

Combat - Total Operating Costs of Fighter Groups, Troop Carrier Groups, Tactical Recon Group, Bomb Squadrons (L), Assault Squadron.
Combat Support - Total Operating Costs of Liaison Squadrons and Flights, Aircraft Control and Warning Units, Tactical Control Groups, Shoran Beacon Unit.

SERVICE GROUP

Total operating costs of ConAC organizations less those included in Command, Operations and other Mission Groups.

OTHER MISSION GROUP

Air Force Reserve (AFRTC's only)
Air National Guard (includes Instructor Personnel)
Air ROTC (includes Instructor Personnel)
Air Explorer Liaison
Air Force Overseas Replacement Groups
All other (minor activities including Military Liaison Personnel with Army, Navy and other agencies)
Extension Course Activity of 2220th Extension Group
(January through April 1950)

ADDITIONAL CHARGES

Cost of excess personnel and recruits awaiting shipment, AFORG Casuals, Detachment of Patients, Lump Sum Payments, reenlistment bonuses, initial issue of clothing, PCS, Supplies and Services furnished others, parts to salvage, extraordinary repairs and condemned inventory.

COMMENT

AN OVERALL DECREASE IN COSTS OF $732,873 FOR JUNE OVER MAY IS INDICATED. INCREASES ARE NOTED IN ALL GROUPS HOWEVER, WITH THE EXCEPTION OF THE ADDITIONAL CHARGES GROUP (WHERE A DECREASE OF $1,290,941 HAS OCCURRED) AS FOLLOWS: COMMAND GROUP $79,900, OPERATIONS GROUP $156,912, SERVICES GROUP $45,294 AND OTHER MISSION GROUP $275,872. DUE TO DELINQUENCY IN REPORTING, THE COSTS FOR THE 62ND TROOP CARRIER GROUP ARE NOT INCLUDED. THESE HAVE APPROXIMATED $250,000 IN PAST MONTHS.

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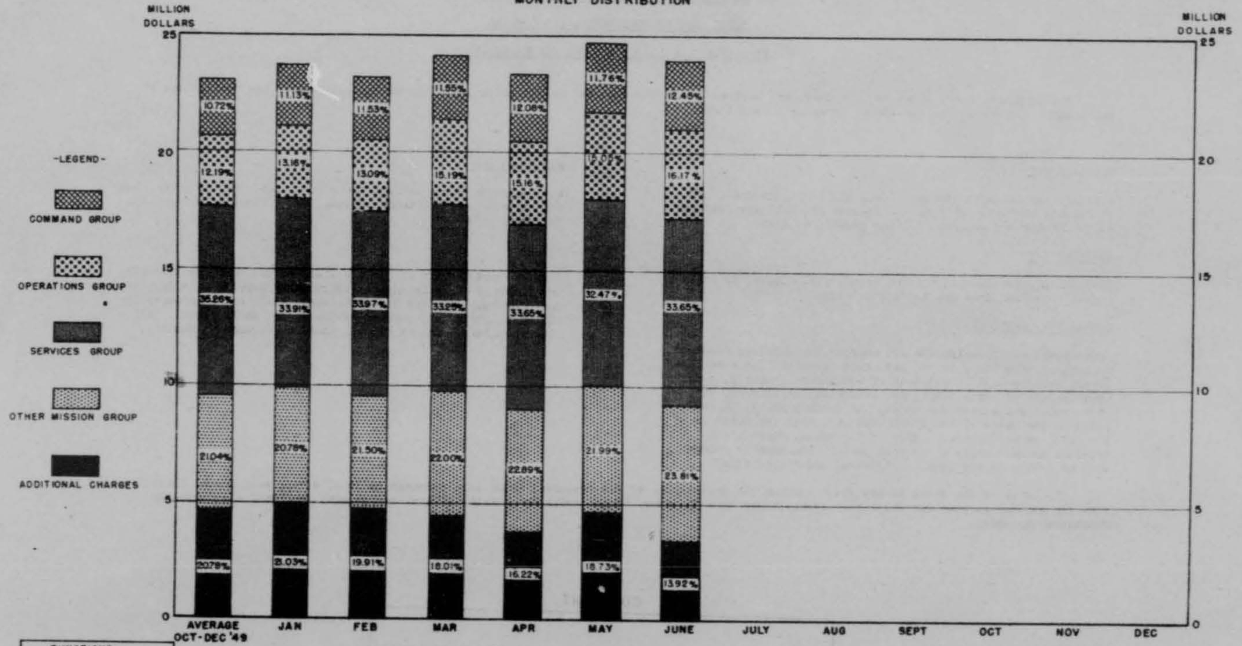
TOTAL COST OF CONTINENTAL AIR COMMAND BY FUNCTIONAL GROUPING

MONTHLY DISTRIBUTION

PREPARED BY
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



FUNCTIONS	AVERAGE OCT-DEC '49	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
COMMAND GROUP	$ 2,469,831	$ 2,644,365	$ 2,676,706	$ 2,792,306	$ 2,817,340	$ 2,905,454	$ 2,985,444						
OPERATIONS GROUP	2,808,108	3,127,350	3,038,494	3,672,826	3,536,608	3,719,115	3,876,027						
SERVICES GROUP	8,119,532	8,059,017	7,887,319	8,040,820	7,848,500	8,024,045	8,069,339						
OTHER MISSION GROUP	4,845,713	4,938,632	4,992,491	5,319,026	5,339,277	5,432,861	5,708,733						
ADDITIONAL CHARGES	4,785,965	4,998,770	4,621,056	4,355,214	3,782,739	4,628,208	3,337,367						
TOTAL COST	$ 23,029,149	$ 23,768,134	$ 23,216,066	$ 24,180,192	$ 23,324,464	$ 24,709,683	$ 23,976,910						

SOURCE: COST CONTROL REPORT, AF FORM 320, 321, 322
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON
TOTAL COST OF CONTINENTAL AIR COMMAND
BY ELEMENTS OF COST - MONTHLY DISTRIBUTION

The component costs shown on this chart are derived from costs reported by all units listed in the explanation of the "Total Cost of Continental Air Command By Functional Grouping", as follows:

MILITARY PAY

Military pay includes the pay of all military personnel, officer or airman, exclusive of rental allowance for officers, and rental allowance and separate rations payable to airmen.

CIVILIAN PAY

Civilian pay is computed for the report period based on gross annual rates and does not include overtime.

CONTRACTUAL SERVICES

Contractual services include all charges for services rendered regardless of whether or not paid from funds available at base level, such as cost of shipment of government property, contract repair of office machines, communication charges, etc. Where contracts exceed one month, the monthly charge is computed on the basis of the fractional part that the month is of the total period covered. Thus, for example, where a contractual amount covers a one year period, the monthly charge will be 1/12th of the total contractual amount specified.

MISCELLANEOUS

Miscellaneous costs include the cost of PCS, TDY, overtime, lump sum payments, reenlistment bonuses, and T/R's (including T/R's for dependents)

SUPPLY

Supply costs include all supply items except complete aircraft and complete aircraft engines; includes AF Supplies, QM Supplies, Engineer Supplies (Air Installations), Fuels and Lubricants for aircraft, for ground powered vehicles, for heating, etc. All other supplies, such as Signal, Chemical, Ordnance, Medical.

The total of the items on the chart include the dollar cost of the resources which were consumed by ConAC during each month, classified to show the general purpose for which such expenditures were incurred. Total costs by elements of cost agrees with the total cost shown by functional grouping.

COMMENT

THE OVERALL DECREASE IN COSTS OF $732,873 FOR JUNE OVER MAY IS THE RESULT OF THE DECREASE IN SUPPLIES OF $423,907 AND MILITARY PAY $813,239. INCREASES IN CIVILIAN PAY AMOUNT TO $77,798, CONTRACTUAL SERVICES $308,399 AND MISCELLANEOUS EXPENDITURES $118,076. THE DECREASE IN MILITARY PAY IS DUE TO THE EXCLUSION OF ALL HOSPITAL SQUADRONS (TRANSFERRED TO HEADQUARTERS COMMAND) AND THE OMISSION OF THE 62ND TROOP CARRIER GROUP PAYROLL (APPROXIMATELY $110,000).

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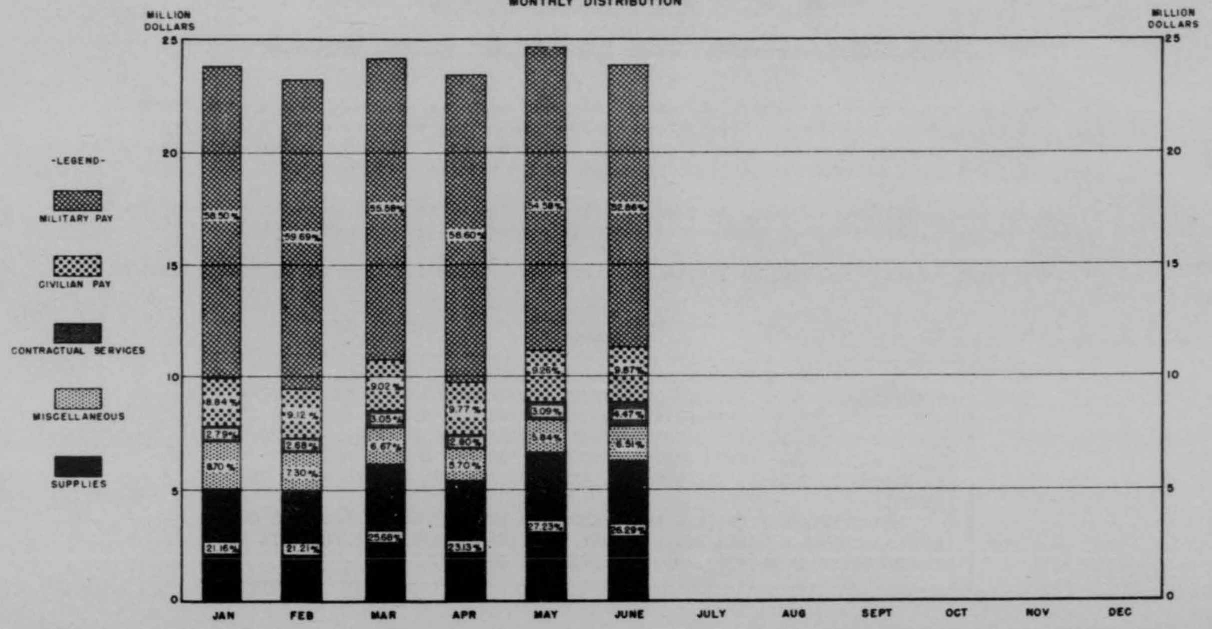
TOTAL COST OF CONTINENTAL AIR COMMAND
BY ELEMENTS OF COST

MONTHLY DISTRIBUTION

PREPARED BY
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



MILITARY PAY	$ 13,905,202	$ 13,857,102	$ 13,439,016	$ 13,667,746	$ 13,486,675	$ 12,673,436						
CIVILIAN PAY	2,101,238	2,118,166	2,182,398	2,278,956	2,287,699	2,365,497						
CONTRACTUAL SERVICES	663,355	622,027	737,542	653,366	763,174	1,071,573						
MISCELLANEOUS	2,069,764	1,695,188	1,612,471	1,330,348	1,443,728	1,561,804						
SUPPLIES	5,028,575	4,923,583	6,208,765	5,394,048	6,728,407	6,304,500						
TOTAL COST	$ 23,768,134	$ 23,216,066	$ 24,180,192	$ 23,324,464	$ 24,709,683	$ 23,976,810						

SOURCE: COST CONTROL REPORT, AF FORM 320, 320A, 321, 321A, 322, 322A,
RCS: AF-FO-F22C

EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF CONTRACTUAL COMMUNICATIONS - HQ CONAC AND HQ CONAC AIR FORCES

The cost of Contractual Communications reflects all payments to commercial organizations for services and includes charges for long distance telephone calls, trunk service, telegraph and cable service, teletype service, charges for rental of commercial telephone service, central office equipment, and the cost of installation of communications equipment as required.

Where commercial service for a headquarters is paid for by the base on which located, the headquarters proportionate share of contractual costs is posted to this account (20527).

The chart reflects the cost variation for Contractual Communications during Fiscal Year 1950.

COMMENT

THE AVERAGE MONTHLY COST FOR EACH HEADQUARTERS IS $766, A TOTAL EXPENDITURE OF $64,312 FOR CONTRACTUAL COMMUNICATIONS FOR FISCAL YEAR 1950. THE COST OF CONTRACTUAL COMMUNICATIONS FOR JUNE AT HQ CONAC IS INCLUDED IN THE TOTALS AT THE MONTHLY AVERAGE RATE OF ELEVEN MONTHS; FISCAL ACCOUNTING, WHICH PROVIDES MUCH OF THE INFORMATION USED IN ASSEMBLING COST DATA, HAS NOT YET BEEN ADJUSTED FOR REVISED RATES INVOLVED.

HEADQUARTERS FIRST AIR FORCE REPORTED AN "ESTIMATED" COST FOR CONTRACTUAL COMMUNICATIONS FOR BOTH MAY AND JUNE INDICATING A POSSIBLE RECURRING DELAY IN RECEIPT AND PROCESSING OF INVOICES.

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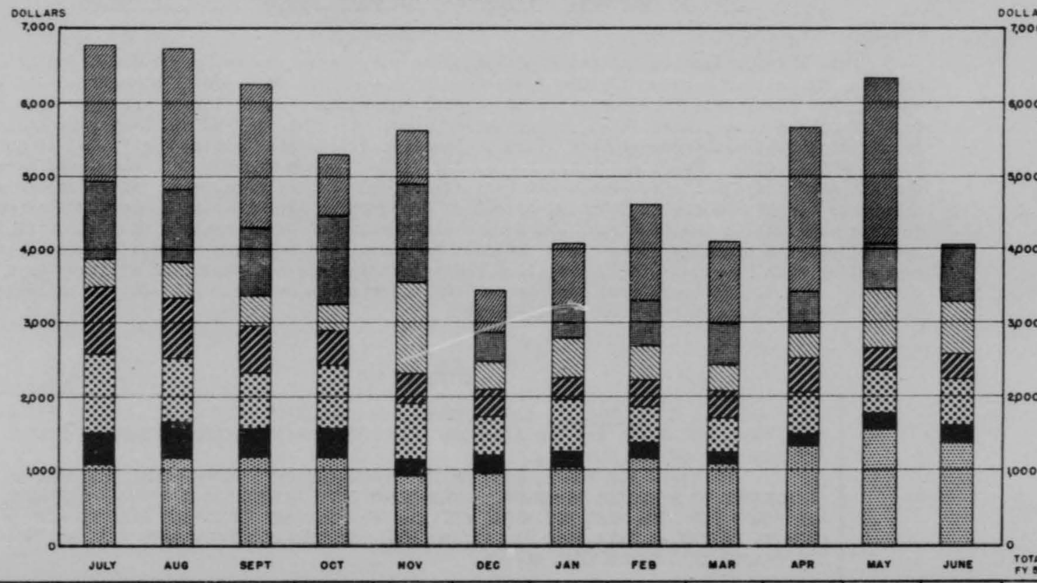
HQ, CONAC
JULY 1950

COST OF CONTRACTUAL COMMUNICATIONS
HQ ConAC AND HQ ConAC AIR FORCES
JULY 1949 – JUNE 1950



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		JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL FY 50
▨	HQ CONAC	$ 1,863	$ 1,953	$ 1,950	$ 866	$ 763	$ 577	$ 886	$ 1,301	$ 1,113	$ 2,204	$ 2,289	$ (A)	$ 17,198(C)
■	HQ 1st AF	1,152	991	937	1,202	1,309	387	427	657	547	556	600	780	9,545
▧	HQ 4th AF	376	535	413	355	1,242	386	508	455	353	351	774	712	6,460
▨	HQ 9th AF	898	809	630	490	394	348	293	329	355	461	286	343	5,636
▩	HQ 10th AF	1,038	840	751	829	784	530	698	448	477	555	575	637	8,162
■	HQ 12th AF	378	499	375	377	199	228	207	200	174	178	206	234	3,255
▦	HQ 14th AF	1,088	1,106	1,178	1,179	911	953	1,056	1,189	1,081	1,334	1,596	1,385	14,056
	TOTAL	$ 6,793	$ 6,733	$ 6,234	$ 5,298	$ 5,602	$ 3,409	$ 4,075	$ 4,579	$ 4,100	$ 5,639	$ 6,326	$ 4,091 (B)	$ 64,312(C)

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

NOTES: (A) NOT REPORTED
(B) LESS HQ CONAC
(C) INCLUDES JUNE COSTS OF HQ CONAC AT MONTHLY AV. VALUE OF ELEVEN MONTHS

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EXPLANATION OF GRAPHIC PRESENTATION ON

COST OF TEMPORARY DUTY TRAVEL - HQ CONAC AND HQ CONAC AIR FORCES

This chart indicates the trend of Temporary Duty travel costs for Hq ConAC and Hq ConAC Air Forces. Expenditures shown include those from both specific and open allotments and include the cost of Per Diem, Rail Transportation of persons and things, meal tickets and minor expenditures (liquid coffee money, taxi fares and porter's tips), for civilian and military personnel traveling on official business (Account Code 20529). Specific allotments provide for travel in conjunction with the following: Ferrying of Air Force, Air Force Reserve and Air National Guard aircraft, Operation of installations, area cadet recruitment, air combat maneuvers, individual or group movements for attendance at schools, travel in conjunction with the Air Force ROTC instruction program at civilian institutions, and summer encampments of Air Force ROTC and Air National Guard. Open allotments normally cover costs incident to travel and per diem of civilian witnesses in connection with courts-martial, travel of medical attendants and escort of military dead to the place of burial. Although cost figures include adjustments over obligations, it is believed that totals for a three month period are comparable.

COMMENT

A TOTAL OF $1,096,130 WAS EXPENDED FOR TEMPORARY DUTY TRAVEL DURING FISCAL YEAR 1950. HQ CONAC AND THE SIX CONAC AIR FORCE HEADQUARTERS INCURRED A MONTHLY AVERAGE COST OF $13,049 EACH.

AT HQ NINTH AIR FORCE, $837 OF THE TEMPORARY DUTY TRAVEL COST REPORTED IS CHARGEABLE TO EXERCISE "SWARMER." TEMPORARY DUTY TRAVEL COSTS AT HQ FOURTEENTH AIR FORCE FOR JUNE WERE ESTIMATED BECAUSE OF A TEN-DAY EXTENSION ALLOWED FOR CLOSING OF FISCAL YEAR 1950 FISCAL RECORDS. NECESSARY ADJUSTMENTS WILL BE INCORPORATED IN A SUBSEQUENT REPORT.

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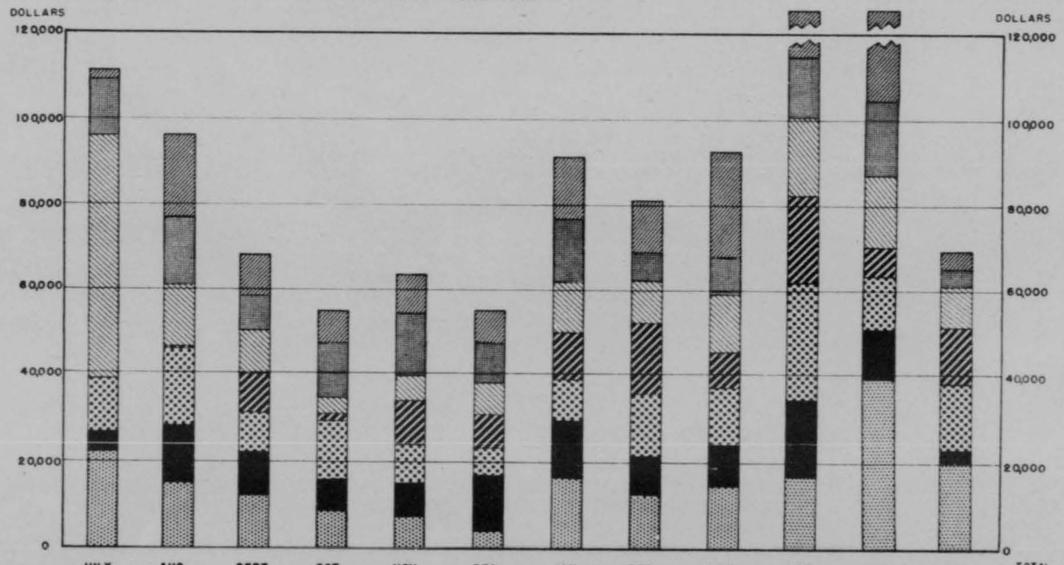
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950

COST OF TEMPORARY DUTY TRAVEL
HQ ConAC AND HQ ConAC AIR FORCES
JULY 1949 - JUNE 1950



-LEGEND-

		JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL FY 50
▨	HQ CONAC	$ 1,856	$ 21,299	$ 9,229	$ 7,246	$ 9,557	$ 7,295	$ 17,581	$ 11,984	$ 24,570	$ 50,133	$ 46,995	$ 4,078	$ 211,823
▩	HQ 1st AF	13,168	14,240	8,926	8,415	14,492	11,528	11,822	6,598	9,495	13,362	16,577	3,921	132,544
▧	HQ 4th AF	57,668	15,087	9,632	7,405	5,286	4,696	12,203	10,491	13,207	18,055	17,276	8,692	179,698
▨	HQ 9th AF	0	50	8,222	1,993	9,575	5,798	11,172	16,449	8,293	20,537	6,992	13,288	102,369
▦	HQ 10th AF	11,671	18,698	9,406	13,069	9,365	9,051	8,570	13,722	12,596	27,249	12,856	15,290	161,543
■	HQ 12th AF	4,426	11,524	9,839	7,513	7,489	12,198	13,199	8,979	9,409	17,536	11,768	3,678	117,558
▒	HQ 14th AF	22,451	15,238	12,433	8,624	7,408	3,979	16,468	12,687	14,704	17,541	38,985	20,077	190,595
	TOTAL	$ 111,240	$ 96,136	$ 67,687	$ 54,265	$ 63,172	$ 54,545	$ 91,015	$ 80,910	$ 92,274	$ 164,413	$ 151,449	$ 69,024	$ 1,096,130

SOURCE: COST CONTROL REPORT, AF FORM 321,
RCS: AF-FO-F22C

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EXPLANATION OF GRAPHIC PRESENTATION ON RELATIVE WORK PERFORMANCE OF SUPPLY CONTROL

The costs included in the activity are those of the Supply Control Officer, Accountable Property Officer, Consolidated Supply Officer, Technical Supply Officer and office staffs, administrative assistants and stock record and M/R posting clerks. Warehouse personnel are not included. The Work Performance Rating is determined by dividing the total cost of the activity on the base by the number of voucher line items (taken from the Voucher Register) accomplished during the month. The results of this calculation are applied in the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost Per Voucher Line Item}} \quad X \quad 100 \quad = \quad \text{Work Performance Rating}$$

ConAC tentative standards have been developed and are shown in this presentation. An average cost, excluding extremes, per voucher line item was determined based on data reported for the two months period January and February 1950. Details of procedures used in determining ConAC Standards are on file in the Directorate of Programs & Costs, Comptroller, Hq. ConAC.

COMMENT

IN THE GROUP REPORTING 0-10000 VOUCHER LINE ITEMS, FLOYD BENNETT, LAWSON, AND SHERMAN HAVE RELATIVELY LOW PERFORMANCE RATINGS AS COMPARED WITH BIRMINGHAM WHICH APPROXIMATES THE STANDARD ESTABLISHED BY USAF. ANALYSIS OF THE ACTIVITY SHOWS THAT A WORK LOAD OF 5,170 VOUCHER LINE ITEM IS BEING COMPLETED BY 24 PEOPLE AT BIRMINGHAM, OR AN AVERAGE OF 215 PER PERSON. BY COMPARISON, AT FLOYD BENNETT A WORKLOAD OF 2,769 VOUCHER LINE ITEM REQUIRES 17 PEOPLE OR AN AVERAGE OF 162 PER PERSON. AT LAWSON A WORKLOAD OF 3,157 VOUCHER LINE ITEMS IS BEING PRODUCED BY 18 PEOPLE (175 VOUCHER LINE ITEMS PER PERSON) AND AT SHERMAN 1,121 VOUCHER LINE ITEMS ARE BEING HANDLED BY 17 PEOPLE (66 VOUCHER LINE ITEMS PER PERSON). IF IT CAN BE ASSUMED THAT THE WORK ACCOMPLISHED BY EACH INDIVIDUAL IN THIS FUNCTION SHOULD APPROACH A STANDARD QUANTITY, THE NUMBER OF PERSONNEL IN THE FUNCTION AT BASES REPORTING LOW RATINGS MAY BE INCONSISTENT WITH WORKLOAD AND WARRANTS FURTHER INVESTIGATION.

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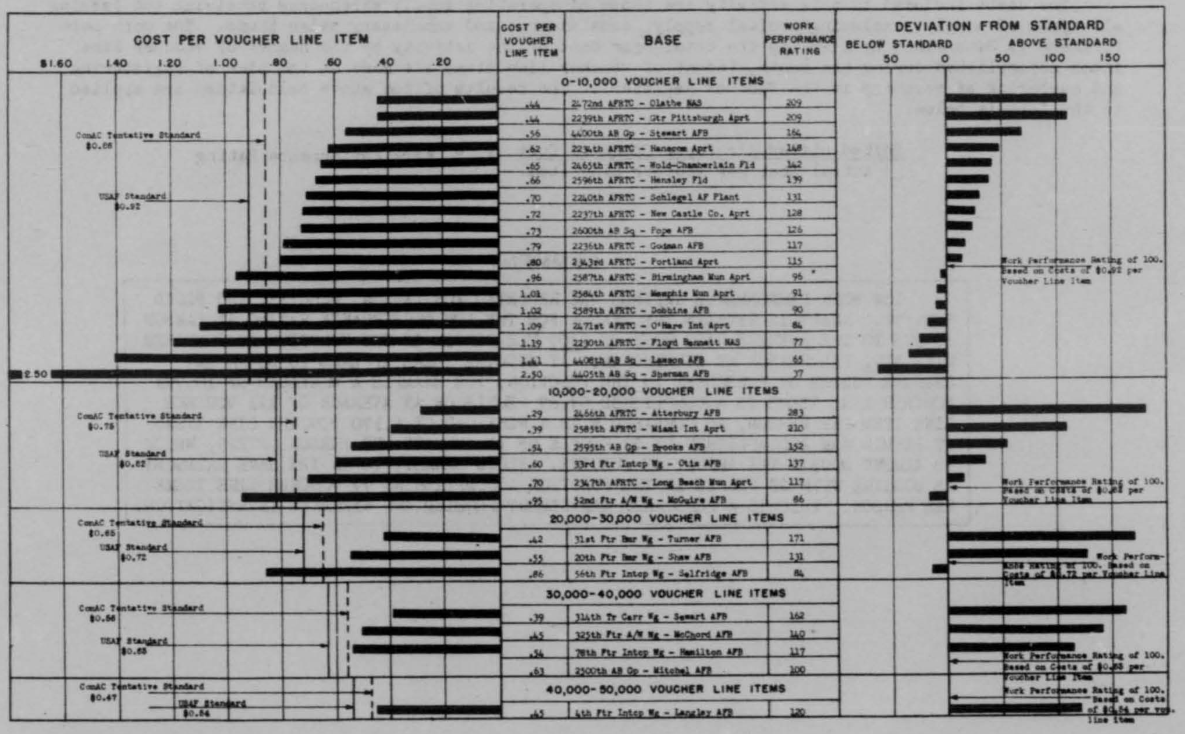
RELATIVE WORK PERFORMANCE OF SUPPLY CONTROL

JUNE 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



COST PER VOUCHER LINE ITEM	BASE	WORK PERFORMANCE RATING
	0-10,000 VOUCHER LINE ITEMS	
.44	2472nd AFRTC - Olathe NAS	209
.44	2239th AFRTC - Gtr Pittsburgh Aprt	209
.56	4400th AB Gp - Stewart AFB	164
.62	2234th AFRTC - Hanscom Aprt	148
.65	2465th AFRTC - Wold-Chamberlain Fld	142
.66	2596th AFRTC - Hensley Fld	139
.70	2240th AFRTC - Schlegel AF Plant	131
.72	2237th AFRTC - New Castle Co. Aprt	128
.73	2600th AB Sq - Pope AFB	126
.79	2236th AFRTC - Godman AFB	117
.80	2343rd AFRTC - Portland Aprt	115
.96	2587th AFRTC - Birmingham Mun Aprt	96
1.01	2584th AFRTC - Memphis Mun Aprt	91
1.02	2589th AFRTC - Dobbins AFB	90
1.09	2471st AFRTC - O'Hare Int Aprt	84
1.19	2230th AFRTC - Floyd Bennett NAS	77
1.41	4408th AB Sq - Lawson AFB	65
2.50	4405th AB Sq - Sherman AFB	37
	10,000-20,000 VOUCHER LINE ITEMS	
.29	2466th AFRTC - Atterbury AFB	283
.39	2585th AFRTC - Miami Int Aprt	210
.54	2595th AB Gp - Brooks AFB	152
.60	33rd Ftr Intcp Wg - Otis AFB	137
.70	2347th AFRTC - Long Beach Mun Aprt	117
.95	52nd Ftr A/W Wg - McGuire AFB	86
	20,000-30,000 VOUCHER LINE ITEMS	
.42	31st Ftr Bmr Wg - Turner AFB	171
.55	20th Ftr Bmr Wg - Shaw AFB	131
.86	56th Ftr Intcp Wg - Selfridge AFB	84
	30,000-40,000 VOUCHER LINE ITEMS	
.39	314th Tr Carr Wg - Sewart AFB	162
.45	325th Ftr A/W Wg - McChord AFB	140
.54	78th Ftr Intcp Wg - Hamilton AFB	117
.63	2500th AB Gp - Mitchel AFB	100
	40,000-50,000 VOUCHER LINE ITEMS	
.45	4th Ftr Intcp Wg - Langley AFB	120

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

NOTE: NO REPORT RECEIVED FROM 81ST FTR INTCP WG, LARSON AFB

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EXPLANATION OF GRAPHIC PRESENTATION ON

RELATIVE WORK PERFORMANCE OF SUPPLY WAREHOUSES

The costs included in this activity are those of operating supply warehouses receiving and issuing all types of supply, excluding medical supply, subsistence, and commissary sales items. The work performance is determined by dividing the total base cost of the activity by the number of voucher line items accomplished during the month, (count of voucher line items are made at the time of registering and numbering of vouchers in the Voucher Register). The results of the above calculation are applied to the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost Per Voucher Line Item}} \text{ X } = \text{ Work Performance Rating}$$

COMMENT

LOW WORK PERFORMANCE RATINGS ARE REPORTED FOR LAWSON, MCGUIRE, AND FLOYD BENNETT. ANALYSIS REVEALS THE REASON FOR THE LOW PERFORMANCE RATING AT LAWSON IS DUE TO THE AVERAGE HIGH COST OF $307 PER PERSON IN THE FUNCTION AS COMPARED WITH $192 PER PERSON AT BIRMINGHAM. AT MCGUIRE THERE APPEARS TO BE AN EXCESSIVE NUMBER OF PERSONNEL IN THE FUNCTION, FOR EXAMPLE A WORKLOAD OF 10,791 VOUCHER LINE ITEMS IS ACCOMPLISHED BY 89 PEOPLE OR AN AVERAGE OF 121 VOUCHER LINE ITEM PER PERSON, AS COMPARED WITH A WORKLOAD OF 5,170 VOUCHER LINE ITEMS AT BIRMINGHAM ACCOMPLISHED BY 23 PEOPLE OR AN AVERAGE PER PERSON OF 225, WHICH IS ALMOST DOUBLE THE AMOUNT AT MCGUIRE. FLOYD BENNETT IS IN THE SAME CATEGORY AS MCGUIRE WITH 28 PEOPLE IN THE FUNCTION ACCOMPLISHING 99 VOUCHER LINE ITEMS PER PERSON. THIS IS A PERSONNEL MANAGEMENT PROBLEM AND WARRANTS INVESTIGATION.

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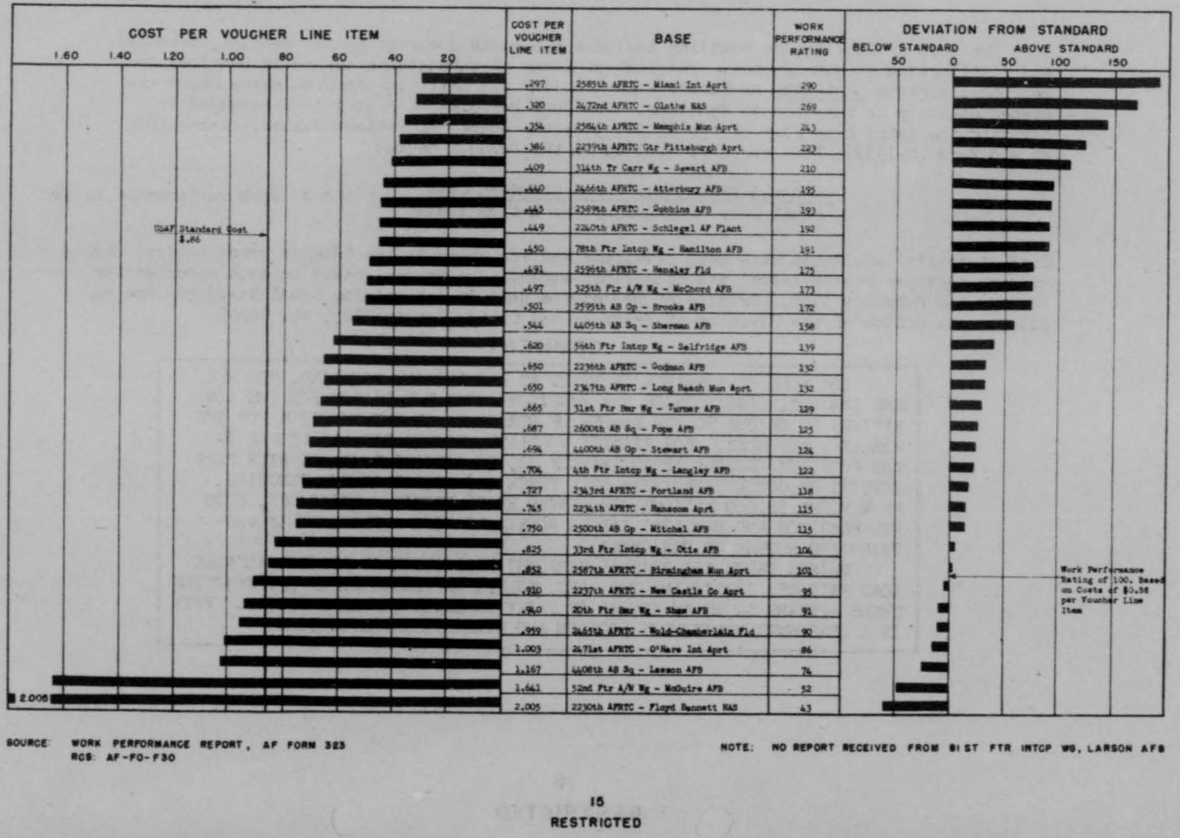
RELATIVE WORK PERFORMANCE OF SUPPLY WAREHOUSES

JUNE 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



COST PER VOUCHER LINE ITEM	BASE	WORK PERFORMANCE RATING
.297	2585th AFRTC - Miami Int Aprt	290
.320	2472nd AFRTC - Olathe NAS	269
.354	2584th AFRTC - Memphis Mun Aprt	243
.386	2239th AFRTC Gtr Pittsburgh Aprt	223
.409	314th Tr Carr Wg - Sewart AFB	210
.440	2466th AFRTC - Atterbury AFB	195
.445	2589th AFRTC - Dobbins AFB	193
.449	2240th AFRTC - Schlegel AF Plant	192
.450	78th Ftr Intcp Wg - Hamilton AFB	191
.491	2596th AFRTC - Hensley Fld	175
.497	325th Ftr A/W Wg - McChord AFB	173
.501	2595th AB Gp - Brooks AFB	172
.544	4405th AB Sq - Sherman AFB	158
.620	56th Ftr Intcp Wg - Selfridge AFB	139
.650	2236th AFRTC - Godman AFB	132
.650	2347th AFRTC - Long Beach Mun Aprt	132
.665	31st Ftr Bmr Wg - Turner AFB	129
.687	2600th AB Sq - Pope AFB	125
.694	4400th AB Gp - Stewart AFB	124
.704	4th Ftr Intcp Wg - Langley AFB	122
.727	2343rd AFRTC - Portland AFB	118
.745	2234th AFRTC - Hanscom Aprt	115
.750	2500th AB Gp - Mitchel AFB	115
.825	33rd Ftr Intcp Wg - Otis AFB	104
.852	2587th AFRTC - Birmingham Mun Aprt	101
.910	2237th AFRTC - New Castle Co Aprt	95
.940	20th Ftr Bmr Wg - Shaw AFB	91
.959	2465th AFRTC - Wold-Chamberlain Fld	90
1.003	2471st AFRTC - O'Hare Int Aprt	86
1.167	4408th AB Sq - Lawson AFB	74
1.641	52nd Ftr A/W Wg - McGuire AFB	52
2.005	2230th AFRTC - Floyd Bennett NAS	43

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323
RCS: AF-FO-F30

NOTE: NO REPORT RECEIVED FROM 81ST FTR INTCP WG, LARSON AFB

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EXPLANATION OF GRAPHIC PRESENTATION ON

RELATIVE WORK PERFORMANCE OF SUBSISTENCE HANDLING

The cost of Subsistence Handling includes the costs incurred in the receipt, issuance, and distribution of subsistence. The cost of items of subsistence issued is not included. Personnel working part-time on Subsistence Handling and part-time on Commissary Sales are costed entirely to Subsistence Handling. The Work Performance Rating is determined by dividing the total base cost of the activity by the number of rations issued, (taken from WD AGO Form 10-133). This cost was applied in the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost of Handling Per Ration Issued}} \text{ X } 100 = \text{Work Performance Rating}$$

ConAC tentative standards have been developed and are shown in the tabular presentation. An average cost per ration issued was determined excluding extremes, based on data reported for January and February 1950. Details of procedures used in determining ConAC Standards are on file in the Office of the Director of Programs and Costs, Comptroller, Hq. ConAC.

COMMENT

LOW WORK PERFORMANCE IS NOTED AT BIRMINGHAM, PORTLAND, MITCHEL AND LANGLEY. ANALYSIS OF THE FUNCTION SHOWS THE REASON FOR THE LOW RATINGS TO BE DUE TO THE NUMBER OF PERSONNEL IN THE FUNCTION FOR THE WORKLOAD REPORTED. FOR EXAMPLE PORTLAND REPORTS SIX (6) PEOPLE IN THE FUNCTION ISSUING APPROXIMATELY 12,000 RATIONS COMPARED WITH POPE ISSUING 21,000 RATIONS WITH ONLY THREE (3) PEOPLE IN THE FUNCTION. AT MITCHEL 52,000 RATIONS ARE ISSUED BY 26 PEOPLE. SELFRIDGE, OTIS AND HAMILTON ARE HANDLING LARGER WORKLOADS WITH APPROXIMATELY ONE-THIRD THE NUMBER OF PERSONNEL.

UNLESS THERE ARE UNUSUAL CIRCUMSTANCES (SUCH AS ADDITIONAL WORK-LOAD FACTORS) JUSTIFYING THE LARGE NUMBER OF PERSONNEL IN THE FUNCTION THERE APPEARS TO BE AN EXCESS OF STAFF ASSIGNED TO THE FUNCTION. THIS IS A PERSONNEL MANAGEMENT PROBLEM AND WARRANTS INVESTIGATION.

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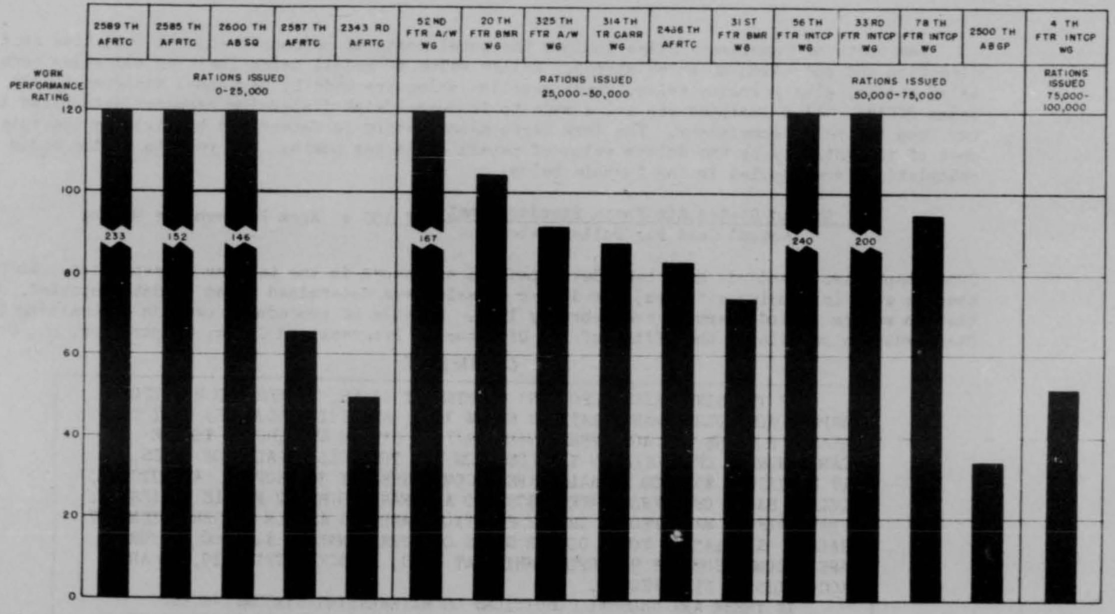
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950

RELATIVE WORK PERFORMANCE OF SUBSISTENCE HANDLING

JUNE 1950



	2589 TH AFRTC	2585 TH AFRTC	2600 TH AB SQ	2587 TH AFRTC	2343 RD AFRTC	52 ND FTR A/W WG	20 TH FTR BMR WG	325 TH FTR A/W WG	314 TH TR CARR WG	2486 TH AFRTC	31 ST FTR BMR WG	56 TH FTR INTCP WG	33 RD FTR INTCP WG	78 TH FTR INTCP WG	2500 TH AB GP	4 TH FTR INTCP WG
TOTAL COST	$ 162	$ 257	$ 1,024	$ 485	$ 1,667	$ 849	$ 1,622	$ 2,320	$ 1,758	$ 1,532	$ 2,134	$ 1,015	$ 1,293	$ 2,380	$ 5,585	$ 4,616
RATIONS ISSUED	5,336	5,618	21,306	4,562	11,982	31,108	37,563	47,788	34,358	28,496	35,059	65,209	73,022	62,372	52,419	82,814
COST PER RATION ISSUED	.030	.046	.048	.106	.139	.027	.043	.049	.051	.054	.061	.015	.018	.038	.107	.056
USAF STANDARD COST	$ .070	$ .070	$ .070	$ .070	$ .070	$ .045	$ .045	$ .045	$ .045	$ .045	$ .045	$ .036	$ .036	$ .036	$ .036	$ .029
■ WORK PERFORMANCE RATING	233	152	146	66	50	167	105	92	88	83	74	240	200	95	34	52
CONAC TENTATIVE STANDARD COST	$ .096	$ .096	$ .096	$ .096	$ .096	$ .040	$ .040	$ .040	$ .040	$ .040	$ .040	$ .030	$ .030	$ .030	$ .030	$ .025

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EXPLANATION OF GRAPHIC PRESENTATION ON RELATIVE WORK PERFORMANCE OF COMMISSARY SALES

The costs of Commissary Sales include the total costs of personnel engaged full time in the direction and operation of sales stores. Dollar value of retail sales includes all sales made by sales stores, plus gasoline sales, where gasoline sales are made by personnel assigned to the Sales Office. Also included are sales made to food-and-drink dispensing agencies authorized to buy from the sales commissary. The Work Performance Rating is determined by dividing the total cost of the activity by the dollar value of retail sales per month. The results of the above calculations are applied in the formula below:

$$\frac{\text{United States Air Force Standard Cost}}{\text{Actual Cost Per Dollar Sales}} \times 100 = \text{Work Performance Rating}$$

ConAC tentative standards have been developed and are shown in the tabular presentation. An average cost (excluding extremes) per dollar of sales was determined based on data reported for the two months period, January and February 1950. Details of procedures used in determining ConAC Standards are on file in the Office of the Director of Programs and Costs, Comptroller, Hq. ConAC.

COMMENT

OF THE NINE BASES REPORTING COMMISSARY SALES, TURNER AND HAMILTON REPORT WORK PERFORMANCE RATINGS BELOW 100. ANALYSIS INDICATES THAT THE REASON FOR THE LOW WORK PERFORMANCE RATING CAN BE ATTRIBUTED TO THE LARGE NUMBER OF PEOPLE IN THE FUNCTION FOR THE DOLLAR VALUE OF SALES. AT HAMILTON, $58,000 IN SALES ARE ACCOMPLISHED BY 30 PEOPLE. AT MITCHEL, DOLLAR SALES OF APPROXIMATELY $75,000 ARE HANDLED BY 12 PEOPLE OR LESS THAN HALF AS MANY PEOPLE IN THE FUNCTION HANDLING A MUCH LARGER VOLUME OF SALES. SIMILARLY, TOTAL DOLLAR SALES OF APPROXIMATELY $11,000 AT TURNER ARE ACCOMPLISHED BY 9 PEOPLE, WHILE AT OTIS, APPROXIMATELY $19,000 ARE ACCOMPLISHED BY 5 PEOPLE.

IF THERE ARE UNUSUAL CONDITIONS OR EXTENUATING CIRCUMSTANCES WARRANTING THESE DIFFERENCES, THIS HEADQUARTERS WOULD APPRECIATE A RESPONSE SO THAT ALLOWANCES MAY BE MADE AND GIVEN CONSIDERATION IN FUTURE ANALYSES. SUCH INVESTIGATIONS MAY APPROPRIATELY BE COMMUNICATED VIA THE "MONTHLY ANALYSIS." RECOMMENDATIONS FOR ADJUSTMENT TO THE WORK PERFORMANCE RATING SYSTEM, IF ANY, SHOULD BE FORWARDED IN SEPARATE CORRESPONDENCE.

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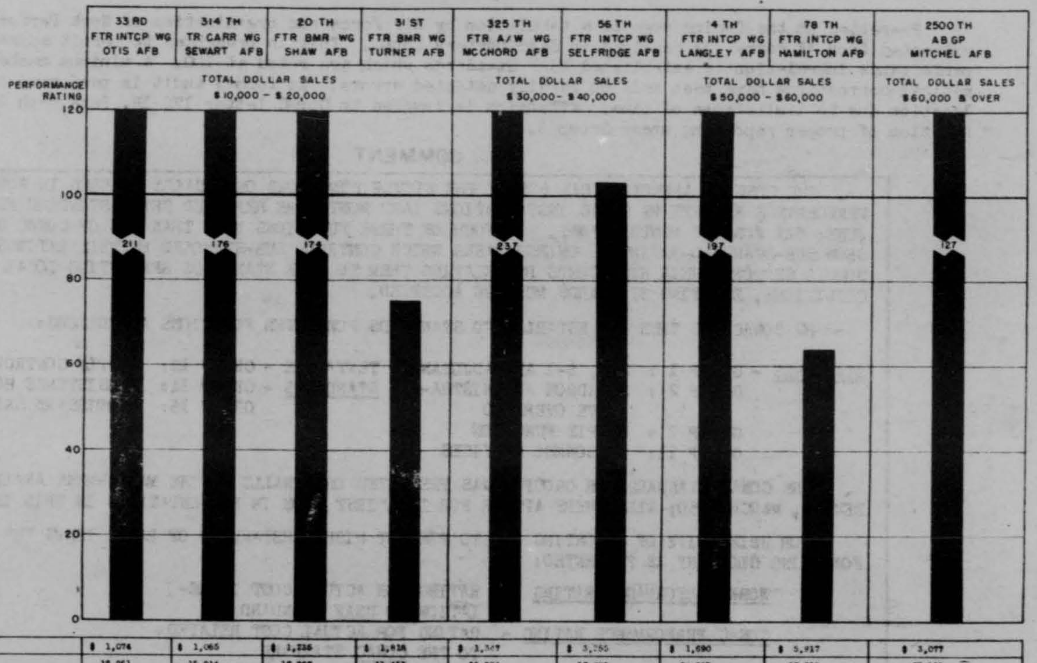
RELATIVE WORK PERFORMANCE OF COMMISSARY SALES

JUNE 1950

PREPARED BY
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



	33RD OTIS AFB	314TH SEWART AFB	20TH SHAW AFB	31ST TURNER AFB	325TH MCCHORD AFB	56TH SELFRIDGE AFB	4TH LANGLEY AFB	78TH HAMILTON AFB	2500TH MITCHEL AFB
TOTAL COST	$ 1,074	$ 1,065	$ 1,236	$ 1,818	$ 1,307	$ 3,235	$ 1,690	$ 5,917	$ 3,077
DOLLAR SALES	18,951	15,914	17,867	11,411	35,894	37,099	50,655	57,839	75,189
COST PER DOLLAR SALES	.057	.067	.069	.159	.036	.087	.033	.102	.041
USAF STANDARD COST	$ .120	$ .120	$ .120	$ .120	$ .090	$ .090	$ .065	$ .065	$ .052
WORK PERFORMANCE RATING	211	176	174	75	237	103	197	64	127
CONAC TENTATIVE STANDARD COST	$ .083	$ .083	$ .083	$ .083	$ .058	$ .058	$ .053	$ .053	$ .027

EXPLANATION OF TABULAR PRESENTATION ON WORK PERFORMANCE RATINGS

Presented on the facing page is a tabulation by Air Force and organization of Work Performance Ratings extracted from AF Forms 323 received in Headquarters ConAC. This is presented to permit appraisal of Base performance in relation to established USAF Standards which are rated at 100. A minimum number of mathematical corrections have been made on readily detected errors. No formal audit is performed prior to publication due to limitations of time. Attention is invited to ConAC Letter 170-1B, Paragraph 20, for clarification of proper reporting under Group 3.

COMMENT

THE COST OF APPROXIMATELY 60% OF THE ELEVEN FUNCTIONS ORIGINALLY COVERED IN WORK PERFORMANCE REPORTS BY CONAC INSTALLATIONS LAST MONTH ARE REPORTED BELOW STANDARD FOR JUNE; 52% FOR THE MONTH OF MAY. IN FOUR OF THESE FUNCTIONS MORE THAN 70% OF CONAC UNITS SHOW SUB-STANDARD RATINGS. UNLESS BASES WHICH CONTINUE SUB-STANDARD MONTHLY RATINGS SHOULD SUPPORT THEIR HIGH COSTS BY RELATING THEM TO BASE STANDARDS REFLECTING LOCAL CONDITIONS, EXISTING STANDARDS MUST BE ACCEPTED.

HQ CONAC HAS THUS FAR ESTABLISHED STANDARDS FOR SEVEN FUNCTIONS AS FOLLOWS:

STANDARDS - GROUP 1 : A-1, S-1 AND ADJUTANT
GROUP 2 : SQUADRON ADMINISTRATIVE OVERHEAD
GROUP 7 : SUPPLY FUNCTION
GROUP 11: PERSONNEL SERVICES

TENTATIVE STANDARDS - GROUP 12: SUPPLY CONTROL
GROUP 14: SUBSISTENCE HANDLING
GROUP 15: COMMISSARY SALES

THE CONAC STANDARD FOR GROUP 2 WAS PRESENTED ORIGINALLY IN THE MANAGEMENT ANALYSIS REVIEW, MARCH 1950; ALL OTHERS APPEAR FOR THE FIRST TIME IN PRESENTATIONS IN THIS ISSUE.

FOR UNIFORMITY OF REPORTING AND TO PREVENT MISUNDERSTANDING OF BASIC TERMS THE FOLLOWING GLOSSARY IS PRESENTED:

WORK PERFORMANCE RATING - RATING FOR ACTUAL COST IN RELATION TO USAF STANDARD
CONAC PERFORMANCE RATING - RATING FOR ACTUAL COST RELATED TO THE CONAC STANDARD
PERFORMANCE INDEX - RATING COMPUTED UTILIZING THE ESTABLISHED BASE STANDARD

COST ANALYSTS ARE URGED TO REPORT THEIR "CONAC PERFORMANCE RATING" AND "PERFORMANCE INDEX" MEASUREMENT OF FUNCTIONS ON THE REVERSE SIDE OF AF FORM #323 AND TO UTILIZE COST TREND STUDIES OF THE MOST SUITABLE OF THESE MEASURES IN ACCOMPLISHING LOCAL MANAGEMENT CONTROL.

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WORK PERFORMANCE RATINGS *
CONTINENTAL AIR COMMAND

JUNE 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950

BASE	A-1 S-1 & ADJUTANT (GROUP 1)	SQ ADM OVERHEAD (GROUP 2)	MILITARY PERSONNEL (GROUP 3)	ADMINISTRATION (GROUP 4)	COMMANDER & STAFF (GROUP 5)	TOTAL ADM & SERVICES (GROUP 6)	SUPPLY (GROUP 7)	TOTAL MAINT & SUPPLY (I) (GROUP 8)	MOTOR POOL (GROUP 9)	MAINT-AUTO & S.P.E. (GROUP 10)	PERSONNEL SERVICES (GROUP 11)	SUPPLY CONTROL (GROUP 12)	SUPPLY WAREHOUSES (GROUP 13)	SUBSISTENCE HANDLING (GROUP 14)	COMMISSARY SALES (GROUP 15)	COMMISSARY OPERATION (GROUP 16)	DIETETIC SERVICE (GROUP 17)
FIRST AIR FORCE																	
33rd Ftr Intcp Wg - Otis AFB	78	79	(C)	85	73	104	100	97	117	90	88	137	104	200	211	177	104
52nd Ftr - A/W Wg - McGuire AFB	96	68	(C)	88	84	36	73	(A)	82	83	85	86	52	167	(C)	(C)	(C)
2230th AFRTC - Floyd Bennett NAS	65	87	161	93	80	126	78	(A)	66	53	315	77	43	(C)	(C)	(C)	(C)
2234th AFRTC - Hanscom Aprt	124	151	50	88	94	72	83	(A)	90	82	118	148	115	(C)	(C)	(C)	(C)
2500th AB Gp - Mitchel AFB	44	117	89	77	26	80	111	120	77	73	92	100	115	34	127	70	88
4400th AB Gp - Stewart AFB	70	97	(B)	84	56	101	141	(A)	70	53	145	164	124	(C)	(C)	(C)	(C)
FOURTH AIR FORCE																	
78th Ftr Intcp Wg - Hamilton AFB	56	110	40	79	37	80	145	128	70	219	78	117	191	95	64	70	91
325th Ftr A/W Wg - McChord AFB	63	94	(C)	86	50	71	113	93	75	100	120	140	173	92	237	135	146
2343rd AFRTC - Portland Aprt	108	190	71	108	118	49	53	(A)	109	313	79	115	118	50	(C)	59	(C)
2347th AFRTC - Long Beach Mun Aprt	105	156	51	101	60	79	76	(A)	116	100	111	117	132	(C)	(C)	(C)	(C)
2579th AB Sq - George AFB	75	59	(C)	97	93	57	26	(A)	485	644	40	(C)	(C)	(C)	(C)	(C)	(C)
NINTH AIR FORCE																	
4th Ftr Intcp Wg - Langley AFB	85	91	(C)	94	43	78	92	84	127	129	123	120	122	52	197	94	124
2236th AFRTC - Godman AFB	70	138	61	82	103	79	99	(A)	173	173	45	117	132	(C)	(C)	(C)	(C)
2237th AFRTC - New Castle Co Aprt	78	94	146	101	88	82	75	(A)	83	76	176	128	95	(C)	(C)	(C)	(C)
2239th AFRTC - Gtr Pittsburgh Aprt	98	321	81	124	115	79	76	(A)	53	87	246	207	223	(C)	(C)	(C)	(C)
2240th AFRTC - Schlegel AF Plant	110	148	57	104	62	89	106	(A)	69	53	75	131	192	(C)	(C)	(C)	(C)
TENTH AIR FORCE																	
56th Ftr Intcp Wg - Selfridge AFB	69	82	87	78	53	84	141	130	110	154	137	84	139	240	103	141	117
2465th AFRTC - Wold-Chamberlain Fld	125	232	61	107	124	91	65	(A)	57	556	222	142	90	(C)	(C)	(C)	(C)
2466th AFRTC - Atterbury AFB	109	165	35	87	67	69	71	(A)	91	113	164	283	195	83	(C)	144	(C)
2471st AFRTC - O'Hare Int Aprt	89	94	34	69	56	69	77	(A)	112	75	78	84	86	(C)	(C)	(C)	(C)
2472nd AFRTC - Olathe NAS	95	202	62	99	105	131	94	(A)	79	247	154	209	269	(C)	(C)	(C)	(C)
4405th AB Sq - Sherman AFB	42	(C)	(C)	156	139	41	85	(A)	76	188	94	37	158	(C)	(C)	(C)	(C)
2476th B Sv. Sq - Oscoda AFB	125	104	(C)	167	167	61	222	(A)	103	214	259	(C)	(C)	(C)	(C)	(C)	(C)
FOURTEENTH AIR FORCE																	
314th Tr Carr Wg - Sewart AFB	99	106	(B)	108	79	101	110	116	100	154	62	162	210	88	176	144	98
20th Ftr Bmr Wg - Shaw AFB	89	88	(C)	95	58	83	100	120	83	152	84	131	91	105	174	117	116
31st Ftr Bmr Wg - Turner AFB	77	102	(C)	100	76	90	114	129	69	61	120	171	129	74	75	93	134
2584th AFRTC - Memphis Mun Aprt	139	136	49	101	69	73	110	(A)	145	130	178	91	243	(C)	(C)	(C)	(C)
2585th AFRTC - Miami Int Aprt	76	153	56	83	105	79	98	(A)	164	71	103	210	290	152	(C)	(C)	(C)
2587th AFRTC - Birmingham Mun Aprt	80	140	60	85	111	91	76	(A)	132	72	94	96	101	66	(C)	(C)	(C)
2589th AFRTC - Dobbins AFB	75	138	32	73	55	65	81	(A)	94	126	66	90	193	233	(C)	(C)	(C)
2596th AFRTC - Hensley Fld	115	185	95	125	92	80	91	(A)	122	67	75	139	175	(C)	(C)	(C)	(C)
2595th AB Gp - Brooks AFB	115	81	(B)	100	59	176	261	337	138	134	181	152	172	(C)	(C)	(C)	(C)
2600th AB Sq - Pope AFB	81	115	(B)	113	35	77	142	(A)	121	92	239	126	125	146	(C)	(C)	(C)
4408th AB Sq - Larson AFB	80	95	(B)	100	98	34	87	(A)	129	145	159	65	74	(C)	(C)	(C)	(C)

NO REPORT RECEIVED FROM 81ST FTR INTCP WG, LARSON AFB

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323,
RCS: AF-FO-F30

* RATING FOR COST EQUAL TO USAF STANDARD IS 100

NOTE: (A) LESS THAN 2000 TOTAL POPULATION NOT REQUIRED TO REPORT
(B) WPR DELETED-NOT AUTHORIZED (REF CONAC LTR 170-18 PAR 20)
(C) NO PERSONNEL COSTED OR SERVICE FURNISHED BY OTHERS

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EXPLANATION OF GRAPHIC PRESENTATION ON

ACTUAL vs STANDARD COST

A-1, S-1, AND ADJUTANT

The costs include the costs of all the Adjutant, and A-1 and S-1 staffs of the organizations which operate the base. On Wing-Base installations, the Wing A-1, Air Base Group A-1, Combat Group S-1, and M&S Group S-1, are all included, although at certain wings S-1 and Adjutant functions of M&S and Combat Groups may be combined and reported under Adjutant. Normally, on a base which is operated by an Air Base Group or an Air Base Squadron, only one S-1 will be included. The performance rating is determined by dividing the total cost of all base A-1, S-1 and Adjutant functions, (except those of intermediate and command headquarters) and applying the results in the following formula:

$$\frac{\text{ConAC Standard Cost}}{\text{Actual Cost of Base Activity}} \times 100 = \text{ConAC Performance Rating}$$

Standards for these functions developed by the Cost Analysis Division of Headquarters ConAC are shown in this presentation. The ConAC Standard is the average cost (excluding extremes) per unit of workload, (military personnel) based on data reported for the three months period, 1 March - 31 May 1950. Details of procedures followed in determining ConAC Standards are on file in the Office of the Director of Programs and Costs, Comptroller, Hq. ConAC.

COMMENT

FOURTEEN OF THE FIFTEEN BASES WHICH ARE OPERATING AT COST ABOVE THE CONAC STANDARD ARE IN THE POPULATION GROUP UNDER 1,000. THE ABILITY TO OPERATE AT LOWER COSTS RESULTS FROM AN ORGANIZATIONAL STRUCTURE WHEREBY ONLY ONE OR TWO PERSONNEL ARE PROVIDING ALL ADJUTANT, A-1 AND S-1, SERVICES FOR THE BASE.

THOSE BASES WHICH REPORT UNIT COSTS IN EXCESS OF THE STANDARD SHOULD BE INVESTIGATED FOR POSSIBLE OVERSTAFFING.

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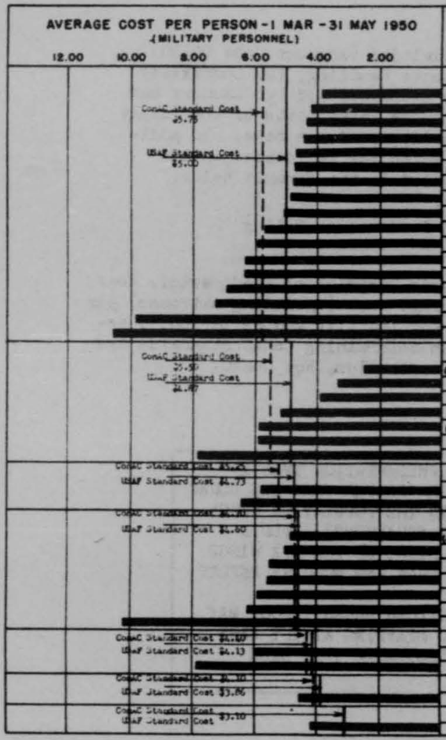
ACTUAL VS STANDARD COST

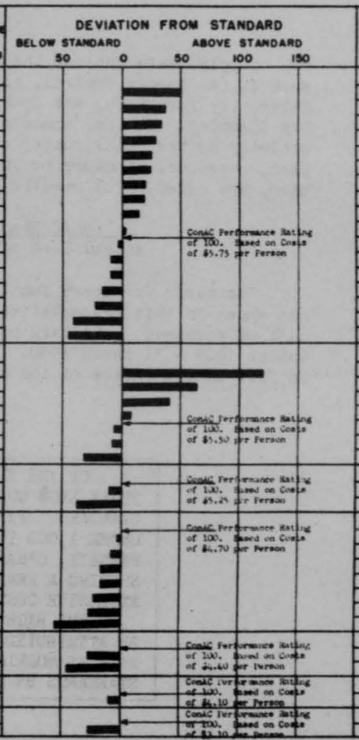
A-1, S-1 AND ADJUTANT

THREE MONTHS AVERAGE, 1 MARCH - 31 MAY 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



AVERAGE COST PER PERSON	BASE	CONAC PERFORMANCE RATING 3 MOS AVG	AVERAGE TOTAL MILITARY PERSONNEL
	UNDER 500 PERSONNEL		
$ 3.83	2472nd AFRTC, Olathe NAS	150	432
4.21	2465th AFRTC, Wold-Chamberlain Fld	137	450
4.34	2596th AFRTC, Hensley Field	132	472
4.48	2343rd AFRTC, Portland Aprt	128	460
4.65	2234th AFRTC, Hanscom Aprt	124	447
(B) 4.66	4406th AB Sq, Marshall AFB	124	181
4.79	2239th AFRTC, Gtr Pittsburgh Aprt	120	479
(B) 4.82	2463rd AB Sq, Benjamin Harrison AFB	119	406
5.09	2584th AFRTC, Memphis Mun Aprt	113	476
5.62	2585th AFRTC, Miami Int'l Aprt	102	475
5.96	2476th BS Sq, Oscoda AFB	96	140
6.35	2236th AFRTC, Godman AFB	91	426
6.40	2237th AFRTC, New Castle County Aprt	90	462
6.95	2587th AFRTC, Birmingham Mun Aprt	83	487
7.26	2230th AFRTC, Floyd Bennett NAS	79	352
9.79	4408th AB Sq, Lawson AFB	59	300
10.61	4405th AB Sq, Sherman AFB	54	165
	500-999 PERSONNEL		
(B)$ 2.51	2240th AFRTC, Schlegel AF Plant	219	504
3.35	2466th AFRTC, Atterbury AFB	164	502
3.97	2347th AFRTC, Long Beach Mun Aprt	139	735
5.17	2471st AFRTC, O'Hare Int'l Aprt	106	646
(B) 5.86	2589th AFRTC, Dobbins AFB	94	533
5.90	2595th AB Sq, Brooks AFB	93	894
7.82	4400th AB Gp., Stewart AFB	70	671
	1000-1499 PERSONNEL		
$ 5.83	52nd Ftr A/W Hq, McGuire AFB	90	1,437
8.42	2600th AB Sq, Pope AFB	62	1,195
	2000-2999 PERSONNEL		
(A)$ 4.87	81st Ftr Intcp Hq, Larson AFB (Moses Lake)	97	2,153
5.03	33rd Ftr Intcp Hq, Otis AFB	93	2,085
5.48	20th Ftr Bmr Hq, Shaw AFB	86	2,553
5.53	314th Tr Carr Hq, Sewart AFB	85	2,685
5.89	31st Ftr Bmr Hq, Turner AFB	80	2,000
6.18	325th Ftr A/W Hq, McChord AFB	76	2,343
10.21	2500th AB Gp, Mitchel AFB	46	2,426
	3000-3999 PERSONNEL		
$ 5.99	56th Ftr Intcp Hq, Selfridge AFB	73	3,176
7.84	62nd Tr Carr Hq, Kelly (McChord)	56	3,240
	4000-4999 PERSONNEL		
$ 4.57	4th Ftr Intcp Hq, Langley AFB	90	4,326
	7000-8000 PERSONNEL		
$ 4.13	78th Ftr Intcp Hq, Hamilton AFB	75	7,489



SOURCE: WORK PERFORMANCE REPORT, AF FORM 323
RCS: AF-FO-F30

NOTE: (A) 1 MONTH AVERAGE
(B) 2 MONTHS AVERAGE

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EXPLANATION OF GRAPHIC PRESENTATION ON

ACTUAL vs STANDARD COST

SUPPLY

Supply costs include the combined costs of all supply activities (Account Code 05450) such as (a) Supply Control, (b) Supply Warehouses, (c) Subsistence Handling, (d) Commissary Sales, (e) Purchasing and Contracting, (f) Salvage and Surplus Property, and (g) Laundry and Dry Cleaning. The performance rating is determined by dividing the total costs of the Supply activity by the total number of personnel, both civilian and military of the base. In addition, personnel of major or intermediate command headquarters which may be located on the base, are added. The results of the above calculation are applied in the formula below:

$$\frac{\text{ConAC Standard Cost}}{\text{Actual Cost of Base Activity}} \times 100 = \text{ConAC Performance Rating}$$

Standards for these functions developed by the Cost Analysis Division of Headquarters ConAC are shown in this presentation. The ConAC Standard is the average cost (excluding extremes) per unit of workload, (military personnel) based on data reported for the five months period, 1 November 1949 - 31 March 1950. Details of procedures followed in determining ConAC Standards are on file in the Office of the Director of Programs and Costs, Comptroller, Hq. ConAC.

COMMENT

OF THE THIRTY-FOUR BASES INCLUDED IN THE PRESENTATION TWENTY-THREE SHOW COSTS PER PERSON SERVICED, WHICH ARE GREATER THAN THE CONAC STANDARD. FIFTEEN OF THESE TWENTY-THREE ARE IN THE POPULATION GROUP UNDER 1,000 (THIRTEEN AFRTC'S AND TWO AIR BASE SQUADRONS). FLOYD BENNETT, O'HARE AND PORTLAND ARE PARTICULARLY HIGH; OF THE SIX WINGS SHOWING A PERFORMANCE BELOW STANDARD, TURNER, SHAW AND MCGUIRE REPORT EXCESSIVE COSTS.

THE HIGH COSTS FOR THE AFRTC'S WITH A WORKLOAD UNDER 1,000, MAY BE ATTRIBUTED TO THE IMPOSSIBILITY OF REDUCING STAFFING AT THE SAME RATE AS WORKLOAD. IN SUCH CASES, IT IS MOST DESIRABLE THAT BASE STANDARDS BE DEVELOPED AND EMPLOYED.

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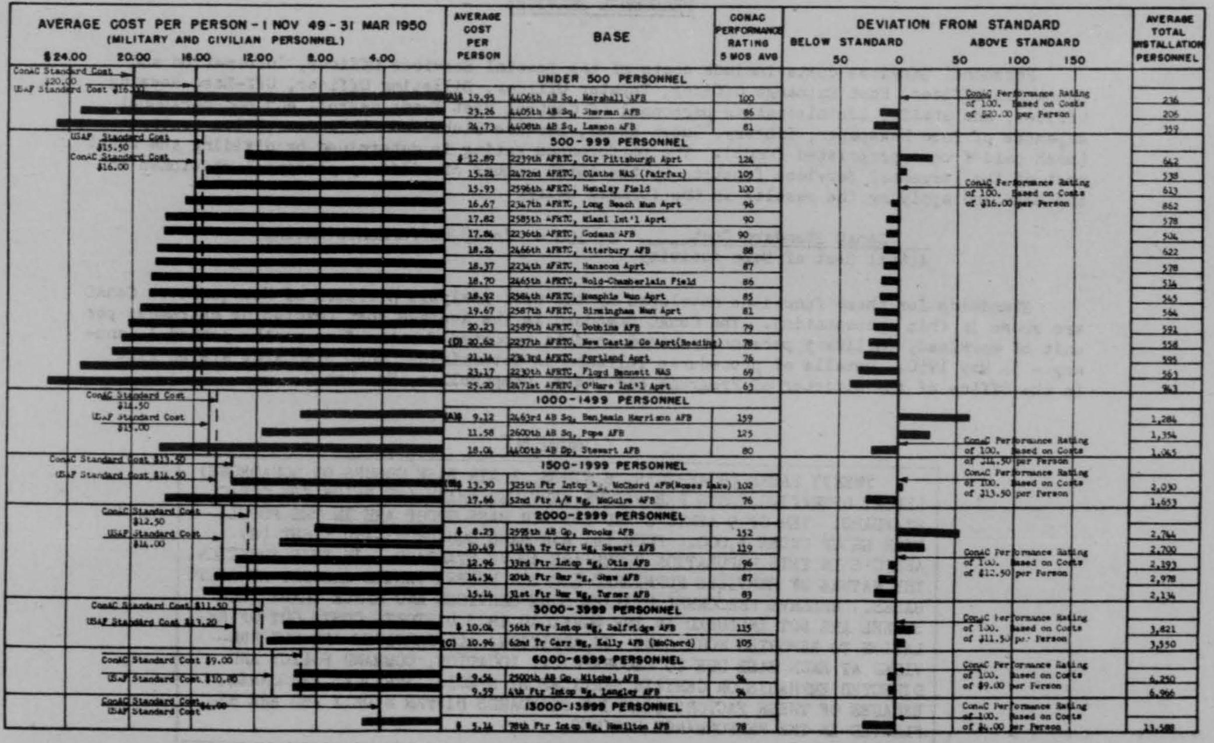
ACTUAL VS STANDARD COST
SUPPLY

FIVE MONTHS AVERAGE, 1 NOVEMBER 1949 - 31 MARCH 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



AVERAGE COST PER PERSON	BASE	CONAC PERFORMANCE RATING 5 MOS AVG	AVERAGE TOTAL INSTALLATION PERSONNEL
	UNDER 500 PERSONNEL		
(A)$ 19.95	4406th AB Sq, Marshall AFB	100	236
23.26	4405th AB Sq, Sherman AFB	86	206
24.73	4408th AB Sq, Lawson AFB	81	359
	500-999 PERSONNEL		
$ 12.89	2239th AFRTC, Gtr Pittsburgh Aprt	124	662
15.24	2472nd AFRTC, Olathe NAS (Fairfax)	105	538
15.93	2596th AFRTC, Hensley Field	100	613
16.67	2347th AFRTC, Long Beach Mun Aprt	96	862
17.82	2585th AFRTC, Miami Int'l Aprt	90	578
17.84	2236th AFRTC, Godman AFB	90	504
18.24	2466th AFRTC, Atterbury AFB	88	622
18.37	2234th AFRTC, Hanscom Aprt	87	578
18.70	2465th AFRTC, Wold-Chamberlain Field	86	514
18.92	2584th AFRTC, Memphis Mun Aprt	85	545
19.67	2587th AFRTC, Birmingham Mun Aprt	81	564
20.23	2589th AFRTC, Dobbins AFB	79	591
(D) 20.62	2237th AFRTC, New Castle Co Aprt(Reading)	78	558
21.14	2343rd AFRTC, Portland Aprt	76	595
23.17	2230th AFRTC, Floyd Bennett NAS	69	563
25.20	2471st AFRTC, O'Hare Int'l Aprt	63	943
	1000-1499 PERSONNEL		
(A)$ 9.12	2463rd AB Sq, Benjamin Harrison AFB	159	1,284
11.58	2600th AB Sq, Pope AFB	125	1,354
18.04	4400th AB Gp, Stewart AFB	80	1,065
	1500-1999 PERSONNEL		
(B)$ 13.30	325th Ftr Intcp Wg, McChord AFB(Moses Lake)	102	2,030
17.66	52nd Ftr A/W Wg, McGuire AFB	76	1,653
	2000-2999 PERSONNEL		
$ 8.23	2595th AB Gp, Brooks AFB	152	2,744
10.49	314th Tr Carr Wg, Sewart AFB	119	2,700
12.96	33rd Ftr Intcp Wg, Otis AFB	96	2,193
14.34	20th Ftr Bmr Wg, Shaw AFB	87	2,978
15.14	31st Ftr Bmr Wg, Turner AFB	83	2,134
	3000-3999 PERSONNEL		
$ 10.04	56th Ftr Intcp Wg, Selfridge AFB	115	3,821
(C) 10.96	62nd Tr Carr Wg, Kelly AFB (McChord)	105	3,550
	6000-6999 PERSONNEL		
$ 9.54	2500th AB Gp, Mitchel AFB	94	6,250
9.59	4th Ftr Intcp Wg, Langley AFB	94	6,966
	13000-13999 PERSONNEL		
$ 5.14	78th Ftr Intcp Wg, Hamilton AFB	78	13,588

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323
RCS: AF-FO-F30

NOTE: (A) BEFORE INACTIVATION OF THESE BASES
(B) BEFORE TRANSFER OF WING WITH 1 SQUADRON TO MCCHORD
(C) BEFORE TRANSFER OF WING WITH 2 SQUADRONS TO KELLY
(D) BEFORE TRANSFER TO NEW CASTLE COUNTY APRT

EXPLANATION OF GRAPHIC PRESENTATION ON

ACTUAL vs STANDARD COST

PERSONNEL SERVICES

Personnel Services costs include costs of the Special Services Officer, Information and Education Officer, Post Exchange Officer, Theater Officer, Billeting Officer, Off-Base Housing Officer, and staffs; administrative personnel of Central Post Fund; payroll and non-personnel expenses of Base Newspaper, Library, Guest House, Service Clubs and other recreation centers (when paid from appropriated funds). The performance rating is determined by dividing the total cost of the Personnel Services function by the total number of military personnel stationed on the base and applying the results in the formula below:

$$\frac{\text{ConAC Standard Cost}}{\text{Actual Cost of Base Activity}} \times 100 = \text{ConAC Performance Rating}$$

Standards for these functions developed by the Cost Analysis Division of Headquarters ConAC are shown in this presentation. The ConAC Standard is the average cost (excluding extremes) per unit of workload, (military personnel) based on data reported for the five months period 1 January - 31 May 1950. Details of procedures followed in determining ConAC Standards are on file in the Office of the Director of Programs and Costs, Comptroller, Hq. ConAC.

COMMENT

TWENTY BASES (9 AFRTC'S, 8 WINGS, 3 AIR BASE GROUPS OR SQUADRONS) REPORT OPERATING COSTS PER PERSON SERVICED WHICH ARE BELOW THE CONAC STANDARD. TEN OF 9 AFRTC'S AND ONE AIR BASE GROUP ARE IN THE POPULATION GROUP UNDER 1,000. FOUR (4) AIR BASE SQUADRONS AND EIGHT (8) AFRTC'S IN THIS POPULATION GROUP ARE ABOVE STANDARD. IN THIS FUNCTION THE NATURE OF SERVICES FURNISHED AND THE NUMBER VARIES GREATLY AT AFRTC BASES. RESERVE PERSONNEL UTILIZE SOME SERVICES AND SINCE THESE PERSONNEL ARE NOT INCLUDED IN THE WORKLOAD THIS DISTORTS COSTS OUT OF RELATION TO REPORTED WORKLOAD. IN ADDITION, ALL SERVICES ARE NOT PROVIDED AT EACH BASE DUE TO GEOGRAPHICAL LOCATION, COMMAND POLICY AND DIRECTED EMPHASIS ON CERTAIN SERVICES BY SPECIAL SERVICES PERSONNEL. BECAUSE OF THESE FACTORS STAFFING STANDARDS DIFFER WIDELY AND ARE REFLECTED IN THE PERFORMANCE RATINGS.

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ACTUAL VS STANDARD COST PERSONNEL SERVICES

FIVE MONTHS AVERAGE, 1 JANUARY - 31 MAY 1950

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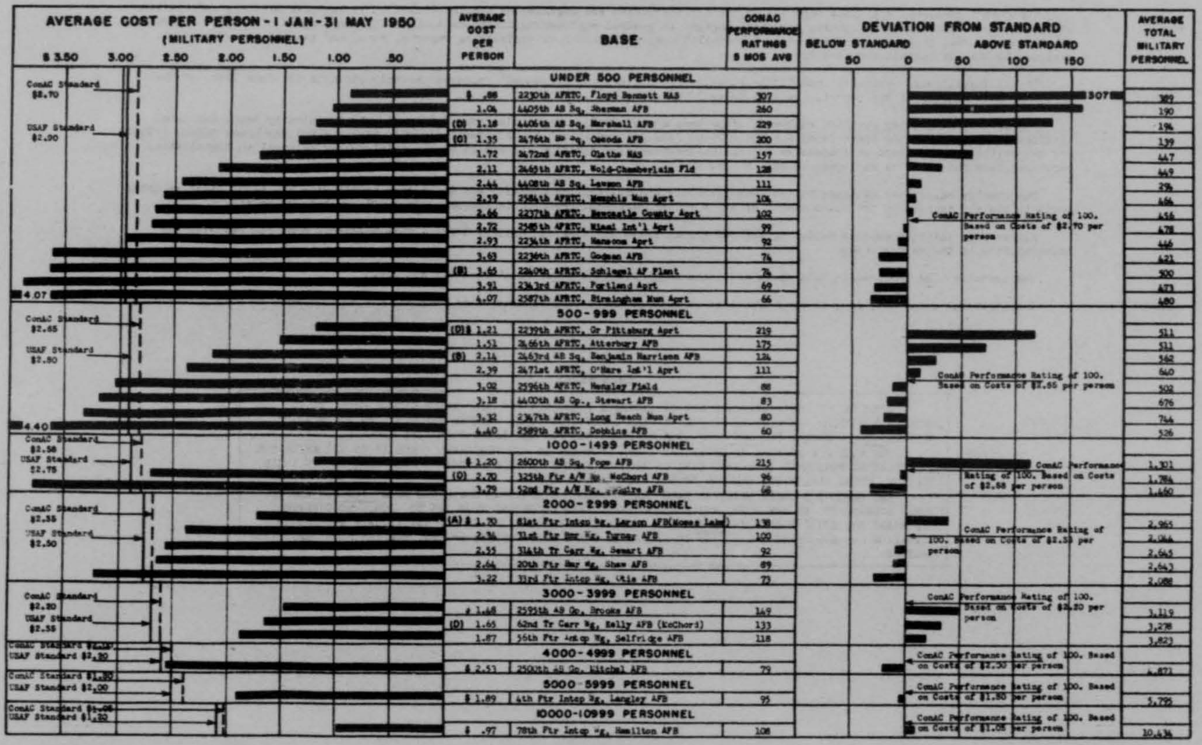
HQ, CONAC
JULY 1950



AVERAGE COST PER PERSON	BASE	CONAC PERFORMANCE RATINGS 5 MOS AVG	AVERAGE TOTAL MILITARY PERSONNEL
	UNDER 500 PERSONNEL		
$ .86	2230th AFRTC, Floyd Bennett NAS	307	309
1.04	4405th AB Sq, Sherman AFB	260	190
(D) 1.18	4406th AB Sq, Marshall AFB	229	194
(C) 1.35	2476th [illegible] Sq, Oscoda AFB	200	139
1.72	2472nd AFRTC, Olathe NAS	157	447
2.11	2465th AFRTC, Wold-Chamberlain Fld	128	449
2.44	4408th AB Sq, Lawson AFB	111	294
2.59	2584th AFRTC, Memphis Mun Aprt	104	464
2.66	2237th AFRTC, Newcastle County Aprt	102	456
2.72	2585th AFRTC, Miami Int'l Aprt	99	478
2.93	2234th AFRTC, Hanscom Aprt	92	446
3.63	2236th AFRTC, Godman AFB	74	421
(B) 3.65	2240th AFRTC, Schlegel AF Plant	74	500
3.91	2343rd AFRTC, Portland Aprt	69	473
4.07	2587th AFRTC, Birmingham Mun Aprt	66	480
	500-999 PERSONNEL		
(D) $ 1.21	2239th AFRTC, Gr Pittsburg Aprt	219	511
1.51	2466th AFRTC, Atterbury AFB	175	511
(B) 2.14	2463rd AB Sq, Benjamin Harrison AFB	124	562
2.39	2471st AFRTC, O'Hare Int'l Aprt	111	640
3.02	2596th AFRTC, Hensley Field	88	502
3.18	4600th AB Gp., Stewart AFB	83	676
3.32	2347th AFRTC, Long Beach Mun Aprt	80	744
4.40	2589th AFRTC, Dobbins AFB	60	526
	1000-1499 PERSONNEL		
$ 1.20	2600th AB Sq, Pope AFB	215	1,301
(D) 2.70	325th Ftr A/W Wg, McChord AFB	96	1,784
3.79	52nd Ftr A/W Wg, McGuire AFB	68	1,460
	2000-2999 PERSONNEL		
(A) $ 1.70	81st Ftr Intcp Wg, Larson AFB(Moses Lake)	138	2,965
2.34	31st Ftr Bmr Wg, Turner AFB	100	2,044
2.55	314th Tr Carr Wg, Sewart AFB	92	2,645
2.64	20th Ftr Bmr Wg, Shaw AFB	89	2,643
3.22	33rd Ftr Intcp Wg, Otis AFB	73	2,088
	3000-3999 PERSONNEL		
$ 1.48	2595th AB Gp, Brooks AFB	149	3,119
(D) 1.65	62nd Tr Carr Wg, Kelly AFB (McChord)	133	3,278
1.87	56th Ftr Intcp Wg, Selfridge AFB	118	3,823
	4000-4999 PERSONNEL		
$ 2.53	2500th AB Gp, Mitchel AFB	79	4,871
	5000-5999 PERSONNEL		
$ 1.89	4th Ftr Intcp Wg, Langley AFB	95	5,795
	10000-10999 PERSONNEL		
$ .97	78th Ftr Intcp Wg, Hamilton AFB	108	10,434

SOURCE: WORK PERFORMANCE REPORT, AF FORM 323
RCS: AF-FO-F30

NOTE:
(A) 1 MONTH DATA ONLY
(B) 2 MONTHS DATA ONLY
(C) 3 MONTHS DATA ONLY
(D) 4 MONTHS DATA ONLY

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EXPLANATION OF GRAPHIC PRESENTATION

OVERHEAD OF AIR INSTALLATION ACTIVITY

"Overhead" personnel are those reported in the Administrative and Engineering Account (10103). It includes military and civilian administration and clerical personnel, personnel engaged in general engineering functions such as the preparation of project estimates, maintenance of real property cards and maps of installations; preparation of engineering reports, etc., and general superintendents assigned to the air installation activity.

"Total Installation Personnel" and "Administrative and Engineering Personnel" represent monthly strength for June 1950, of the personnel data section of the report, (Account Codes 30001 and 30099).

The average salary per civilian employed, other than Administration and Engineering Personnel, was computed by using the total civilian labor costs in the Grard Total Account (19999) less Accrued Annual Leave Account (10101), Sick and Holiday Leave Taken, (10102) and the civilian labor costs in Administration and Engineering, and dividing the result by the total number of civilian installation personnel less the civilian employees in A&E, on the May report.

The average salary per civilian in the administration and Engineering activity was determined by dividing the total civilian labor costs in the A&E account by the total number of A&E civilian personnel reported in account code 30001, on the May report.

All average salaries exclude costs for accrued annual leave and sick and holiday leave. This procedure does not restrict the comparability of the values shown.

The installations included in this study are those which submit a detailed AF Form 329 and 330.

Installations submitting Army or Navy type cost reports or short form reports on AF Form 329 are not included in this presentation.

COMMENT

STAFFING OF ADMINISTRATIVE AND ENGINEERING PERSONNEL FOR USAF BASES RANGES FROM 7% TO 13% WITH ONLY MCCHORD AND MCGUIRE OF THE 14 USAF BASES OVER 10%; MCCHORD REPORTS 13% AND MCGUIRE REPORTS 12% COMPARED TO 13% AND 10% RESPECTIVELY FOR THE PRIOR 10 MONTHS AVERAGE.

THE RISE FOR MCGUIRE IS CAUSED BY A 29% INCREASE IN A&E PERSONNEL (FROM 17 TO 22) WHILE THE INSTALLATION PERSONNEL INCREASED (163 TO 190) ONLY 10%. OSCODA DECREASED FROM 16% TO 7% WHILE ALL THE OTHERS REMAIN THE SAME OR SHOW A SLIGHT VARIATION.

THE RANGE FOR USAFR BASES IS FROM 8% TO 15%. BIRMINGHAM DECREASED FROM 11% FOR THE 10 MONTH AVERAGE TO 8% FOR JUNE, WHILE WOLD-CHAMBERLAIN DECREASED FROM 14% TO 10%. LONG BEACH AND MIAMI ARE STILL HIGH WITH 15%. THE ANALYSTS AT THESE BASES SHOULD INVESTIGATE THE ADMINISTRATION AND ENGINEERING ACTIVITY TO ASCERTAIN THE JUSTIFICATION, IF ANY, FOR THE HIGH PERCENTAGE FACTORS.

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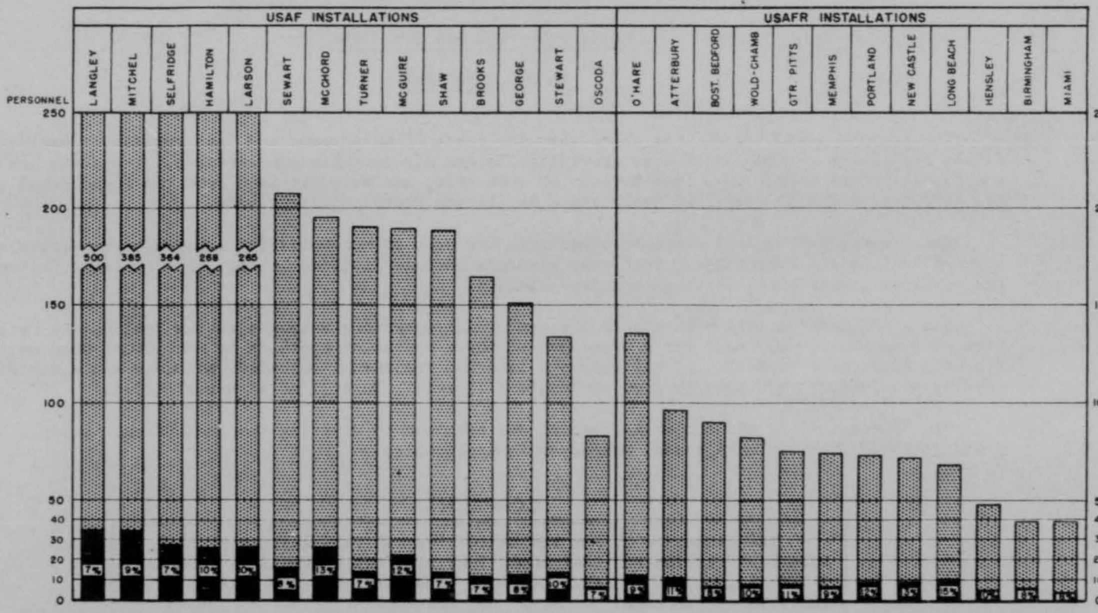
JULY 1950

OVERHEAD OF AIR INSTALLATIONS ACTIVITY

SELECTED INSTALLATIONS

JUNE 1950



	LANGLEY	MITCHEL	SELFRIDGE	HAMILTON	LARSON	SEWART	MCCHORD	TURNER	MCGUIRE	SHAW	BROOKS	GEORGE	STEWART	OSCODA
■ ADM & ENG PERS	34	34	27	26	26	16	26	13	22	13	11	12	13	6
TOTAL INST PERS	500	385	364	268	265	208	196	191	190	189	165	151	134	83
*AVG SALARY CIV. OTHER THAN A&E PERS	323	287	281	300	284	235	274	189	226	298	216	294	264	228
*AVG SALARY - A&E PERSONNEL (CIV)	341	279	287	169	244	269	250	266	282	298	361	408	279	225

	O'HARE	ATTERBURY	BOST. BEDFORD	WOLD-CHAMB	GTR PITTS	MEMPHIS	PORTLAND	NEW CASTLE	LONG BEACH	HENSLEY	BIRMINGHAM	MIAMI
■ ADM & ENG PERS	12	11	7	8	8	7	9	9	10	5	3	6
TOTAL INST PERS	136	96	90	82	75	74	73	72	68	48	39	39
*AVG SALARY CIV. OTHER THAN A&E PERS	276	128	249	211	257	214	271	223	229	228	128	206
*AVG SALARY - A&E PERSONNEL (CIV)	348	211	264	241	272	275	245	222	381	321	305	286

SOURCE: REAL ESTATE FACILITIES MONTHLY COST REPORT, AF FORMS 329 & 330
RCS: AF-MD-F33A

* EXCLUDES ACCRUED ANNUAL LEAVE, & SICK & HOLIDAY LEAVE TAKEN

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EXPLANATION OF GRAPHIC PRESENTATION OF
PERCENTAGE DISTRIBUTION OF TOTAL COST OF
MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES
BASES PROVIDING OWN SERVICES
FISCAL YEAR 1950

The amounts presented in this chart show the costs of Management and Preservation of Real Estate Facilities of each ConAC base providing its own Air Installation services. The costs are for the fiscal period from 1 July 1949 through 30 June 1950, and were obtained from the Grand Total of all Accounts of the 30 June 1950 Real Estate Facilities Monthly Cost Reports.

These costs include all elements comprising the cost of accomplishing management and preservation of Real Estate Facilities. Such cost elements include civilian labor, military labor, material and supplies, contractual services and depreciation.

The grand total of all accounts is the sum of all operating accounts in the Real Estate Facilities cost accounting system. For a breakdown of these operating accounts by Functional Component see page 33. For a breakdown of all accounts into the individual operating accounts and a description of the latter, reference is made to Chapters II & III, Part II of AF Manual 170-5.

The "Percent of Total Cost of All Bases" was obtained by dividing the cost of each base by the Grand Total of USAF or USAFR bases, whichever is applicable.

COMMENT

THE AVERAGE COST FOR THE MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES FOR USAF BASES PROVIDING OWN SERVICES IS APPROXIMATELY $1,080,000 A YEAR. GENERALLY SPEAKING, THE COST VARIES WITH THE SIZE OF THE BASE.

THE AVERAGE COST FOR THE MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES FOR USAFR BASES PROVIDING OWN SERVICES IS APPROXIMATELY $350,000, A YEAR. THIS FIGURE SHOULD BE CONSIDERED AS A GUIDE ONLY INASMUCH AS MANY RESERVE BASES HAVE AIR INSTALLATION WORK ACCOMPLISHED UNDER THE TERMS OF A LEASE-RENTAL CONTRACT, THE COSTS OF WHICH ARE NOT INCLUDED IN THE MONTHLY COST REPORT.

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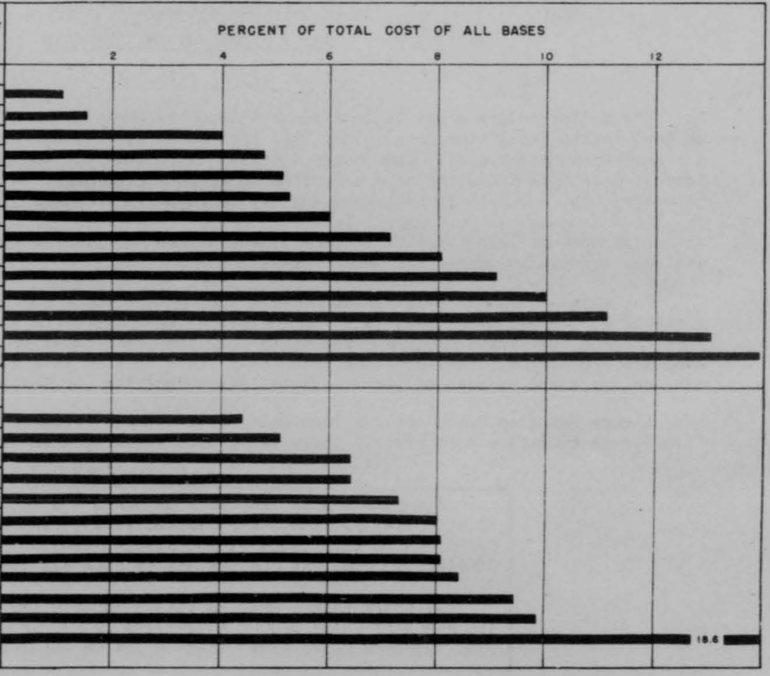
HQ, CONAC
JULY 1950

PERCENTAGE DISTRIBUTION OF TOTAL COST OF MAINTENANCE AND PRESERVATION OF REAL ESTATE FACILITIES

BASES PROVIDING OWN SERVICES

FISCAL YEAR 1950

BASE	TOTAL COST EACH BASE F.Y. 1950	% OF TOTAL COST OF ALL BASES
USAF		
Oscoda AFB	$ 167,467	1.1
George AFB	228,499	1.5
Turner AFB	604,556	4.0
Brooks AFB	711,201	4.7
Shaw AFB	773,230	5.1
Stewart AFB	796,357	5.2
McGuire AFB	909,991	6.0
Sewart AFB	1,083,565	7.1
McChord AFB	1,234,057	8.1
Larson AFB	1,378,094	9.1
Selfridge AFB	1,517,865	10.0
Hamilton AFB	1,698,901	11.2
Mitchel AFB	1,972,321	13.0
Langley AFB	2,108,747	13.9
GRAND TOTAL	$15,181,471	100.0
USAFR		
Miami Int Aprt	$ 187,205	4.4
Birmingham Mun Aprt	216,677	5.1
Portland AFB	273,086	6.4
New Castle Co. & Reading Mun Aprt.	272,042	6.4
Wold-Chamberlain Fld	307,134	7.3
Atterbury AFB	337,729	8.0
Long Beach Mun Aprt	340,782	8.1
Boston-Bedford Mun Aprt	341,089	8.1
Memphis Mun Aprt	355,068	8.4
Hensley Fld	396,196	9.4
Gtr Pittsburgh Aprt	414,983	9.8
O'Hare Int Aprt	783,925	18.6
GRAND TOTAL	$4,223,759	100.0



SOURCE: REAL ESTATE FACILITIES MONTHLY COST REPORTS, AF FORM 329 & 330
RCS: AF-MD-F33A

NOTE: (A) COSTSOF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES UNDER LEASE-RENTAL CONTRACTS NOT INCLUDED
(B) COSTS ARE FOR 8 MOS PERIOD ONLY - FROM 1 NOV 1949 THROUGH 30 JUNE 1950
(C) COSTS ARE FOR READING FROM JULY 1949 THROUGH APR 1950 AND FOR NEW CASTLE FOR MAY & JUNE 1950

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EXPLANATION OF GRAPHIC PRESENTATION ON
PERCENTAGE DISTRIBUTION OF TOTAL COST OF
MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES
BY FUNCTIONAL COMPONENT
BASES PROVIDING OWN SERVICES
FISCAL YEAR 1950

The dollar values shown in this presentation are costs incurred in the Management and Preservation of Real Estate Facilities from 1 July 1949 through 30 June 1950, for USAF and USAFR bases providing own Air Installation services. Cumulative data was extracted from the 30 June 1950 Real Estate Facilities Monthly Cost Report and compiled according to account groupings. A description of the individual operating accounts contained in each grouping may be found in Chapters II and III, Part II of AF Manual 170-5.

Reference may also be made to page 31 to see how the total costs incurred in the Air Installation activity are divided among all ConAC bases.

The purpose of this chart is to present information about the percentage distribution of the costs of Air Installation activities during Fiscal Year 1950. To arrive at this picture, the total cost of each functional component was divided by the Grand Total of all accounts - USAF or USAFR whicheven was applicable. The result of this analysis is to show at a glance the part of the Air Installation dollar spent on each of the Air Installation function for the past fiscal year.

A more detailed breakdown has been made of the Special Projects and the Undistributed Costs Group. This serves to define more clearly these two groups which make up such a large percentage of total cost.

COMMENT

FOR USAF BASES, THE COSTS INCURRED FOR THE MANAGEMENT AND PRESERVATION OF HEATING PLANTS AND SYSTEMS (18%), FIRE PROTECTION AND AIRCRAFT CRASH RESCUE ACTIVITIES (15%), SPECIAL PROJECTS (15%) AND UNDISTRIBUTED COSTS (17%) TOGETHER CONSUME 65¢ OF EACH AIR INSTALLATIONS DOLLAR.

AT USAFR BASES, HEATING PLANTS AND SYSTEMS (12%), FIRE PROTECTION AND AIRCRAFT CRASH RESCUE ACTIVITIES (25%), SPECIAL PROJECTS (22%) AND UNDISTRIPUTED COSTS (16%) MAKE UP 75% OF ALL COSTS INCURRED.

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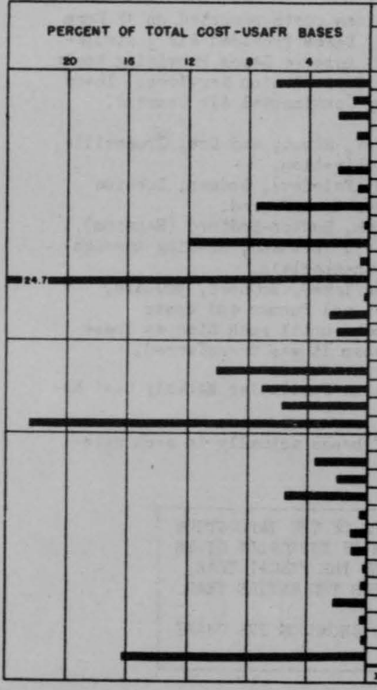
JULY 1950

PERCENTAGE DISTRIBUTION OF TOTAL COST OF MAINTENANCE AND PRESERVATION OF REAL ESTATE FACILITIES

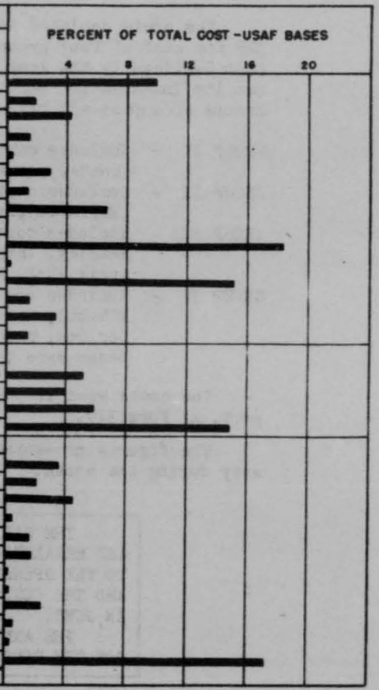
BY FUNCTIONAL COMPONENT

BASES PROVIDING OWN SERVICES

FISCAL YEAR 1950



USAFR BASES * % OF TOTAL COST	USAFR BASES * TOTAL COST	FUNCTIONAL COMPONENT	USAF BASES TOTAL COST	USAF BASES % OF TOTAL COST
6.3	$ 267,465	Building & Other Structures	$ 1,522,064	10.0
1.0	41,786	Building Equipment	309,936	2.0
1.9	80,975	Grounds	612,044	4.1
0.8	33,490	Roads & Railroads	216,753	1.4
-	1,615	Airfield Pavements	46,492	0.3
2.1	86,169	Water Plants & Systems	425,325	2.8
0.6	25,749	Sewer Plants & Systems	225,159	1.5
7.3	306,956	Electric Plants & Systems	996,296	6.6
0.1	3,297	Gas Plants & Systems	6,608	-
12.0	504,666	Heating Plants & Systems	2,775,969	18.3
0.4	17,390	Storage & Dispensing Systems	34,787	0.2
24.7	1,043,960	Fire Protection & Aircraft Crash Rescue	2,264,888	14.9
0.1	5,942	Off-Post Facilities	218,075	1.5
2.5	108,126	Janitorial & Sanitation Services	481,097	3.2
1.7	71,880	Other Services	189,302	1.3
		SPECIAL PROJECTS		
9.7	409,329	Major Projects	761,161	5.0
7.0	296,108	Minor Modification Projects	604,803	4.0
5.6	236,397	Major Modification Projects	882,632	5.8
22.3	941,829	Total - Special Projects	2,248,546	14.8
		UNDISTRIBUTED COSTS		
3.6	153,087	Accrued Annual Leave	523,487	3.5
2.0	86,899	Sick & Holiday Leave Taken	308,306	2.0
5.3	227,119	Administration & Engineering	674,229	4.4
0.4	16,948	Supply Overhead	42,862	0.3
1.1	47,121	Shop Overhead	242,316	1.6
0.9	37,822	Mobile Equipment	260,385	1.7
0.1	2,800	Installed Machine Tools	11,286	0.1
0.3	11,218	Hand Tools	34,600	0.2
2.0	85,246	Depreciation-Mobile Equipment	394,390	2.6
0.3	10,886	Class "F" & "MR" Property Salvaged	72,969	0.5
0.2	9,186	Snow & Sand Removal	31,886	0.2
16.2	685,232	Total-Undistributed Costs	2,596,660	17.1
100.0	$ 4,222,789	GRAND TOTAL	$15,161,471	100.0



SOURCE: REAL ESTATE FACILITIES MONTHLY COST REPORTS, AF FORM 329
RCS: AF-MD-F35A, JUNE 1950

* COSTS OF MANAGEMENT & PRESERVATION OF REAL ESTATE FACILITIES UNDER LEASE-RENTAL CONTRACTS NOT INCLUDED

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EXPLANATION OF GRAPHIC PRESENTATION ON

TREND OF MONTHLY COSTS OF

MANAGEMENT & PRESERVATION OF REAL ESTATE FACILITIES

The costs depicted in this chart consist of the monthly Installations costs reported on AF Form 329 for each of four groups of bases: (1) Inactive installations. (2) Bases Provided Air Installation Services by the Army, Navy or other Major Air Force Commands. (3) Reserve Bases Providing their own Air Installation Services. (4) USAF Bases Providing their own Air Installation Services. These groups encompass all bases reporting Air Installation costs incurred by Continental Air Command.

GROUP I - Includes costs at Baer, Byrd, Dover, Hawkins, Moody, Newark, Stout; and Dow, Greenville, Grenier, Lockbourne, Orlando and Slocum subsequent to inactivation.

GROUP II - Includes costs at Lawson, Otis, Pope, Sherman, Olathe NAS (Fairfax), Godman, Dobbins (Marietta), and at Marshall until 15 June 1950, when it was transferred.

GROUP III - Includes costs at Atterbury, Birmingham, Greater Pittsburgh, Boston-Bedford (Hanscom), Hensley, Long Beach, Memphis, Miami, O'Hare (Orchard Place), Portland, Reading through April 1950, New Castle County for May and June, and Wold-Chamberlain.

GROUP IV - Includes costs at Brooks, Hamilton, Langley, Larson (Moses Lake), McChord, McGuire, Mitchel, Oscoda, Selfridge, Sewart (Smyrna), Shaw, Stewart and Turner and costs for Dow, Greenville, Grenier, Lockbourne, Orlando and Slocum until such time as these bases were inactivated; and Benjamin Harrison until May when it was transferred.

The costs used in this chart are the Grand Totals on the Real Estate Facilities Monthly Cost Report, AF Form 329.

The figures presented in the "No." column represent the number of bases actually in each category during the month.

COMMENT

THE VARIATIONS EVIDENT FROM THIS CHART ARE THE RESULT OF THE IMPOSITION AND RELAXATION OF BUDGET FUND CONTROLS, THE IMPETUS WHICH IS TYPICALLY GIVEN TO THE SPENDING PROGRAM FOR SPECIAL PROJECTS AT THE END OF THE FISCAL YEAR, AND THE COST ENTRY FOR DEPRECIATION OF MOBILE EQUIPMENT FOR THE ENTIRE YEAR IN JUNE.

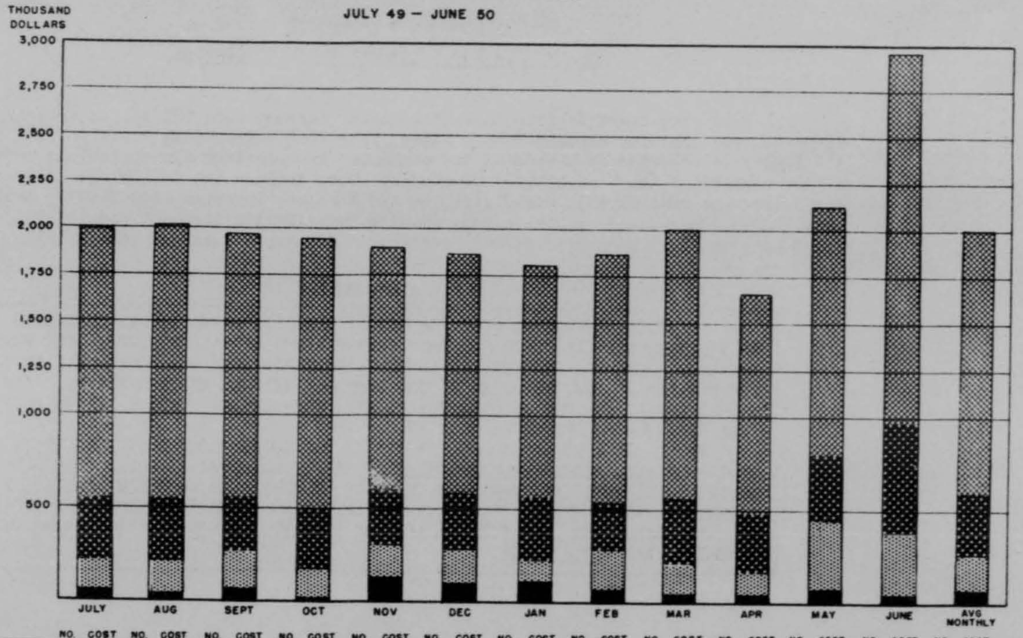
THE ANNUAL COST FOR THE AIR INSTALLATION FUNCTION AS SHOWN ON THE CHART FOR THE CONTINENTAL AIR COMMAND IS $24,195,000.

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950

TREND OF MONTHLY COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

CONTINENTAL AIR COMMAND BASES

JULY 49 – JUNE 50



LEGEND

LEGEND		JULY NO.	JULY COST	AUG NO.	AUG COST	SEPT NO.	SEPT COST	OCT NO.	OCT COST	NOV NO.	NOV COST	DEC NO.	DEC COST	JAN NO.	JAN COST	FEB NO.	FEB COST	MAR NO.	MAR COST	APR NO.	APR COST	MAY NO.	MAY COST	JUNE NO.	JUNE COST	AVG MONTHLY NO.	AVG MONTHLY COST
■	INACTIVE INSTALLATIONS (GROUP I)	7	$ 48,423	7	$ 42,189	8	$ 57,591	7	$ 18,815	9	$ 126,321	10	$ 100,608	10	$ 109,190	10	$ 63,515	10	$ 51,085	7	$ 43,051	10	$ 78,871	8	$ 47,740	8	$ 65,617
░	BASES PROVIDED SERVICES BY ARMY, NAVY OR OTHER CMDS (GROUP II)	8	178,291	8	178,088	8	170,886	8	155,551	8	173,435	8	164,158	8	124,613	8	220,119	8	152,614	8	115,689	7	364,132	9	341,880	8	196,621
▩	RESERVE BASES PROVIDING OWN SERVICES (GROUP III)	11	329,202	11	340,212	11	317,432	11	330,828	12	310,780	12	303,711	12	326,230	12	304,580	12	410,235	12	324,129	13	374,166	12	564,850	12	353,030
▒	USAF BASES PROVIDING OWN SERVICES (GROUP IV)	18	1,434,656	18	1,546,262	18	1,426,990	19	1,436,828	16	1,283,749	15	1,279,376	14	1,246,401	14	1,282,097	14	1,389,793	14	1,172,378	14	1,306,166	14	2,008,287	16	1,401,081
	TOTAL	44	$1,990,572	44	$2,106,751	45	$1,972,899	45	$1,942,022	45	$1,894,285	45	$1,867,853	44	$1,806,434	44	$1,870,311	44	$2,003,727	41	$1,655,247	44	$2,123,335	43	$2,962,757	44	$2,016,349

SOURCE: REAL ESTATE FACILITIES MONTHLY COST REPORTS, AF FORM 329
RCS: AF - MD - F 33A

EXPLANATION OF GRAPHIC PRESENTATION ON

OPERATING COSTS, FISCAL YEAR 1950

TENANT AIR FORCE RESERVE TRAINING CENTERS

The following chart depicts Operating Costs (account code 08181) incurred by Tenant Air Force Reserve Training Centers during Fiscal Year 1950. Operating Costs include the cost of all functions operated by personnel and supported by budgetary appropriations under the direct control of the installation Commander. They include the following: Commander and Staff (account code 01051), Administration and Services (account code 02477), Medical (account code 03277), Operations and Training - Mission Organization (account code 07270), Maintenance and Supply (account code 05581), and Undistributed Charges (account code 04151).

COMMENT

THE TOTAL OPERATING COST FOR TENANT AFRTC'S DURING FISCAL YEAR 1950 WAS $6,716,340; MONTHLY COSTS FOR EACH TENANT AFRTC AVERAGE $93,283. THE MONTHLY OPERATING COST FOR EACH TENANT AFRTC IS APPROXIMATELY 50% LOWER THAN THAT OF THE NON-TENANT AFRTC'S. THE 2233RD AFRTC AT MITCHEL WHICH REFLECTS A LOW ANNUAL OPERATING COST IN RELATION TO ALL OTHER TENANT AFRTC'S WAS IN OPERATION ONLY NINE MONTHS OF FISCAL YEAR 1950.

WHILE THE AFRTC AT SCOTT REPORTS IN 3RD LOWEST COST POSITION, IT IS NEXT TO LOWEST WITH RESPECT TO AVERAGE MONTHLY FLYING HOURS REPORTED (908 HOURS PER MONTH). THE AFRTC AT TINKER, IN NEXT TO HIGHEST COST POSITION, REPORTS THE LOWEST AVERAGE MONTHLY ACCOMPLISHMENT OF FLYING HOURS (867 HOURS PER MONTH).

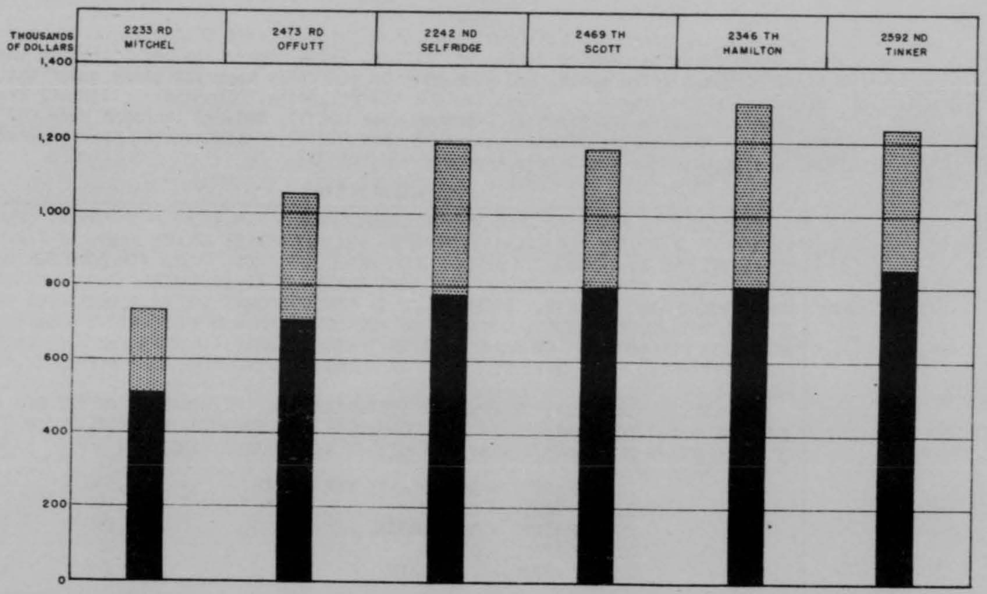
THE OPERATING COST FOR ALL AFRTC'S (TENANT AND NON-TENANT) DURING FISCAL YEAR 1950 WAS $42,532,049.

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950

OPERATING COSTS
TENANT AIR FORCE RESERVE TRAINING CENTERS
CONTINENTAL AIR COMMAND

(DIRECTLY CONTROLLABLE BY THE INDIVIDUAL COMMANDER)

FISCAL YEAR 1950



-LEGEND-

		2233 RD MITCHEL	2473 RD OFFUTT	2242 ND SELFRIDGE	2469 TH SCOTT	2346 TH HAMILTON	2592 ND TINKER
	TOTAL OPERATING COSTS	$ 729,850 (A)	$ 1,054,991	$ 1,196,166	$ 1,181,734	$ 1,316,060	$ 1,237,539
▨	NON-PERSONNEL COSTS	220,315	351,411	422,794	382,616	512,013	384,234
■	PAYROLL COSTS	$ 509,535	$ 703,580	$ 773,372	$ 799,118	$ 804,047	$ 853,305
	AIR FORCE AREA OF RESPONSIBILTY	First	Tenth	Tenth	Tenth	Fourth	Fourteenth

SOURCE: COST CONTROL REPORTS, AF FORMS 320 & 322
RCS: AF-FO-F22C

NOTE: (A) OPERATED NINE MONTHS OF FY 1950

EXPLANATION OF GRAPHIC PRESENTATION ON

OPERATING COSTS, FISCAL YEAR 1950

NON-TENANT AIR FORCE RESERVE TRAINING CENTERS

The following chart depicts Operating Costs (account code 08181) incurred by Non-Tenant Air Force Reserve Training Centers during Fiscal Year 1950. Operating Costs include the cost of all functions operated by personnel and supported by budgetary appropriations under the direct control of the installation commander. They include the following: Commander and Staff (account code 01051), Administration and Services (account code 02477), Medical (account code 03277), Operations and Training - Mission Organization (account code 07270), Undistributed Charges (account code 04151), and Maintenance and Supply (account code 05581).

COMMENT

NON-TENANT AIR FORCE RESERVE TRAINING CENTERS HAD AN AVERAGE ANNUAL OPERATING COST OF $2,106,806, RANGING FROM $1,592,627 AT THE 2240TH AFRTC AT CLEVELAND TO $3,711,694 AT THE 2347TH AFRTC, LONG BEACH. PAYROLL COSTS FOR BOTH THE 2471ST AFRTC, O'HARE AND THE 2347TH AFRTC, LONG BEACH ARE APPROXIMATELY DOUBLE THOSE OF ALL OTHER NON-TENANT AFRTC'S. ALTHOUGH IT IS REALIZED THAT THE AFOREMENTIONED AFRTC'S SUPPORT TWO RESERVE WINGS, DOUBLING OF WORKLOAD DOES NOT NECESSARILY INDICATE THE NECESSITY FOR DOUBLING OF STAFF. IT IS THEREFORE POSSIBLE THAT THE HIGH PAYROLL COSTS REFLECTED ARE, IN PART, CAUSED BY EXCESSIVE PERSONNEL ASSIGNMENTS IN CERTAIN AREAS.

FROM THE STANDPOINT OF WORKLOAD ACCOMPLISHMENT, EXAMINATION OF REPORTS OF FLYING TIME INDICATES THAT THE FOLLOWING AFRTC'S ARE REPORTING RELATIVELY LOW NUMBERS OF HOURS FLOWN PER RESERVE WING IN TACTICAL AND TRAINER AIRCRAFT:

2237TH AFRTC - READING AND NEW CASTLE	8,556
2471ST AFRTC - O'HARE	11,299
2587TH AFRTC - BIRMINGHAM	11,860
2236TH AFRTC - GODMAN	12,169
2240TH AFRTC - CLEVELAND	14,278

THE FOLLOWING AFRTC'S REPORT HIGH FLYING HOURS ACCOMPLISHED PER RESERVE WING:

2596TH AFRTC - HENSLEY	16,850
2589TH AFRTC - DOBBINS	18,550

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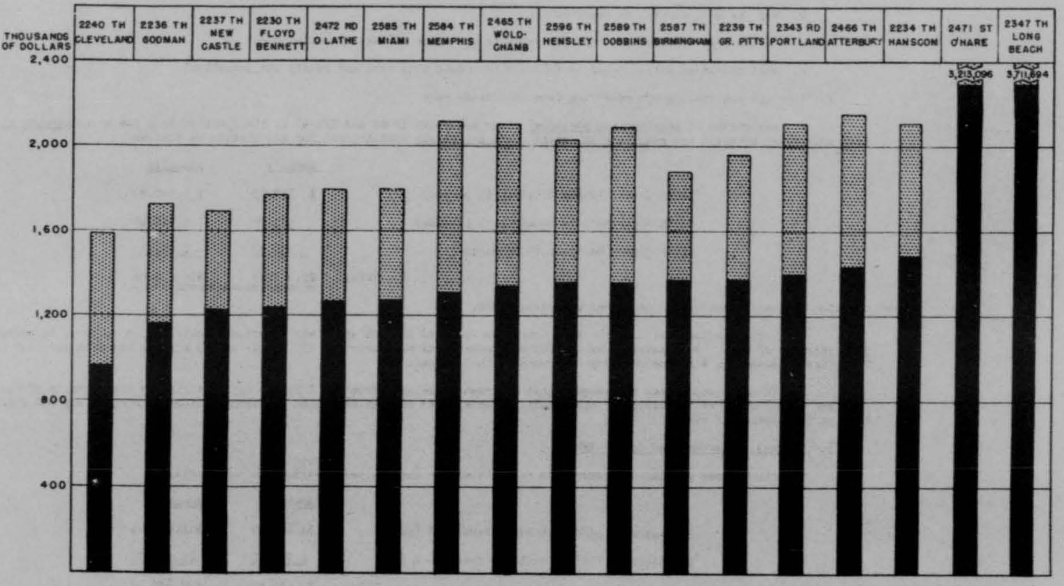
OPERATING COSTS
NON-TENANT AIR FORCE RESERVE TRAINING CENTERS
CONTINENTAL AIR COMMAND
(DIRECTLY CONTROLLABLE BY THE INDIVIDUAL COMMANDER)

FISCAL YEAR 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



-LEGEND-

	TOTAL OPERATING COST	$1,592,627	$1,723,127	$1,696,415	$1,760,625	$1,789,852	$1,794,086	$2,113,331	$2,104,283	$2,026,442	$2,090,279	$1,879,897	$1,959,359	$2,108,335	$2,149,870	$2,104,391	$3,213,096	$3,711,694
▨	NON-PERSONNEL COSTS	634,211	557,372	469,464	521,815	523,060	518,929	805,817	764,299	671,787	731,446	513,243	586,694	717,142	720,685	623,246	934,475	1,429,052
■	PAYROLL COSTS	$ 958,416	$1,165,755	$1,226,951	$1,238,810	$1,266,792	$1,275,157	$1,307,514	$1,339,984	$1,354,655	$1,358,833	$1,366,654	$1,372,665	$1,391,193	$1,429,185	$1,481,145	$2,278,621	$2,282,642
	AIR FORCE AREA OF RESPONSIBILTY	First	First	First	First	Tenth	Fourteenth	Fourteenth	Tenth	Fourteenth	Fourteenth	Fourteenth	First	Fourth	Tenth	First	Tenth	Fourth

SOURCE: COST CONTROL REPORTS, AF FORMS 320 & 322
RCS: AF-FO-F22C

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EXPLANATION OF PAY-OFF PROJECT

CONAC SAVINGS IN SQUADRON ADMINISTRATIVE OVERHEAD

314TH TROOP CARRIER WING, SEWART AIR FORCE BASE

1. Because the cost of Squadron Administrative Overhead per person administered at Sewart Air Force Base for the three months period 1 January - 31 March 1950, exceeded both the USAF Standard of $9.42 and the ConAC average of $8.30, as presented in the ConAC Management Analysis Review, a study was initiated by the Comptroller, 314th Troop Carrier Wing, to determine the following:

a. Was the cost correct as reported?

b. If the cost is correctly reported, what is the cause of this excessive cost?

c. What course of action could be followed to reduce this cost and remedy the situation?

2. Findings and conclusions resulting from this study were:

a. Assignment of unauthorized personnel (over and above T/O&E and T/D-A) to the function in a few units already at full authorized strength was resulting in excess costs per person administered for the station as follows:

	Monthly	Annually
314th Installations Squadron (1 person)	$ 132.65	$ 1,591.80
314th Motor Vehicle Squadron (3 persons)	493.20	5,918.40
314th Supply Squadron (3 persons)	576.32	6,915.84
TOTAL	$1,202.17	$14,426.04

Deletion of these unauthorized personnel was recommended.

b. Authorizations for Squadron Administrative Overhead in some units was disproportionately high compared to authorized strength of unit. For example, the Air Police Squadron was administering 93 people with 7 airmen; the 50th and 61st Troop Carrier Squadrons were administering 235 people with 7 airmen.

c. In addition, it was recommended that 8 airmen be deleted from the T/D-A as not justified by the strength of the unit and inconsistent with staffing in other units. The wing is only 95.8% manned and cannot afford padding of any one function at the expense of others.

3. Savings if Recommended Action Taken:

Effecting these recommended reductions would result in the following savings in the function:

	Monthly	Annually
Reassignment of Unauthorized Personnel (6)	$1,202.17	$14,426.04
Deletions of Filled Positions from T/D-A (8)	1,213.50	14,562.00
TOTAL	$2,415.67	$28,988.04

4. The estimated annual savings, $28,988.04, which would result from action based on recommendations noted in paragraph 3 was based on the original survey described above. However, as may be noted on the facing page, the savings resulted from action finally taken, $41,806.68, was considerably in excess of the figure originally estimated.

5. This Pay-Off Project represents an excellent example of coordinated effort between Comptroller and Personnel staffs, working together to achieve greater economy without sacrifice of efficiency or degree of mission performance. It tends, also, to confirm the theory that a survey of personnel assigned to a function may reveal that the staffing in many activities may not agree with the T/O&E's and T/D-A's as originally constituted, or that the present workload does not justify the augmentation in the existing T/D-A, based on the original contemplated strength or workload and that manning tables have not been monitored. Cost Control can lead to Management Control. It remains for the staff to accept this instrument of management and utilize it to the fullest extent.

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PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950

PAY-OFF PROJECT

ANALYSIS OF CONAC SAVINGS IN SQUADRON ADMINISTRATIVE OVERHEAD

314TH TROOP CARRIER WING - SEWART AIR FORCE BASE

SQUADRON ADMINISTRATIVE OVERHEAD COST REDUCED AS A RESULT OF FOLLOWING ACTION TAKEN:

1. Reduction in Cost resulting from:		
a. Replacement of high graded or rated personnel with lower grade or non-rated (1 Officer, 2 Airmen) personnel.	$ 210.20	
b. Survey resulting in change in method of costing. (1 Officer, 1 Airman)	558.60	
c. Reassignment to other functions of personnel now in function but unauthorized, and elimination of authorizations for activity. (4 Officers, 2 Warrant Officers, 14 Airmen)	4,154.22	
Total Reduction in Cost		$ 4,923.02
Less:		
2. Increases in Cost resulting from:		
a. Filling of vacancies (8 Airmen)	$ 879.25	
b. Assignment (2 Officers)	559.88	
Total Increase in Cost		$ 1,439.13
Net Reduction in Monthly Cost or an		$ 3,483.89

ESTIMATED ANNUAL SAVINGS TO THE USAF OF $ 41,807

The data shown herein represents a consolidation of detail shown in the Pay-Off analysis submitted by this base. Lack of space prohibits the inclusion of further detail in this presentation. The analysis as submitted has been reproduced by Hq ConAC and distribution has been made to interested staff agencies and to Hq 1st, 4th, 9th, and 10th Air Forces. Additional copies are available from Director of Programs and Costs, Comptroller, Hq ConAC, upon request.

SOURCE: Analysis - 314th Troop Carrier Wing, Sewart AFB, April 1950

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EXPLANATION OF PAY-OFF PROJECTS

CONAC SAVINGS IN BASE OPERATIONS, AIRCRAFT MAINTENANCE AND COMMUNICATIONS FUNCTIONS

2587TH AFRTC, BIRMINGHAM MUNICIPAL AIRPORT

One Pay-Off presentation last month indicated a savings (through the procurement of additional housing) in quarters allowances paid to airmen. In addition to this item, the 2587th AFRTC has submitted additional Pay-Off projects demonstrating the application of managerial effort to achieve cost reduction and more efficient utilization of personnel resulting in the diversion of manhours to tasks requiring added effort within an organizational framework already fully manned.

This presentation indicates that thought and action to promote efficiency and economy are not confined to the Comptroller and Management Analysis personnel and provides definite evidence that coordinated action on the part of all agencies will result in reduced costs and increased efficiency. All personnel, military and civilians, should be enjoined to become management conscious and assist in determining areas where recommendations for action may "pay-off", as appears to be the case here. The Comptroller is best qualified to lead in guiding such campaigns.

While each project presented here does not represent a very great saving, it is believed that the methodology followed serves to illustrate that a substantial savings to the Air Force would follow, if similar coordinated action directed toward efficient manpower utilization and cost control resulted at more ConAC installations.

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PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950

PAY-OFF PROJECTS

BASE OPERATION, AIRCRAFT MAINTENANCE, COMMUNICATIONS

2587TH AFRTC-BIRMINGHAM MUNICIPAL AIRPORT

1. Reduction in Cost of Base Operations

By closing Base Operations at 2400 hours and utilizing the services of the night duty airman, the use of one civilian has been eliminated with a resultant monthly payroll savings of $ 258.00

2. Savings in Man-Hours - Aircraft Maintenance

In the past, maintenance work was accomplished in two widely separated hangars resulting in wasted time by personnel going from one hangar to the other. By consolidating the two hangars into one, a savings of approximately 300 man-hours per month is anticipated. At the average maintenance wage rate of $1.67 per hour, the monthly savings is in excess of $ 500.00 or enough to cover the expense of three major aircraft inspections. Further savings are expected in July when the wash rack is moved nearer the maintenance shop.

3. Reduction in Toll Charges for Long Distance Calls

Effective controls placed on official long distance calls, (primarily achieved by placing collect calls to reservists, and increased use of radiotelephone) effected reduced charges as follows:

Average monthly cost 7 months period 1 June 1949 - 31 December 1949	$ 38.46		
Average monthly cost 3 months period 1 January 1950 - 31 March 1950	$ 9.86		
Savings Per Month		$ 28.60	
Total Monthly Savings, or an			$ 786.60

ESTIMATED ANNUAL SAVINGS TO THE USAF OF $9,439

SOURCE: Pay-Off Projects - 2587th AFRTC - Birmingham Mun Aprt. 27 April 1950

These Pay-Off Projects are presented from data reported to Hq. ConAC by the Commanding General - Fourteenth Air Force.

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EXPLANATION OF TABULATIONS OF COMPARATIVE DATA
FOR PROGRESS AND MANAGEMENT ANALYSIS
COMBAT GROUPS, SEPARATE SQUADRONS AND
AIR FORCE RESERVE TRAINING CENTERS

The purpose of the tabulations presented on the following three pages is to provide, to commanders and management analysts, at unit level, selected performance data. These tabulations provide a basis for local progress and management analysis.

The data contained in these tabulations does not replace, but rather supplements Comptroller Chart #6 and the presentations in this Review. Additional data will be included in future issues of this Review upon request. Information classified above RESTRICTED will not be included.

Examples of analyses possible from data shown here are:

a. Cost of Organizational Maintenance per Flying Hour (ConAC Cost Analysis Review, August).

b. Cost of Fuels and Lubes per Flying Hour (Page 16, ConAC Cost Analysis Review, July).

c. Utilization of in-commission rates.

d. Analysis of Fuel Consumption per hour.

e. Cost of organizational maintenance per unit of flying, AFRTC (Page 11, ConAC Cost Analysis Review, November).

f. Hours flown per person assigned to organizational maintenance function.

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COMPARATIVE DATA FOR
PROGRESS AND MANAGEMENT ANALYSIS
COMBAT GROUPS AND SEPARATE SQUADRONS
CONTINENTAL AIR COMMAND
JUNE 1950

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950

COMBAT GROUP	AIRCRAFT-FLYING HOUR FACTORS										
COLUMN	1	2	3	4	5	6	7	8	9	10	11
	AIR FORCE	TYPE ACFT	AVG NO ACFT ON HAND	AVG NO ACFT IN COMM	AVG NO ACFT OUT (MAINT)	AVG NO ACFT OUT (T.O. COMP)	AVG NO ACFT OUT (AOCP)	AVG NO ACFT OUT (OTHER)	TOTAL HRS FLOWN	HRS FLOWN PER ACFT (ON HAND)	GALLONS FUEL PER HR
56 TH FTR INTCP GP	10	F-80 F-86	34 36	24 28	6 6	- -	4 2	- -	635 666	19 19	392 419
52 ND FTR A/W GP	1	F-82	24	17	5	-	1	1	737	31	129
325 TH FTR A/W GP (A)	4	F-82	33	19	12	-	2	-	687	21	162
20 TH FTR BMR GP	14	F-84	66	48	14	1	1	2	2,548	39	385
31 ST FTR BMR GP	14	F-84	64	1	-	46	-	17	131	20	331
78 TH FTR INTCP GP	4	F-84	55	40	12	-	2	1	2,019	37	331
33 RD FTR INTCP GP	1	F-84 F-86	3 81	1 58	- 17	- 5	1 -	1 1	7 2,365	2 29	341 322
4 TH FTR INTCP GP	1	F-86	79	57	15	1	3	3	3,167	40	355
81 ST FTR INTCP GP (B)	14	F-86	70	55	9	-	6	-	1,562	22	325
62 ND TR CARR GP (C)	14	C-54	38	29	8	-	1	-	1,829	48	194
314 TH TR CARR GP	14	C-82 C-119	10 50	1 30	1 12	1 -	1 7	6 1	16 2,438	2 49	173 234
316 TH TR CARR GP	14	C-82 C-119	29 26	7 15	6 7	- -	- 4	16 -	126 1,093	43 42	165 246
2601 ST ASSAULT SQ	14	C-82	17	6	9	-	1	1	480	28	159
84 TH BOMB SQ (L)	1	B-45	14	10	3	-	1	-	436	31	1,293
85 TH BOMB SQ (L)	1	B-45	16	12	4	-	-	-	434	27	1,310
161 ST TAC RCN SQ	1	RF-80	19	16	3	-	-	-	592	31	378
363 RD TAC RCN SQ	1	RB-26	16	11	5	-	-	-	897	56	133

COMBAT GROUP	PERSONNEL FACTORS					
COLUMN	12	13	14	15	16	17
	NUMBER OFF AUTH	NUMBER OFF ASGD	NUMBER AMN AUTH	NUMBER AMN ASGD	TOTAL PERS ASGD	% AUTH PERS ASGD
56 TH FTR INTCP GP	108	109	396	353	462	92
52 ND FTR A/W GP	78	68	219	216	284	96
325 TH FTR A/W GP (A)	111	101	316	333	434	102
20 TH FTR BMR GP	101	105	367	396	501	107
31 ST FTR BMR GP	101	108	367	395	503	107
78 TH FTR INTCP GP	101	122	367	375	497	106
33 RD FTR INTCP GP	101	104	367	392	496	106
4 TH FTR INTCP GP	101	110	349	365	475	106
81 ST FTR INTCP GP (B)	101	110	349	492	602	134
62 ND TR CARR GP (C)	142	143	454	449	592	99
314 TH TR CARR GP	190	172	476	455	627	94
316 TH TR CARR GP	99	91	304	269	360	89
2601 ST ASSAULT SQ	43	40	140	130	170	93
84 TH BOMB SQ (L)	55	53	193	185	238	96
85 TH BOMB SQ (L)	55	56	193	185	241	97
161 ST TAC RCN SQ	28	25	115	116	141	99
363 RD TAC RCN SQ	78	42	176	193	235	93

COMBAT GROUP	COST FACTORS								
COLUMN	18	19	20	21	22	23	24	25	26
	TOTAL PERS ORG MAINT (07110)	PAYROLL COST ORG MAINT (07110)	TOTAL PERS UNIT OVERHEAD (07061)	PAYROLL COST UNIT OVERHEAD (07061)	COST OF FUEL CMBT ACFT (07102)	TOTAL PERS CMBT UNIT (07270)	PAYROLL COST - COMBAT UNIT (07270)	TOTAL PERS - MISSION ACFT (05102 - 05104)	PAYROLL COST - MISSION ACFT (05102 - 05104)
56 TH FTR INTCP GP	278	42,264	63	14,761	32,344 36,266	440	90,856	25 14	4,454 2,420
52 ND FTR A/W GP	163	25,166	51	11,472	18,631	265	59,865	58	10,476
325 TH FTR A/W GP (A)	190	27,874	50	11,673	21,274	289	61,738	57	12,369
20 TH FTR BMR GP	347	47,798	52	8,780	121,995	498	99,758	74	12,204
31 ST FTR BMR GP	323	46,245	44	8,181	7,812	493	100,341	89	13,576
78 TH FTR INTCP GP	338	49,000	48	10,712	91,874	492	102,029	111	22,056
33 RD FTR INTCP GP	336	49,612	71	13,231	326 129,574	503	101,793	7 118	1,032 17,793
4 TH FTR INTCP GP	295	44,542	64	12,705	146,095	470	101,939	149	23,701
81 ST FTR INTCP GP (B)	198	30,353	36	7,020	36,600	306	63,505	89	13,736
62 ND TR CARR GP (C)		COST DATA NOT RECEIVED							
314 TH TR CARR GP	305	46,636	51	9,515	123,282	625	149,375	28 16	4,365 2,606
316 TH TR CARR GP	165	25,540	14	3,017	60,842	333	81,871	-	-
2601 ST ASSAULT SQ	91	13,675	-	-	15,363	165	37,236	-	-
84 TH BOMB SQ (L)	169	26,198	-	-	73,304	213	47,389	-	-
85 TH BOMB SQ (L)	177	27,760	-	-	73,956	225	50,183	-	-
161 ST TAC RCN SQ	68	9,786	-	-	30,595	113	20,210	-	-
363 RD TAC RCN SQ	124	18,701	-	-	24,021	176	35,487	-	-

SOURCE: COST CONTROL REPORTS, AF FORMS 320 & 322, RCS: AF-FO-F22C
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
CONAC PERSONNEL STRENGTH REPORT, RCS: FS-P2B

NOTES: (A) INCLUDES 318TH & 319TH FTR A/W SQS
(B) INCLUDES 93 RD FTR INTCP SQ
(C) INCLUDES 4TH TR CARR SQ

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HQ, CONAC
JULY 1950

COMPARATIVE DATA FOR PROGRESS AND MANAGEMENT ANALYSIS

TENANT AIR FORCE RESERVE TRAINING CENTERS

CONTINENTAL AIR COMMAND

JUNE 1950

	AIRCRAFT - FLYING HOUR FACTORS											PERSONNEL FACTORS							COST FACTORS				
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
AFRTC	AIR FORCE	TYPE ACFT	AVG NO ACFT ON HAND	AVG NO ACFT IN COMM	AVG NO ACFT OUT (MAINT)	AVG NO ACFT OUT (T.O COMP)	AVG NO ACFT OUT (AOCP)	AVG NO ACFT OUT (OTHER)	TOTAL HRS FLOWN	HRS FLOWN PER ACFT (ON HAND)	GALLONS FUEL PER HR	NUMBER OFF AUTH	NUMBER OFF ASGD	NUMBER AMN AUTH	NUMBER AMN ASGD	TOTAL MIL PERS ASGD	% AUTH MIL PERS ASGD	TOTAL NO CIV EMPLOYED	TOTAL PERS ORG MAINT (07110)	PAYROLL COST ORG MAINT (07110)	COST OF FUEL - ASSIGNED ACFT (07102)	TOTAL PERS-MAINT & TRNG FUNCTION (07270)	PAYROLL COST-MAINT & TRNG FUNCTION (07270)
2233 RD MITCHEL	1	C-46 T-7, T-11	17 21	14 18	3 3	- -	- -	- -	509 400	30 19	151 39	22	21	189	202	223	106	39	174	34,435	24,987	177	35,796
2346 TH HAMILTON	4	C-46 T-7, T-11	6 21	4 19	2 1	- -	- -	- 1	57 645	10 31	127 41	22	22	189	194	216	102	56	179	39,764	6,369	208	47,829
2242 ND SELFRIDGE	10	C-46 T-7, T-11	12 19	10 14	1 3	- -	1 2	- -	839 831	70 44	144 39	22	24	215	228	252	106	59	180	40,307	30,755	192	44,565
2469 TH SCOTT	10	C-46 T-7, T-11	12 20	9 17	2 3	- -	1 -	- -	515 981	43 49	155 40	22	21	215	249	270	114	61	200	40,442	23,994	216	44,944
2473 RD OFFUTT	10	C-46 T-7, T-11	11 18	9 14	2 3	- 1	- -	- -	676 793	61 44	153 37	22	20	215	215	235	99	65	159	30,091	27,274	169	33,286
2592 ND TINKER	14	B-26 C-47 T-7, T-11	11 1 20	9 1 17	2 - 2	- - -	- - 1	- - -	616 98 748	56 98 37	132 89 41	23	22	225	285	307	124	60	206	40,931	23,860	258	52,580

SOURCE: COST CONTROL REPORTS, AF FORMS 320 & 322, RCS: AF-FO-F22C
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
CONAC PERSONNEL STRENGTH REPORT, RCS: FS-P2B

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COMPARATIVE DATA FOR PROGRESS AND MANAGEMENT ANALYSIS
NON-TENANT AIR FORCE RESERVE TRAINING CENTERS
CONTINENTAL AIR COMMAND
JUNE 1950

	AIRCRAFT - FLYING HOUR FACTORS											PERSONNEL FACTORS							COST FACTORS				
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
AFRTC	AIR FORCE	TYPE ACFT	AVG NO ACFT ON HAND	AVG NO ACFT IN COMM	AVG NO ACFT OUT (MAINT)	AVG NO ACFT OUT (T.O. COMP)	AVG NO ACFT OUT (AOCP)	AVG NO ACFT OUT (OTHER)	TOTAL HRS FLOWN	HRS FLOWN PER ACFT (ON HAND)	GALLONS FUEL PER HR	NUMBER OFF AUTH	NUMBER OFF ASGD	NUMBER AMN AUTH	NUMBER AMN ASGD	TOTAL MIL PERS ASGD	% AUTH MIL PERS ASGD	TOTAL NO CIV EMPLOYED	TOTAL PERS ORGN MAINT (07110)	PAYROLL COST ORGN MAINT (07110)	COST OF FUEL - ASGD ACFT (07108)	TOTAL PERS MAINT & TRNG FUNCTIONS (07170)	PAYROLL COSTS - MAINT & TRNG FUNCTIONS (07170)
2230 TH FLOYD BENNETT	1	C-47 T-7 T-11	17 23	16 22	1 1	- -	- -	- -	1,452 457	85 19	86 40	19	21	269	331	352	131	115	176	35,917	22,461	178	36,876
2234 TH HANSCOM	1	C-46 T-7 T-11	14 20	12 16	1 3	- -	1 1	- -	658 1,096	47 55	136 35	34	37	375	406	443	108	151	208	42,500	26,090	212	42,485
2343 RD PORTLAND	4	C-46 T-7 T-11	26 18	25 17	1 1	- -	- -	- -	1,701 1,157	65 64	164 39	34	36	400	417	453	104	130	179	41,753	46,292	179	41,753
2347 TH LONG BEACH	4	B-26 T-7 T-11	35 37	22 24	7 8	- -	6 4	- 1	2,347 1,916	68 52	153 42	43	48	589	620	668	106	174	346	72,931	86,474	373	80,380
2236 TH GODMAN	1	C-47 T-7 T-11	20 20	18 14	2 3	- -	- 2	- 1	1,889 671	94 33	91 40	33	27	298	345	372	112	111	176	39,402	36,562	182	42,360
2237 TH NEW CASTLE	1	C-46 T-7 T-11	13 19	6 8	6 8	- -	1 3	- -	650 529	50 28	138 39	33	24	368	392	416	104	117	162	32,539	22,160	170	35,736
2239 TH GR. PITTSBURGH	1	C-46 T-7 T-11	15 20	12 17	2 3	- -	1 -	- -	1,066 1,232	70 126	142 36	34	27	372	376	403	99	109	160	34,354	38,135	166	40,543
2240 TH CLEVELAND	1	C-46 T-7 T-11	25 19	21 14	4 4	- -	- 1	- -	1,773 769	71 47	146 43	33	29	368	456	485	121	83	228	42,912	50,283	246	46,295
2465 TH WOLD-CHAMBERLAIN	10	C-46 T-7 T-11	13 17	11 14	2 2	- -	- 1	- -	794 679	61 40	156 34	34	33	373	419	452	112	138	181	36,297	29,636	203	41,960
2466 TH ATTERBURY	10	C-46 T-7 T-11	13 21	10 18	2 3	- -	1 -	- -	853 662	66 31	137 40	34	32	396	437	469	109	193	167	32,872	29,892	173	34,863
2471 ST O'HARE	10	C-46 T-7 T-11 T-6	32 42 1	26 19 1	3 22 -	- - -	1 1 -	- - -	1,293 1,325 1	40 32 1	127 32 20	45	47	606	614	661	102	272	295	56,995	41,365	316	62,497
2472 MD O'LATHE	10	C-46 C-47 T-7 T-11	7 6 20	4 4 13	2 1 4	- - -	1 1 3	- - -	312 381 820	45 64 41	139 94 42	28	25	282	370	395	127	86	192	37,691	22,277	202	39,760
2596 TH HENSLEY	14	C-46 T-7 T-11	11 20	8 16	2 3	- -	1 1	- -	638 747	58 37	167 43	33	30	355	397	427	120	90	155	32,143	27,044	176	37,849
2584 TH MEMPHIS	14	C-46 T-7 T-11	37 19	30 14	2 3	- -	2 2	3 -	2,561 1,096	69 58	141 44	34	32	368	399	431	107	126	235	47,127	81,232	247	50,607
2585 TH MIAMI	14	C-46 T-7 T-11	10 20	7 16	3 2	- -	- 2	- -	656 926	66 46	140 40	33	33	370	380	413	102	118	191	38,714	9,761	209	44,160
2587 TH BIRMINGHAM	14	B-26 C-47 T-7 T-11	11 1 19	7 1 13	2 - 4	- - -	1 - 2	- - -	155 36 685	14 36 36	152 106 43	33	34	380	396	430	104	97	180	39,324	30,581	194	43,398
2589 TH DOBBINS	14	B-26 C-47 T-7 T-11	33 1 18	28 1 14	3 - 1	- - -	1 - 1	1 - 2	1,952 103 1,104	59 103 61	132 90 43	34	42	385	385	427	101	161	174	36,264	63,750	183	39,096

SOURCE: COST CONTROL REPORTS, AF FORMS 320 & 322, RCS: AF-FO-F28C
ACFT STATUS & FLYING TIME REPORT, AF FORM 110A, RCS: AF-SC-A1A
CONAC PERSONNEL STRENGTH REPORT, RCS: FS-PEB

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JULY 1950

PERCENT IN COMMISSION, PRIMARY AIRCRAFT

BY COMBAT GROUP

1 JUNE 49 - 31 JULY 50

	56 TH FTR INTCP GP	20 TH FTR BMR GP	78 TH FTR INTCP GP	33 RD FTR INTCP GP	31 ST FTR BMR GP	81 ST FTR INTCP GP	4 TH FTR INTCP GP	52 ND FTR A/W GP	325 TH* FTR A/W GP	62 ND TR CARR GP	316 TH TR CARR GP	314 TH TR CARR GP
JUNE	71	65	56	64	55	52	58	45	**44**	61	62	70
JULY	59	45	63	60	46	56	**44**	48	67	55	39	68
AUGUST	67	54	60	46	**34**	51	48	40	53	71	58	64
SEPTEMBER	65	74	60	58	64	42	**39**	54	48	80	48	47
OCTOBER	63	79	77	65	67	31	**8**	44	43	58	79	48
NOVEMBER	78	65	68	42	49	51	13	59	45	63	17	**6**
DECEMBER	76	60	63	65	68	66	**13**	68	38	47	31	29
JANUARY	64	57	68	69	56	56	38	70	**25**	48	42	42
FEBRUARY	58	71	69	75	64	70	51	70	**34**	63	51	40
MARCH	69	68	52	67	**21**	76	73	56	47	61	70	36
APRIL	78	69	54	78	71	71	80	72	53	67	**49**	66
MAY	73	80	69	74	**27**	71	80	67	53	80	30	49
JUNE	72	73	72	71	**2****	76	72	71	50	79	39	51
JULY												

SOURCE: COST CONTROL REPORTS, AF FORMS 320, 322, RCS: AF-FO-F22C
REPORT OF SELECTED AIRCRAFT AND STATUS OPERATIONS
AF FORM 110A, RCS: FS-A1

NOTE: RATINGS SHOWN IN HEAVY TYPE ARE MONTHLY LOWS.

* INCLUDES 318 TH & 319 TH SQUADRONS
** DUE TO ACFT OUT OF COMMISSION FOR PARTS AND PENDING TRANSFER TO SAC

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PERCENT IN COMMISSION , RESERVE AIRCRAFT

TACTICAL AND TRAINER TYPES

BY AFRTC

1 JUNE 49 - 31 JULY 50

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HQ, CONAC
JULY 1950

	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY	
	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR	TAC	TNR
2230 TH AFRTC	86	91	78	98	82	83	79	66	74	65	72	77	85	86	80	86	81	86	75	81	85	84	81	90	94	89		
2472 ND AFRTC	47	72	38	80	62	81	63	68	73	73	76	79	70	75	84	82	81	80	69	78	66	75	71	77	56	67		
2236 TH AFRTC	74	70	88	81	64	71	58	67	52	64	47	48	52	54	60	63	59	57	68	51	71	63	85	66	86	71		
2592 ND AFRTC	76	80	57	83	77	84	75	83	71	81	80	63	82	55	67	60	75	54	69	51	63	80	77	67	80	84		
2589 TH AFRTC	62	72	58	67	61	68	64	70	61	86	72	84	75	87	72	82	77	81	73	82	71	79	74	71	87	74		
2347 TH AFRTC	42	45	53	44	51	50	45	**42**	50	40	56	**46**	55	**45**	62	56	68	65	75	56	**60**	59	**48**	59	64	64		
2587 TH AFRTC	61	62	48	**43**	55	58	**61**	84	-	67	**5**	50	**21**	52	69	51	56	46	61	44	65	54	78	80	69	69		
2234 TH AFRTC	54	75	69	74	61	64	61	61	75	69	72	63	81	81	92	85	89	86	94	86	92	93	81	76	85	80		
2346 TH AFRTC	78	80	82	88	71	89	76	92	78	92	78	88	85	90	82	93	82	90	74	92	86	95	86	95	73	88		
2584 TH AFRTC	81	63	66	49	79	83	83	88	79	87	91	90	87	96	82	85	70	83	80	82	71	63	89	69	81	72		
2473 RD AFRTC	68	82	66	82	73	84	69	85	75	81	84	76	80	82	89	86	76	83	69	90	78	93	78	90	82	75		
2240 TH AFRTC	71	78	85	83	78	77	67	83	74	86	68	85	83	89	81	82	71	77	68	64	70	79	81	77	84	72		
2471 ST AFRTC	75	83	83	81	78	79	65	77	86	82	84	72	81	89	67	72	59	55	60	67	80	63	80	**56**	81	**44**		
2343 RD AFRTC	42	71	60	86	67	88	52	75	68	85	73	89	65	86	62	83	83	85	70	81	85	91	86	90	95	97		
2596 TH AFRTC	63	81	68	78	74	79	62	77	68	81	63	89	72	75	73	78	46	71	69	75	70	86	80	71	78	82		
2469 TH AFRTC	37	52	40	54	48	64	60	76	63	74	77	73	76	81	64	77	67	74	73	74	64	91	87	83	78	85		
2585 TH AFRTC	82	72	**25**	69	76	64	60	60	69	63	53	74	72	79	72	72	60	74	73	80	82	78	66	74	72	83		
2239 TH AFRTC	41	78	28	61	**22**	74	53	75	72	71	78	92	75	80	72	65	72	62	71	56	87	71	76	83	82	85		
2465 TH AFRTC	53	60	70	75	63	69	70	82	59	66	67	80	66	85	44	58	41	50	64	67	85	83	89	81	85	81		
2242 ND AFRTC	**26**	77	65	80	69	61	47	52	62	55	39	63	62	79	70	81	63	73	77	79	85	79	83	69	80	73		
2233 RD AFRTC	-	-	-	-	-	-	-	-	-	-	34	57	71	88	60	80	54	79	54	76	78	83	87	92	80	87		
2237 TH AFRTC	-	85	-	75	58	**35**	53	82	85	52	55	73	59	71	67	62	48	69	60	70	67	81	56	65	**47**	**44**		
2466 TH AFRTC	52	**40**	63	49	83	38	**42**	46	**49**	**39**	50	60	59	47	**40**	**45**	**36**	**35**	**37**	**43**	75	**52**	77	69	79	85		

SOURCE: COST CONTROL REPORTS, AF FORMS 320, 322, RCS: AF-FO-F22C
REPORT OF SELECTED AIRCRAFT AND STATUS OPERATIONS
AF FORM 110A, RCS: FS-A1

NOTE: RATINGS SHOWN IN HEAVY TYPE ARE MONTHLY LOWS

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EXPLANATION OF GRAPHIC PRESENTATION ON AVERAGE IN-COMMISSION RATES, PRIMARY AIRCRAFT BY COMBAT GROUP

The graphic presentation reflects average in-commission rates for combat aircraft by unit for the periods considered. Combat type aircraft alone were included in this study, T-33, T-6 and F-51 types were excluded for the fighter units, and only the tactical type cargo aircraft, i.e., C-82, C-54, and C-119, were included for the troop carrier groups. The percentage figures were developed from the hours on hand and hours in-commission as extracted from the monthly consolidated AF Form 110A. In instances when units were in transition from one type tactical aircraft to another the data for both types were combined. Basic data from which this presentation was developed is reflected on Page 48.

COMMENT

COMPARISON OF THE IN-COMMISSION RATES OF THE COMBAT UNITS FOR JUNE WITH THE CONAC STANDARD (75%) INDICATES THAT THE 62ND TROOP CARRIER GROUP AND THE 81ST FIGHTER-INTERCEPTOR GROUP ARE THE ONLY GROUPS WHICH EQUALLED OR EXCEEDED THE CONAC STANDARD. THE LOW IN-COMMISSION RATES OF THE 314TH AND 316TH TROOP CARRIER GROUPS MAY BE ATTRIBUTED TO THE CONVERSION OF THE UNITS FROM C-82 TO C-119 AIRCRAFT. THE 31ST FIGHTER BOMBER GROUP REFLECTED A LOW IN-COMMISSION RATE DUE TO AOCP'S AND OTHER REASONS PENDING TRANSFER TO SAC.

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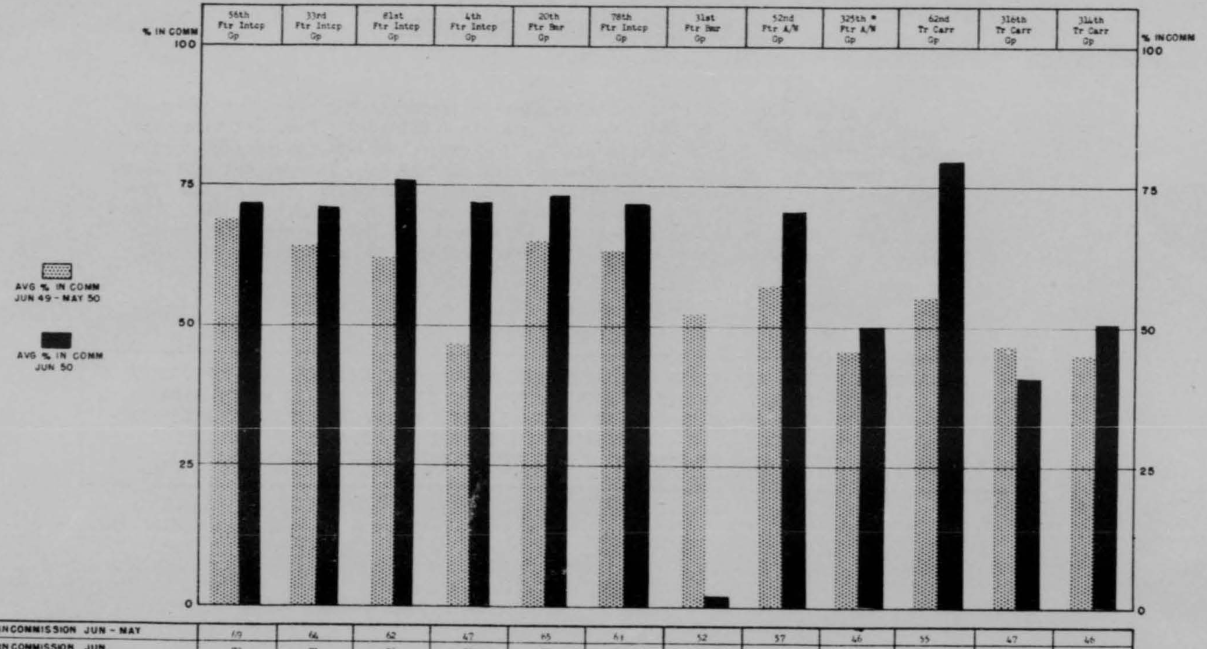
AVERAGE IN COMMISSION RATES, PRIMARY AIRCRAFT

BY COMBAT GROUP

1 JUNE 49 - 31 MAY 50 VS JUNE 50

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



	56th Ftr Intcp Gp	33rd Ftr Intcp Gp	81st Ftr Intcp Gp	4th Ftr Intcp Gp	20th Ftr Bmr Gp	78th Ftr Intcp Gp	31st Ftr Bmr Gp	52nd Ftr A/W Gp	325th * Ftr A/W Gp	62nd Tr Carr Gp	316th Tr Carr Gp	314th Tr Carr Gp
% INCOMMISSION JUN - MAY	69	64	62	47	65	61	52	57	46	55	47	46
% INCOMMISSION JUN	72	71	76	72	73	72	2	71	50	79	39	51
AVG A/C ON HAND JUN - MAY	79	73	53	77	67	58	55	25	36	39	30	44
AVG A/C ON HAND JUN	70	81	68	79	66	55	64	24	32	37	55	60
AVG HRS FLOWN / A/C O/H JUN - MAY	19	19	18	13	24	33	20	20	20	40	35	33
AVG HRS FLOWN / A/C O/H JUN	19	29	27	40	39	37	2	31	21	49	22	41
TYPE A/C	F-80, F-86	F-86	F-86	F-86, F-80	F-84	F-84	F-84	F-82F	F-82F, F-94	C-82, C-54D	C-82, C-119	C-82A, C-119B

SOURCE: COST CONTROL REPORTS, AF FORMS 320,322, RCS AF-FO-F22C
REPORT OF SELECTED AIRCRAFT AND STATUS OPERATIONS
AF FORM 110A, RCS: FS-A1

* INCLUDES 319TH SQUADRON

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EXPLANATION OF GRAPHIC PRESENTATION ON AVERAGE IN-COMMISSION RATES, RESERVE TACTICAL AIRCRAFT BY AIR FORCE RESERVE TRAINING CENTER

The graphic presentation reflects average in-commission rates for Reserve Tactical type aircraft by AFRTC for the periods considered. Tactical type aircraft alone were included in this study. In-Commission data for reserve trainer type aircraft is included in the presentation on Page 55. The percentage figures were developed from the hours on hand and hours in-commission as extracted from the consolidated Report of Aircraft Status and Operations on AF Form 110A. The ConAC Standard shown was extracted from existing ConAC Maintenance directives. Basic data from which this presentation was developed is reflected on Page 49.

COMMENT

ALL AFRTC'S EXCEPT THE 2472ND AT OLATHE, THE 2237TH AT NEW CASTLE, AND THE 2346TH AT HAMILTON, REFLECT A HIGH IN-COMMISSION RATE DURING JUNE THAN FOR THE 12 MONTHS AVERAGE. THE DECREASE IN THE IN-COMMISSION RATE AT 2346TH IS NOT CONSIDERED PARTICULARLY SIGNIFICANT. THE DECREASE AT THE 2472ND IS PROBABLY DUE IN PART TO THE MOVE OF THIS AFRTC FROM FAIRFAX TO OLATHE. THE DECREASE AT THE 2237TH SHOULD BE INVESTIGATED LOCALLY.

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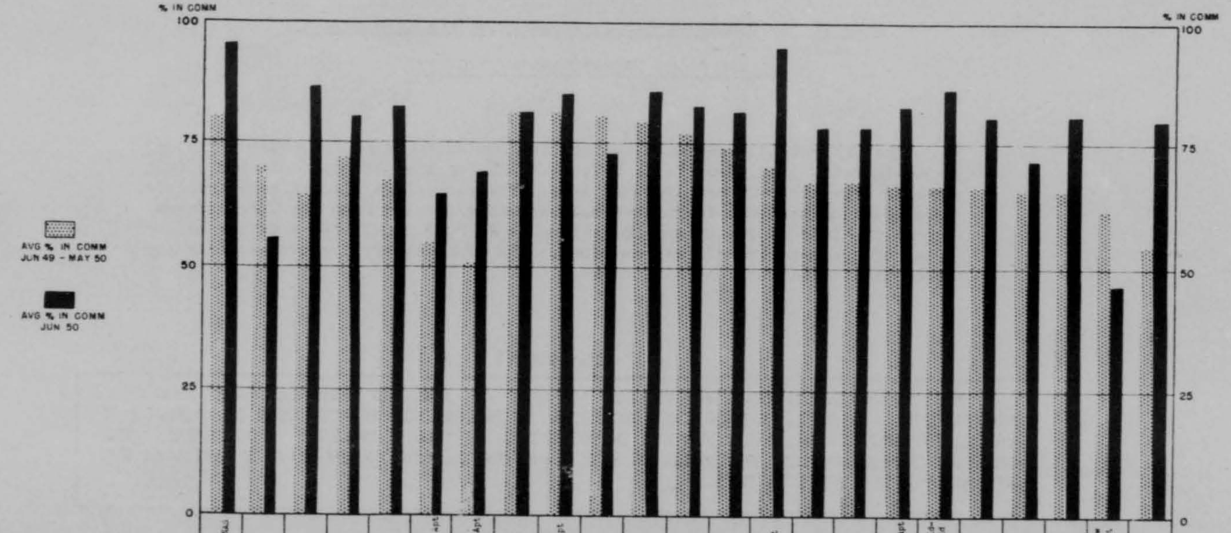
AVERAGE INCOMMISSION RATES, RESERVE TACTICAL AIRCRAFT
BY AIR FORCE RESERVE TRAINING CENTER
JUN 49 - MAY 50 VS JUN 50

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



	2230th AFRTC Floyd Bennett NAS	2472nd AFRTC Olathe NAS	2236th AFRTC Godman AFB	2592nd AFRTC Tinker AFB	2589th AFRTC Dobbins AFB	2347th AFRTC Long Beach Mun Apt	2587th AFRTC Birmingham Mun Apt	2584th AFRTC Memphis Mun Apt	2240th AFRTC Cleveland Mun Apt	2346th AFRTC Hamilton AFB	2234th AFRTC Hanscom Apt	2473rd AFRTC Offutt AFB
% INCOMMISSION JUN-MAY	80	70	64	72	68	55	51	81	81	80	79	77
% INCOMMISSION JUNE	94	56	86	80	87	64	69	81	84	73	85	82
AVG A/C ON HAND JUN-MAY	15	13	15	18	17	34	14	17	12	17	13	11
AVG A/C ON HAND JUNE	18	13	20	12	35	37	12	37	25	6	14	11
AVG HRS FLOWN / A/C O/H JUN-MAY	37	45	35	23	31	32	25	46	41	48	35	28
AVG HRS FLOWN / A/C O/H JUNE	81	53	94	60	58	68	16	69	71	10	16	61
TYPE A/C	C-47	C-47	C-47	B-26	B-26	B-26	B-26	C-46	C-46	C-46	C-46	C-46

	2471st AFRTC O'Hare Int Apt	2343rd AFRTC Portland Mun Apt	2596th AFRTC Hensley Field	2469th AFRTC Scott AFB	2239th AFRTC Gtr Pittsburgh Apt	2465th AFRTC Wold-Chamberlain Field	2233rd AFRTC Mitchel AFB	2585th AFRTC Miami Int Apt	2242nd AFRTC Selfridge AFB	2237th AFRTC New Castle County Apt	[illegible] AFRTC Atterbury AFB
% INCOMMISSION JUN-MAY	74	71	68	68	67	67	67	66	66	61	54
% INCOMMISSION JUNE	81	95	78	78	82	85	80	72	80	47	79
AVG A/C ON HAND JUN-MAY	27	12	17	13	12	12	12	12	13	13	14
AVG A/C ON HAND JUNE	32	26	11	12	14	13	17	10	12	13	13
AVG HRS FLOWN / A/C O/H JUN-MAY	31	40	41	25	34	43	34	38	41	25	36
AVG HRS FLOWN / A/C O/H JUNE	40	65	58	43	75	61	41	64	70	50	66
TYPE A/C	C-46	C-46	C-46	C-46	C-46	C-46	C-46	C-46	C-46	C-46	C-46

SOURCE: COST CONTROL REPORTS, AF FORMS 320, 322, RCS: AF-FO-F22C
REPORT OF SELECTED AIRCRAFT AND STATUS OPERATIONS
AF FORM 110A, RCS: FS-A1

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EXPLANATION OF GRAPHIC PRESENTATION ON AVERAGE IN-COMMISSION RATES, RESERVE TRAINER TYPE AIRCRAFT BY AIR FORCE RESERVE TRAINING CENTER

The presentation reflects average in-commission rates for Reserve Trainer type aircraft, i.e., T-6, T-11, T-7, by AFRTC for the periods indicated. Only trainer type aircraft are included here. The percentage figures were developed from hours on hand and hours in-commission as extracted from the Consolidated Report of Aircraft Status and Operations on AF Form 110A. The data for all types of trainer aircraft was combined. The ConAC standard shown was extracted from existing maintenance directives.

COMMENT

THE IN-COMMISSION RATES FOR TRAINER AIRCRAFT FOR JUNE ARE GENERALLY LOWER THAN THOSE FOR TACTICAL AIRCRAFT. SIGNIFICANT DECREASES IN IN-COMMISSION RATES WERE EXPERIENCED AT THE 2471ST AND 2237TH, WHERE FURTHER INVESTIGATION BY THOSE CONCERNED IS DESIRABLE. THE GREATEST IMPROVEMENT IN IN-COMMISSION RATE IS AT THE 2466TH, AN INCREASE OF 39% OVER THE AVERAGE FOR THE PREVIOUS YEAR.

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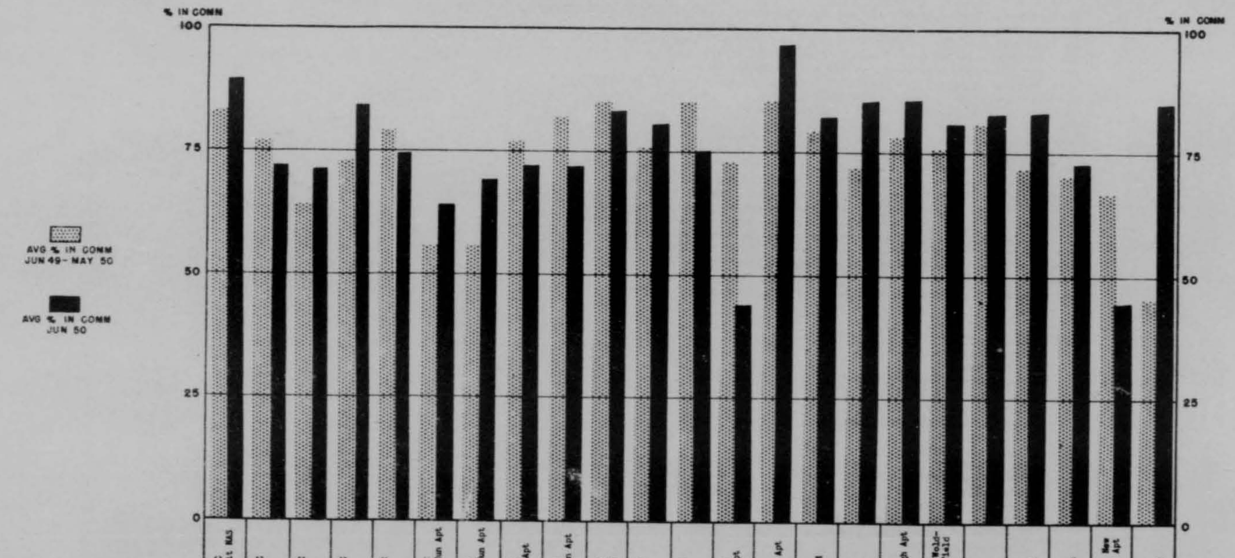
AVERAGE IN COMMISSION RATES, RESERVE TRAINER TYPE AIRCRAFT

BY AIR FORCE RESERVE TRAINING CENTERS

JUN 49 – MAY 50 VS JUN 50

PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
JULY 1950



	2230th AFRTC Floyd Bennett NAS	2472nd AFRTC Olathe NAS	2236th AFRTC Godman AFB	2592nd AFRTC Tinker AFB	2589th AFRTC Dobbins AFB	2347th AFRTC Long Beach Mun Apt	2587th AFRTC Birmingham Mun Apt	2584th AFRTC Memphis Mun Apt	2240th AFRTC Cleveland Mun Apt	2346th AFRTC Hamilton AFB	2234th AFRTC Hanscom Apt	2473rd AFRTC Offutt AFB	2471st AFRTC O'Hare Int Apt	2343rd AFRTC Portland Mun Apt	2596th AFRTC Hensley Field	2469th AFRTC Scott AFB	2239th AFRTC Gtr Pittsburgh Apt	2465th AFRTC Wold-Chamberlain Field	2233rd AFRTC Mitchel AFB	2585th AFRTC Miami Int Apt	2242nd AFRTC Selfridge AFB	2237th AFRTC New Castle County Apt	2466th AFRTC Atterbury AFB
% IN COMMISSION JUN - MAY	83	77	64	73	79	56	56	77	82	90	76	85	73	85	79	72	73	71	81	72	71	67	46
% IN COMMISSION JUNE	89	67	71	84	74	64	69	72	72	88	80	75	44	97	82	85	85	81	87	83	73	44	85
AVG A/C ON HAND JUN - MAY	28	26	32	29	32	50	27	24	29	31	33	25	47	25	27	25	30	28	14	23	34	31	41
AVG A/C ON HAND JUNE	24	20	20	20	19	37	19	20	19	21	21	18	44	18	20	20	20	17	21	20	19	19	21
AVG HRS FLOWN / A/C O/H JUN-MAY	20	29	14	15	29	26	26	21	21	29	26	22	21	27	31	22	28	31	18	33	25	12	20
AVG HRS FLOWN / A/C O/H JUNE	19	41	34	37	58	52	36	55	40	31	52	44	30	64	37	49	62	40	26	46	44	28	31

SOURCE: COST CONTROL REPORTS, AF FORMS 320, 322, RCS: AF-FO-F22C
REPORT OF SELECTED AIRCRAFT AND STATUS OPERATIONS
AF FORM 110A, RCS: FS – A1

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Continental Air Command
Summary of Operating Costs
(By Organization)
March 1950

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COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
5 MAY 1950

CONTINENTAL AIR COMMAND

SUMMARY OF OPERATING COSTS

(BY ORGANIZATION)

MARCH 1950

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PART I OPERATING COSTS SELECTED FUNCTIONS.
PART II COST OF MANAGEMENT & PRESERVATION OF REAL ESTATE FACILITIES.

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PART I
COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
5 MAY 1950

RECAPITULATION OF CONTINENTAL AIR COMMAND

OPERATING COSTS

MARCH 1950

LINE	ITEM (A)	HEADQUARTERS (B)	WINGS (C)	AFRTC'S (D)	ALL OTHER ORGANIZATIONS (E)	AGGREGATE (F)
1	No. of Personnel Reported					
2	Officers	2,286	3,069	769	2,381	8,505
3	Airmen	5,006	20,952	9,051	20,914	55,923
4	Civilians	1,161	3,012	2,213	1,686	8,0[illegible]
5						
6	TOTAL PERSONNEL	8,453	27,033	12,033	24,981	72,500
7						
8	Payroll Costs					
9	Officers	$ 1,375,411	$ 1,549,049	$ 417,420	$ 1,148,882	$ 4,490,762
10	Airmen	1,008,283	3,340,841	1,745,027	2,852,188	8,946,339
11	Civilians	314,659	807,577	605,258	454,904	2,182,398
12						
13	Total Payroll	$ 2,698,353	$ 5,697,467	$ 2,767,705	$ 4,455,974	$ 15,619,499
14						
15	▲ Non-Personnel Costs	$ 598,134	$ 4,166,472	$ 2,026,060	$ 1,770,027	$ 8,560,693
16						
17	TOTAL COSTS	$ 3,296,487	$ 9,863,939	$ 4,793,765	$ 6,226,001	$ 24,180,192

▲ Non-Personnel Costs: Includes Miscellaneous Costs, Contractual Services and Supplies.

SOURCE: Cost Control Reports - AF Forms 321, 321A, 320, 320A, 322 & 322A.

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
5 May 1950

OPERATING COSTS

COMMAND AND INTERMEDIATE HEADQUARTERS

MARCH 1950

Item (A)	Account Code (B)	Hq ConAC Mitchel (C)	Hq TAC Langley (D)	Hq 1st AF Mitchel (E)	Hq 4th AF Hamilton (F)	Hq 9th AF Langley (G)	Hq 10th AF Selfridge (H)	Hq 12th AF Brooks (I)	Hq 14th AF Robins (J)	Hq 8th Air Div Pope (K)	Hq 9th Air Div Pope (L)	Hq 25th Air Div Everett, Wash (M)	Hq 26th Air Div Roslyn, NY (N)	Hq 28th Air Div Hamilton (O)	Hq 30th Air Div Selfridge (P)	Hq 32d Air Div Stewart (Q)	Hq EADF Mitchel (R)	Hq WADF Hamilton (S)
No. of Personnel Reported																		
Officers		326	63	270	292	318	349	253	289	28	14	11	10	6	4	7	25	21
Airmen		705	46	703	565	794	708	488	777	28	24	23	30	15	11	21	45	23
Civilians		344	34	134	115	142	166	95	118	1	1	0	0	0	0	0	7	4
Total Personnel		1,375	143	1,107	972	1,254	1,223	836	1,184	57	39	34	40	21	15	28	77	48
Payroll Costs																		
Officers		$ 198,476	$ 41,320	$ 159,928	$ 175,840	$ 185,559	$ 209,793	$ 131,534	$ 175,324	$ 17,484	$ 8,139	$ 6,101	$ 5,907	$ 3,344	$ 2,233	$ 3,558	$ 16,350	$ 14,021
Airmen		125,032	8,092	147,188	125,265	160,769	151,149	102,250	151,965	4,823	3,515	4,227	4,401	2,794	1,884	3,486	7,068	4,175
Civilians		101,710	8,962	35,449	30,961	37,301	39,847	24,296	32,737	247	247	-	-	-	-	-	1,910	992
Total Payroll		$ 425,218	$ 58,374	$ 342,565	$ 332,066	$ 383,629	$ 400,789	$ 278,080	$ 360,026	$ 22,554	$ 11,901	$ 10,628	$ 10,308	$ 6,138	$ 4,117	$ 7,044	$ 25,328	$ 19,388
& Non-Personnel Costs		$ 100,622	$ 5,717	$ 85,867	$ 68,795	$ 98,745	$ 67,654	$ 54,756	$ 100,108	$ 2,207	$ 1,594	$ 1,226	$ 1,361	$ 411	$ 381	$ 2,181	$ 3,780	$ 2,729
Total Costs		$ 525,840	$ 64,291	$ 428,432	$ 400,861	$ 482,374	$ 468,443	$ 332,836	$ 460,134	$ 24,761	$ 13,495	$ 11,854	$ 11,669	$ 6,549	$ 4,498	$ 9,225	$ 29,108	$ 22,117
Costs of Selected Functions																		
Office of CG & VC	20003	$ 10,351	$ 3,126	$ 3,667	$ 4,911	$ 4,474	$ 5,114	$ 4,129	$ 5,610	$ 1,851	$ 1,334	$ 998	$ 922	$ 1,730	$ -	$ 822	$ 1,144	$ 2,333
Air Adj Gen & Historical Section	*	24,460	7,253	17,325	31,783	22,412	28,725	22,653	24,515	2,659	1,719	1,103	992	1,103	198	1,027	3,917	1,439
IG, Air Insp, PM, Flying Safety	**	24,526	-	22,401	20,500	18,180	14,660	14,897	15,411	-	-	-	527	-	-	-	-	-
Public Information Office	20009	4,778	807	2,862	2,097	1,382	1,839	2,039	1,329	118	629	-	-	-	-	-	-	265
Air Surgeon	20207	5,117	-	3,252	3,608	1,565	2,890	2,471	1,082	-	-	-	-	-	-	162	-	-
Total Comptroller Function	20161	61,961	-	23,626	22,379	22,192	21,910	18,320	21,857	-	-	-	598	854	125	-	-	-
Statistical Services	20107	29,002	-	12,227	13,671	13,324	11,922	11,325	13,075	-	-	-	502	854	125	-	-	-
Programs & Costs	***	12,202	-	3,209	3,007	2,427	2,451	1,875	2,699	-	-	-	96	-	-	-	-	-
Total Deputy for Personnel	****	35,016	-	35,673	21,129	28,115	30,521	21,627	29,998	-	-	666	492	317	464	272	-	-
Personnel Services	20217	3,187	-	2,194	1,210	1,303	1,078	946	2,883	-	-	-	195	-	-	-	-	-
Military Personnel	20227	22,857	-	21,028	8,153	16,517	21,326	16,977	12,757	-	-	-	297	-	464	272	-	-
Total Deputy for Operations	*****	74,493	33,742	18,212	22,080	16,984	16,806	14,201	23,351	13,475	5,857	4,153	3,085	1,446	1,380	2,118	15,412	11,372
Operations & Training	20305	26,537	9,833	5,844	8,022	6,947	5,380	4,343	8,170	-	-	-	-	-	682	-	1,414	-
Plans & Requirements	20307	20,950	12,258	3,820	3,718	2,933	1,512	2,233	3,559	-	-	-	-	391	-	-	3,086	7,368
Intelligence	20311	8,343	5,465	685	1,832	2,306	1,844	1,820	2,971	2,308	1,669	784	742	-	125	348	1,305	1,653
Communications & Electronics	20315	12,241	3,542	6,740	6,629	3,557	5,059	3,687	5,079	3,544	518	1,455	368	744	573	800	-	-
Total Deputy for Materiel	20461	67,352	-	22,935	21,665	20,425	25,591	13,471	26,889	1,230	766	1,597	-	215	-	258	-	-
Maintenance	20405	6,578	-	4,300	3,751	1,561	2,019	2,536	1,931	-	-	-	-	-	-	-	-	-
Supply	20407	18,180	-	4,245	4,641	4,670	5,849	4,312	7,989	1,230	768	272	-	215	-	162	-	-
Installations	20413	30,127	-	5,957	5,352	2,011	6,415	6,833	7,441	-	-	291	-	-	-	-	-	-
Hq Sq Administrative Overhead	20503	17,416	2,001	9,224	5,914	8,410	5,675	3,523	13,704	-	-	-	397	-	801	-	-	1,180
Flight Section - Flying	20505	20,784	-	8,370	11,811	26,313	-	1,121	11,710	-	-	-	-	-	-	-	-	772
Flight Section - Maintenance	20507	24,341	-	9,974	-	25,186	650	22,030	21,079	-	-	-	-	-	368	346	-	-
Personnel w/o Duty Assignment	20511	1,047	1,325	384	4,158	4,472	3,777	5,371	6,726	306	256	-	1,302	-	-	1,328	-	504
Communications Contractual	20527	1,113	183	547	353	335	477	174	1,081	105	70	-	17	5	6	33	21	33
TDY	20529	24,570	1,137	9,495	13,207	8,393	14,596	9,409	14,704	170	114	177	209	-	-	124	1,020	284
Overtime Paid Civilians	20530	-		-	-	-	-	-	92	-	-	-	-	-	-	-	-	-
Rentals - Leased Facilities	20531	-	-	2,006	-	-	-	-	887	-	-	-	-	-	-	-	-	-
Personnel at School	21003	8,333	1,662	3,112	589	8,723	13,431	4,203	1,393	-	-	-	124	-	458	-	-	-
Air Reserve	21005	1,714	-	21,325	12,986	10,892	21,710	7,844	9,791	-	-	-	-	-	-	-	-	-
Air National Guard	21007	-	-	36,708	34,512	27,591	46,668	16,032	20,735	-	-	-	-	-	-	-	-	-
Air ROTC	21009	6,200	-	52,121	60,085	83,300	102,843	59,128	59,979	-	-	-	-	-	-	-	-	-
Air Scout Liaison	21049.01	-	-	334	444	506	732	444	384	-	-	-	-	-	-	-	-	-
Other Liaison Activities	21049.02	83	-	229	4,304	-	822	-	1,989	-	-	-	-	-	-	-	-	-
Aviation Cadet & OCS Procurement	21049.03	-	-	3,374	1,636	1,886	5,239	1,498	5,090	-	-	-	-	-	-	-	-	-

* Account Codes 20007 ≠ 20015
** " " 20006 ≠ 20005 ≠ 20213 ≠ 20309
*** " " 20109 ≠ 20113
**** " " 20261 less 20213 less 20207
***** " " 20361 less 20309

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
5 May 1950

OPERATING COSTS

WINGS

MARCH 1950

	Item (A)	Account Code (B)	4th Ftr Intcp Wg Langley (C)	56th Ftr Intcp Wg Selfridge (D)	81st Ftr Intcp Wg Kirtland (E)	20th Ftr Bmr Wg Shaw (F)	31st Ftr Bmr Wg Turner (G)	33d Ftr Intcp Wg Otis (H)	78th Ftr Intcp Wg Hamilton (I)	52d Ftr All Wea Wg McGuire (J)	325th Ftr All Wea Wg Moses Lake (K)	62d Tr Carr Wg McChord (L)	314th Tr Carr Wg Sewart (M)	316th Tr Carr Gp Sewart (N)	161st Tac Rcn Sq Shaw (O)	363d Tac Rcn Gp Langley (P)	318th Ft All Wea Sq McChord (Q)	84th Bomb Sq (L) Langley (R)	85th Bomb Sq (L) Langley (S)	2601st Assault Sq Sewart (T)
1	No. of Personnel Reported																			
2	Officers		289	227	182	273	178	269	316	183	176	337	315	89	30	30	23	43	42	42
3	Airmen		2,789	1,939	1,308	1,836	1,288	1,825	2,686	1,286	1,146	1,961	1,755	242	102	193	87	190	194	109
4	Civilians		628	328	3	251	251	263	428	216	170	272	220	0	0	0	0	0	0	0
6	Total Personnel		3,706	2,494	1,493	2,360	1,717	2,357	3,430	1,685	1,492	2,570	2,290	331	132	223	110	233	236	151
8	Payroll Costs																			
9	Officers		$ 147,432	$ 113,707	$ 92,927	$ 133,000	$ 89,171	$ 133,746	$ 132,603	$ 97,238	$ 91,189	$ 165,876	$ 160,925	$ 47,163	$ 14,359	$ 27,153	$ 11,854	$ 25,671	$ 23,111	$ 21,924
10	Airmen		448,408	292,256	198,714	281,217	203,578	274,290	458,326	210,578	176,923	325,300	281,408	48,619	16,875	23,436	15,618	34,853	36,655	22,787
11	Civilians		167,938	94,593	766	61,122	57,623	62,011	128,036	55,089	44,892	82,448	13,059	-	-	-	-	-	-	-
13	Total Payroll		$ 763,778	$ 500,556	$ 292,407	$ 475,339	$ 350,372	$ 470,047	$ 718,965	$ 362,905	$ 313,004	$ 573,624	$ 455,392	$ 95,782	$ 31,234	$ 50,589	$ 27,472	$ 60,524	$ 59,766	$ 44,711
15	▲ Non-Personnel Costs		$ 561,421	$ 391,441	$ 195,083	$ 522,158	$ 245,284	$ 335,753	$ 313,353	$ 163,344	$ 203,886	$ 452,438	$ 338,107	$ 94,369	$ 44,236	$ 87,179	$ 20,386	$ 71,456	$ 71,562	$ 35,016
17	Total Costs		$1,325,199	$ 891,997	$ 487,490	$ 997,497	$ 595,656	$ 805,800	$1,032,318	$ 526,249	$ 516,890	$1,026,062	$ 793,499	$ 190,151	$ 75,470	$ 137,768	$ 47,858	$ 131,980	$ 131,328	$ 79,727
19	Costs of Selected Functions																			
21	CG and Staff	01051	$ 27,303	$ 22,158	$ 20,374	$ 24,337	$ 19,599	$ 21,477	$ 35,288	$ 20,353	$ 15,706	$ 22,493	$ 21,834	$ 10,626	$ 4,697	$ 11,027	$ -	$ 2,615	$ 1,527	$ 3,406
22	Sq Admin Overhead (AB Gp Units)	02014	10,493	8,203	11,438	5,335	7,488	9,677	7,782	7,468	6,747	9,397	11,903	-	-	-	-	-	-	-
23	Food Services (Mess Halls)	02110	28,951	15,807	10,326	15,136	10,536	12,677	28,810	13,143	9,162	16,442	14,574	-	-	-	25	-	-	-
24	Accounting & Disbursing	02117	12,132	9,639	1,937	8,300	7,134	6,357	14,955	5,176	4,714	6,858	3,298	-	-	-	-	-	-	-
25	Civilian Personnel & Payroll	*	4,613	2,597	-	4,983	-	2,314	2,792	1,621	358	2,008	161	-	-	-	-	-	-	-
26	Personnel Services	02124	12,172	7,035	1,475	7,321	1,694	6,243	11,580	4,434	4,572	3,507	6,531	-	-	-	-	-	-	-
27	Motor Pool	02136	26,545	16,688	7,723	17,815	11,609	13,209	23,772	12,143	10,345	15,655	13,281	-	-	-	153	-	-	-
28	Base Operations	02142	4,459	4,476	1,786	4,678	3,885	3,931	7,384	7,762	5,025	2,558	4,193	-	-	-	-	-	-	-
30	Total Air Installations	02261	165,236	117,332	8,801	73,037	54,436	78,236	110,187	53,777	30,626	46,271	77,099	-	-	-	-	-	-	-
31	Fire Stations & Acft Crash Rescue	02218	15,260	8,101	5,895	9,202	7,216	15,295	16,062	6,586	7,129	5,938	6,452	-	-	-	-	-	-	-
32	Rentals - Leased Facilities	02244	-	93	-	-	174	-	80	-	127	-	-	-	-	-	-	-	-	-
33	Field Maintenance Automotive Equip	02302	29,807	14,654	8,016	11,720	14,881	21,073	10,714	14,154	9,003	18,145	5,379	-	-	-	-	-	-	-
34	Organizational Maint of Admin. Acft	02306	34,340	19,632	8,281	10,988	8,455	24,535	30,362	10,582	6,868	12,914	11,006	-	-	-	-	-	-	-
35	Medical																			
36	Medical Administration	03002	10,001	5,509	1,675	2,830	3,497	7,471	10,104	4,450	4,256	7,431	6,103	-	-	199	-	-	-	-
37	Supplies - Hospital	03004	1,728	36	34	32	19	71	61	43	113	205	110	-	-	-	-	-	-	-
38	Dental Service	03102	4,846	2,655	599	1,852	1,753	2,213	7,312	2,262	2,273	3,804	2,059	-	-	-	-	-	-	-
39	Medical Service & Other Services	03104	11,884	10,791	3,125	7,146	3,972	6,479	14,352	5,369	4,496	4,114	2,514	-	-	-	-	-	-	-
40	X-Ray Service	03106	1,709	978	250	999	795	653	1,038	497	376	[illegible]	770	-	-	-	-	-	-	-
41	Laboratory	03108	1,344	944	318	607	155	340	754	307	270	450	415	-	-	-	-	-	-	-
42	Pharmacy	03110	2,367	1,151	125	984	819	707	1,389	607	936	553	3,138	-	-	-	-	-	-	-
43	Preventive Medicine	03112	1,368	1,073	-	1,282	1,316	522	1,220	287	419	1,025	1,031	-	-	-	-	-	-	-
44	Flight Surgeon	03114	2,930	1,765	274	1,212	478	171	2,379	643	332	1,111	1,436	-	-	-	-	-	-	-
45	Dietetic Service	03116	10,755	4,559	-	3,730	3,574	3,321	5,529	-	3,573	4,290	4,134	-	-	-	-	-	-	-
46	Medical Services	03277	49,950	29,642	6,400	20,624	22,778	26,146	44,118	11,455	13,935	45,075	21,832	-	-	199	-	-	-	-
47	Fuels & Lubes (ABN & Prof Flying)	04108	11,853	14,566	4,225	3,178	4,390	13,033	3,926	8,176	3,639	15,180	4,792	-	-	-	-	-	-	-
48	Subsistence	04112	40,374	25,548	19,964	26,263	13,349	32,864	24,553	[illegible]	17,628	[illegible]	35,327	1,302	1,844	2,469	1,123	2,469	3,195	1,028
49	Separate Rations Paid Airmen	04113	35,758	22,886	14,414	24,950	13,681	14,349	29,658	11,036	11,889	[illegible]	37,924	3,581	1,243	2,921	1,236	2,773	1,343	1,257
50	Personnel w/o Duty Assignment	04114	17,151	10,579	6,317	3,529	-	20,531	8,039	[illegible]	3,345	[illegible]	3,285	461	-	1,643	169	134	-	-
51	Prisoners	04116	2,449	2,070	880	642	453	812	3,260	741	326	[illegible]	143	-	-	80	-	-	-	-
52	Overtime Paid Civilians	04115	1,206	81	-	220	-	758	171	108	1,822	[illegible]	[illegible]	-	-	-	-	-	-	-
53	Field Maintenance & Supply Overhead	05050	11,783	5,147	5,635	3,805	10,301	10,395	7,436	8,130	1,558	1,735	4,551	-	-	-	-	-	-	-
54	Special Mission & Tenant Aircraft	05108	15,812	1,149	-	1,104	-	-	13,891	-	-	[illegible]	-	-	-	-	-	-	-	-
55	** Non-Aeronautical Maintenance	05112	276	2,158	-	1,996	3,211	7,718	3,327	1,578	5,134	[illegible]	6,823	-	-	-	-	-	-	-
56	Aircraft Shop Maintenance	05160	71,858	38,701	13,078	32,242	25,048	43,958	63,321	30,922	30,891	[illegible]	41,498	-	-	-	-	-	-	-
58	Total Supply Function	05450	65,625	31,272	12,335	35,719	35,481	27,535	47,750	32,636	29,241	40,517	25,513	-	271	127	-	370	235	-
59	Supply Control	05402	22,193	12,797	3,234	11,810	10,363	10,681	21,117	11,401	9,790	14,159	13,340	-	132	-	-	-	-	-
60	Supply Warehouse	05404	29,265	6,533	8,949	14,721	19,621	11,078	16,242	16,408	14,128	12,855	10,226	-	-	-	-	-	-	-
61	Subsistence Handling	05406	4,750	452	-	1,822	1,801	1,511	2,727	550	401	1,289	1,092	-	-	-	-	-	-	-
62	Commissary Sales Store	05408	1,512	2,907	311	1,489	1,313	1,063	4,780	-	467	2,956	1,369	-	-	-	-	-	-	-
63	Purchasing & Contracting Office	05410	2,721	2,576	-	1,479	1,654	1,280	2,336	1,376	1,018	2,434	1,508	-	-	-	-	-	-	-
64	Salvage & Surplus Property Activity	05412	3,550	1,443	221	1,797	1,389	698	1,886	-	495	1,044	894	-	-	-	-	-	-	-
65	Combat Group Operations & Tng Ovhd	07001	14,506	16,197	13,670	12,047	2,879	11,998	10,551	12,865	11,905	12,227	12,943	1,926	-	-	1,322	-	-	1,064
66	Fuels & Lubes - Mission Aircraft	07102	100,402	96,839	85,618	236,434	85,652	138,368	81,443	14,779	53,589	90,521	97,688	31,092	35,470	18,649	12,561	32,056	33,552	21,232
67	Orgn Maintenance (Combat Group)	07110	54,079	37,296	46,029	44,688	23,312	61,481	65,139	30,213	34,484	34,178	41,256	45,178	9,985	21,496	14,844	29,341	30,103	12,037
68	Personnel at School	09102	12,654	11,322	7,126	12,294	9,642	5,296	18,445	5,061	10,075	11,126	8,634	703	430	470	154	979	682	427
69	Special Missions (Group A)	09161	23,539	13,095	7,128	20,558	9,804	6,506	28,215	7,144	10,075	17,819	-	703	802	470	156	979	682	427
70	Supplies & Services Furnished Others																			
71	(Non-USAF)	12114	5,976	1,159	-	-	-	5,553	10,131	19	-	382	1,344	-	-	-	-	-	-	-
72	Supplies & Services Furnished ANG	12122	783	707	-	-	-	-	-	1,493	-	285	549	-	-	-	-	-	-	-
73	Tenant Organizations of Other Major																			
74	Commands	14555	117,010	50,391	-	-	-	-	154,661	-	-	87,070	-	-	-	-	-	-	-	-

76 * 02122 / 02171

77 ** Non-Aeronautical Maintenance Performed in Aircraft Field Maintenance Shops

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Part I
Comptroller Chart 6
Prepared by:
Director Programs & Costs
Hq ConAC
5 May 1950

OPERATING COSTS

AIR FORCE RESERVE TRAINING CENTERS

GROUP I — MARCH 1950 — GROUP II

Item (A)	Account Code (B)	2466th Atterbury (C)	2234th Hanscom (D)	2589th Dobbins (E)	2239th Gr Pitts (F)	2472d Fairfax (G)	2236th Godman (H)	(I)	2592d Tinker (J)	2240th Schlegel AF Plant (K)	2242d Selfridge (L)	2469th Scott (M)	2346th Hamilton (N)	[illegible] Offutt (O)	[illegible] Mitchel (P)	(Q)
No. of Personnel Reported																
Officers		38	36	45	32	31	35		22	24	24	21	24	[illegible]	25	
Airmen		472	414	457	505	425	399		303	329	191	266	274	[illegible]	245	
Civilians		95	147	90	100	85	98		38	7	58	50	39	45	36	
Total Personnel		605	597	592	637	541	532		363	360	273	337	337	366	306	
Payroll Costs																
Officers		$ 20,748	$ 19,304	$ 24,181	$ 17,607	$ 16,845	$ 18,102		$ 11,811	$ 13,990	$ 12,016	$ 11,363	$ 14,191	$ 14,252	$ 13,365	
Airmen		77,195	73,871	87,239	89,449	83,303	69,800		59,157	68,426	35,391	41,910	46,997	41,675	48,610	
Civilians		24,925	41,924	22,284	28,046	21,044	27,909		9,702	1,793	18,768	11,611	18,234	12,034	9,481	
Total Payroll		$ 122,868	$ 135,099	$ 133,704	$ 135,102	$ 121,192	$ 115,811		$ 80,670	$ 84,209	$ 66,175	$ 76,904	$ 79,422	$ 67,961	$ 71,456	
▲ Non-Personnel Costs		$ 297,212	$ 71,809	$ 88,702	$ 101,507	$ 71,120	$ 52,607		$ 46,662	$ 61,460	$ 46,110	$ 35,910	$ 49,429	$ 40,980	$ 45,532	
Total Costs		$ 420,080	$ 206,908	$ 222,406	$ 236,609	$ 192,312	$ 168,418		$ 127,332	$ 145,669	$ 112,285	$ 112,814	$ 128,923	$ 108,941	$ 117,988	
Costs of Selected Functions																
CO and Staff	01051	$ 8,507	$ 11,626	$ 15,930	$ 10,535	$ 9,562	$ 10,756		$ 5,281	$ 12,058	$ 7,406	$ 5,622	$ 6,335	$ 9,672	$ 9,301	
Food Services (Mess Halls)	02110	3,347	2,727	2,818	3,144	4,713	2,877		185	-	-	-	-	228	-	
Civilian Personnel & Payroll	*	246	280	260	550	738	473		-	-	-	-	-	261	-	
Motor Pool	02136	5,548	3,214	4,997	6,305	3,309	4,104		116	470	149	477	-	95	-	
Work Details	02138	-	-	-	558	425	-		-	-	-	-	-	-	140	
Base Operations	02142	3,496	4,378	3,298	4,536	5,320	4,857		-	5,459	3,001	3,899	2,829	3,563	3,695	
Air Installation Office & Shop Ovhd	02202	1,680	2,412	561	3,828	1,954	1,521		-	-	-	-	-	-	-	
Maintenance of Air Instl Machinery	02204	38	1,095	-	44	111	-		-	-	-	-	-	-	-	
Maintenance Buildings & Other Structures	02206	3,487	3,108	1,924	2,062	443	2,062		-	-	-	-	-	-	-	
Operation Utility Plants & Systems	02216	10,182	10,662	7,527	6,514	2,368	1,632		-	-	-	-	-	-	-	
Fire Stations & Crash Rescue	02218	3,585	6,280	6,101	5,425	7,388	4,394		-	140	-	-	-	-	-	
Rentals - Leased Facilities	02244	-	2,083	-	300	1,062	-		-	-	-	-	-	-	-	
Medical Services	03277	3,446	2,450	2,917	1,349	1,110	1,240		-	893	-	-	-	100	-	
Subsistence Issued	04112	7,800	6,129	5,706	4,794	1,979	5,218		3,779	-	2,518	4,361	1,289	3,656	1,670	
Separate Rations Paid Airmen	04113	6,337	6,738	8,258	8,471	10,053	6,986		3,631	22,111	3,431	4,608	1,884	3,316	3,914	
Personnel w/o Duty Assignment	04114	661	1,039	2,515	399	1,587	1,116		1,354	771	-	141	518	156	1,135	
Total Supply Function	05450	$ 10,964	$ 12,180	$ 11,025	$ [illegible]	$ [illegible]	$ 8,692		$ 4,001	$ 2,031	$ 3,594	$ 3,424	$ -	$ 5,323	$ 1,310	
Supply Function (Officers & Staff)	05402	$ 4,526	$ 5,051	$ 6,792	$ 3,969	$ 4,353	$ 4,793		$ 3,931	$ 791	$ 3,575	$ 3,424	$ -	$ 5,047	$ -	
Supply Warehouse	05404	4,387	6,142	2,510	3,240	3,312	3,550		-	1,159	222	-	-	-	1,029	
Subsistence Handling	05406	829	-	372	-	-	-		-	-	-	-	-	-	-	
Commissary Sales Store	05408	-	-	-	-	-	-		-	-	-	-	-	-	-	
Purchasing & Contracting	05410	968	928	557	1,022	-	-		-	-	-	-	-	-	-	
Salvage & Surplus Property	05412	-	-	457	-	-	-		-	-	-	-	-	-	-	
Flying Personnel - Fuels & Lubes	07102	$ 17,579	$ 21,799	$ 26,155	$ 21,106	$ 17,728	$ 16,312		$ 16,387	$ 24,419	$ 22,474	$ 16,051	$ 32,944	$ 17,543	$ 22,181	
Organizational Maintenance - Aircraft	07110	38,893	42,553	37,599	40,767	11,156	11,186		40,883	39,601	34,217	47,307	41,982	12,112	41,819	
Instructors - Flying & Ground	07114	3,583	1,022	3,144	6,337	1,734	2,991		11,257	5,375	4,299	4,775	1,603	1,947	517	
Instructors - Flying	07114.01	2,397	1,022	1,569	4,160	416	1,808		4,303	1,479	1,136	2,827	1,951	2,693	-	
Personnel at School	09102	7,458	2,321	1,357	1,865	2,313	1,161		972	1,612	1,087	1,790	844	1,024	577	
** Transient USAF Aircraft	09109	-	-	-	1,505	1,511	1,963		-	-	-	-	-	-	-	
Permanent Change of Station	12113	2,419	1,605	1,428	3,901	672	1,127		-	615	1,415	777	817	1,292	376	
*** Supplies & Services Furnished	12114	-	981	1,711	1,362	756	1,088		-	-	-	-	-	-	-	
Supplies & Services Furnished ANG	12122	-	49	10,991	7,673	1,271	198		-	-	-	-	-	-	-	

* Account Codes 02123 & 02122

** Includes Payroll Costs, Parts & Supplies (excepting Fuels & Lubes Furnished) transient USAF aircraft other than Air Reserve, ANG & AROTC Aircraft

*** Supplies & Services Furnished to Non-USAF Agencies

GROUP I - Bases Maintained and Operated with ConAC Reserve Funds

GROUP II - USAF Bases where a Proportionate Share of the Runway Maintenance and the Area occupied by the AFRTC is Supported by Reserve Funds

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Part I
Comptroller Chart 8
Prepared By:
Director Programs & Costs
Hq ConAC
5 May 1950

OPERATING COSTS

AIR FORCE RESERVE TRAINING CENTERS

GROUP III — MARCH 1950 — GROUP IV

Item	Account Code	2471st O'Hare	2347th Long Beach	2584th Memphis	2237th Reading	2465th Wold-Chamberlain	2587th Birmingham	2585th Miami	2343d Portland		2596th Hensley	2230th Floyd Bennett				
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)
No. of Personnel Reported																
Officers		56	58	32	26	37	32	43	38		37	28				
Airmen		529	708	400	437	393	430	428	433		471	351				
Civilians		331	132	123	94	88	94	105	120		91	126				
Total Personnel		916	898	555	557	518	556	576	591		599	505				
Payroll Costs																
Officers		$ 30,403	$ 32,282	$ 16,219	$ 14,313	$ 19,773	$ 17,943	$ 23,794	$ 20,234		$ 20,143	$ 15,527				
Airmen		95,117	153,939	78,140	82,702	82,015	91,065	85,579	84,120		94,212	58,347				
Civilians		92,307	36,224	32,857	23,338	24,865	26,305	27,212	34,118		23,364	38,673				
Total Payroll		$ 217,827	$ 222,445	$ 127,216	$ 120,353	$ 126,653	$ 135,313	$ 136,585	$138,472		$ 137,719	$ 112,547				
▲ Non-Personnel Costs		$ 117,471	$ 249,900	$ 67,752	$ 85,531	$ 82,206	$ 62,699	$ 108,918	$ 91,074		$ 78,852	$ 73,547				
Total Costs		$ 335,298	$ 472,[illegible]	$ 194,968	$ 205,884	$ 208,859	$ 198,012	$ 245,503	$229,546		$ 216,571	$ 186,094				
Costs of Selected Functions																
CO and Staff	01051	$ 11,258	$ 20,00[illegible]	$ 13,596	$ 9,315	$ 9,615	$ 10,982	$ 11,412	$ 9,278		$ 10,479	$ 14,184				
Food Services (Mess Halls)	02110	3,789	4,381	2,405	3,766	-	3,114	2,421	2,596		3,177	2,305				
Civilian Personnel & Payroll	*	2,519	-	524	340	507	250	298	241		266	321				
Motor Pool	02136	6,756	8,776	4,049	4,182	3,530	3,533	2,755	4,548		2,298	2,824				
Work Details	02138	-	275	-	-	-	-	-	-		-	-				
Base Operations	02142	7,934	6,812	6,544	2,794	3,285	1,199	4,245	4,641		6,614	1,550				
Air Instl Office & Shop Overhead	02202	5,658	4,156	3,167	1,834	2,268	1,153	2,003	3,171		1,948	1,484				
Maint of Air Instl Machinery	02204	571	400	397	98	233	-	431	-		497	-				
Maint Buildings & Other Structures	02206	4,102	1,540	1,323	3,152	1,380	479	1,497	1,332		1,517	4,129				
Operation Utility Plants & Systems	02216	32,236	4,196	5,472	7,830	6,920	2,173	1,298	5,403		1,435	9,409				
Fire Stations & Crash Rescue	02218	10,621	4,500	4,678	3,430	5,945	3,107	427	1,448		3,665	1,556				
Rentals - Leased Facilities	02244	377	3,762	1,875	1,081	-	2,347	1	- -		- -	-				
Medical Services	03277	2,720	3,514	1,144	1,171	1,664	1,527	4,801	2,341		1,274	1,288				
Subsistence Issued	04112	7,504	6,096	5,349	8,473	-	4,875	4,312	5,444		5,120	5,967				
Separate Rations Paid Airmen	04113	8,007	15,782	7,250	6,258	26,993	[illegible]	7,309	13,927		9,068	4,981				
Personnel w/o Duty Assignment	04114	3,133	458	2,080	2,735	-	4,711	554	-		125	1,816				
Total Supply Function	05450	$ 21,201	$ 16,588	$ 9,635	$ 11,906	$ 500	$ 12,516	$ 9,430	$ 11,380		$ 10,344	$ 11,520				
Supply Control (Officers & Staff)	05402	$ 8,672	$ 7,047	$ 5,886	$ 4,825	$ 4,245	$ 4,930	$ 4,775	$ 6,531		$ 6,405	$ 3,502				
Supply Warehouse	05404	12,523	8,745	2,498	5,750	4,556	5,920	3,512	1,261		3,401	7,300				
Subsistence Handling	05406	-	247	-	-	-	185	397	1,168		-	-				
Commissary Sales Store	05408	-	-	-	-	-	-	-	-		-	-				
Purchasing & Contracting	05410	1,111	549	593	1,148	576	1,231	646	1,572		473	-				
Salvage & Surplus Property	05412	746	-	203	-	-	-	-	186		-	-				
Flying Personnel - Fuels & Lubes	07102	$ 31,218	$ 41,872	$ 21,810	$ 20,905	$ 24,235	$ 19,165	$ 23,775	$ 33,112		$ 16,777	$ 20,772				
Organizational Maint - Aircraft	07110	61,362	81,264	39,885	35,966	40,427	42,649	46,434	49,262		37,572	43,759				
Instructors - Flying & Ground	07114	9,064	3,184	-	3,051	7,932	2,396	7,293	-		6,171	3,433				
Instructors - Flying	07114.01	2,648	3,184	-	1,911	2,986	-	4,620	-		1,896	514				
Personnel at School	09102	2,073	3,025	405	1,408	1,300	1,550	2,104	1,804		2,757	1,568				
** Transient USAF Aircraft	09109	1,269	-	-	-	1,499	-	377	-		1,244	-				
Permanent Change of Station	12113	1,749	5,651	2,011	2,005	2,589	1,796	5,543	2,725		4,286	4,786				
*** Supplies & Services Furnished	12114	579	19	151	-	-	515	1,106	379		253	-				
Supplies & Services Furnished ANG	12122	4,720	201	529	4,334	444	-	2,485	-		1,085	47				

* Account Codes 02123 ≠ 02122

** Includes Payroll Costs, Parts & Supplies (excepting Fuels & Lubes) furnished transient USAF Aircraft other than Air Reserve, ANG & ARTC Aircraft

*** Supplies & Services Furnished to Non-USAF Agencies

GROUP III - Leased Facilities, Maintained by Municipality, Except Areas Occupied by ARTC's which are Supported by Reserve Funds

GROUP IV - Naval Air Stations, Facilities Used and Proportionate Share of Base Maintenance is Supported by Reserve Funds

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
5 May 1950

OPERATING COSTS

NON WING-BASE AIR BASE GROUPS & SQUADRONS, BASE SERVICE AND ASSEMBLY & PROCESSING SQUADRONS

MARCH 1950

Item (A)	Account Code (B)	2463d AB Gp Benj Harr (C)	2500th AB Gp Mitchel (D)	2995th AB Gp Brooks (E)	4400th AB Gp Stewart (F)	(G)	2600th AB Sq Pope (H)	4405th AB Sq Sherman (I)	4406th AB Sq Marshall (J)	4408th AB Sq Lawson (K)	(L)	2476th BS Sq Oscoda (M)	(N)	2212th A&P Sq Langley (O)	(P)	(Q)
No. of Personnel Reported																
Officers		12	169	68	42		39	9	14	28		5		6		
Airmen		202	1,689	650	395		451	153	180	198		122		194		
Civilians		147	742	184	290		40	27	29	72		16		0		
Total Personnel		361	2,600	902	727		530	189	223	298		143		200		
Payroll Costs																
Officers		$ 5,416	$ 83,516	$ 33,333	$ 19,187		$ 19,110	$ 4,529	$ 6,812	$ 14,816		$ 2,771		$ 2,115		
Airmen		27,106	253,549	109,987	64,999		78,628	26,383	29,546	35,608		19,456		25,827		
Civilians		41,532	205,823	46,561	80,637		9,767	7,438	7,804	18,967		4,401		-		
Total Payroll		$ 74,054	$ 542,888	$ 189,881	$ 164,823		$ 107,505	$ 38,350	$ 44,162	$ 69,391		$ 26,528		$ 27,942		
▲ Non-Personnel Costs		$ 31,859	$ 397,696	$ 69,930	$ 82,213		$ 77,986	$ 26,115	$ 24,915	$ 35,572		$ 11,391		$ 16,888		
Total Costs		$ 105,913	$ 940,584	$ 259,811	$ 247,036		$ 185,491	$ 64,465	$ 69,077	$ 104,963		$ 37,919		$ 44,830		
Costs of Selected Functions																
CO and Staff	01051	$ 6,114	$ 17,809	$ 15,555	$ 11,888		$ 11,754	$ 2,757	$ 3,385	$ 10,556		$ 2,508		$ 3,410		
Food Services (Mess Halls)	02110	2,670	22,192	7,272	2,439		4,928	-	1,090	1,426		1,309		-		
Civilian Personnel & Payroll	*	-	7,766	-	1,515		280	260	-	350		-		-		
Motor Pool	02136	3,598	20,567	8,228	6,616		4,745	1,547	770	2,617		1,692		-		
Work Details	02138	-	802	-	-		-	-	-	-		-		-		
Base Operations	02142	-	6,950	4,439	3,796		2,404	780	1,253	2,153		1,482		-		
Air Instl Office & Shop Overhead	02202	6,626	13,007	4,720	3,889		334	-	399	1,846		1,939		-		
Maint of Air Instl Machinery	02204	2,259	1,579	767	4,557		-	-	-	-		801		-		
Maint Buildings & Other Structures	02206	1,637	17,622	6,269	6,091		-	628	-	-		942		-		
Operation Utility Plants & Systems	02216	20,645	113,334	16,092	26,785		-	449	-	-		5,353		-		
Fire Stations & Crash Rescue	02218	5,240	10,833	4,710	6,177		3,896	1,879	1,899	4,012		1,287		-		
Rentals - Leased Facilities	02244	-	514	-	17		-	-	-	-		-		-		
Medical Services	03277	928	62,800	6,467	6,863		871	1,038	741	55		665		-		
Subsistence Issued	04112	3,718	23,928	5,061	5,607		5,375	1,285	4,484	2,517		5,375		1,821		
Separate Rations Paid Airmen	04113	2,114	20,435	10,532	5,811		7,470	2,864	2,993	3,831		-		281		
Personnel w/o Duty Assignment	04114	-	4,617	2,992	1,110		1,010	294	-	274		169		257		
Aircraft Shop Maintenance	05160	-	45,246	13,029	15,118		-	-	-	-		-		-		
Total Supply Function	05430	8,898	58,688	22,229	18,251		13,703	4,026	4,898	5,778		1,523		-		
Supply Control (Officers & Staff)	05402	2,815	23,242	9,754	7,032		6,124	2,875	2,135	4,112		1,523		-		
Supply Warehouse	05404	4,486	19,666	7,368	8,254		6,040	1,110	2,513	2,566		-		-		
Subsistence Handling	05406	-	4,948	1,660	718		1,025	-	-	-		-		-		
Commissary Sales Store	05408	528	2,177	749	-		-	-	-	-		-		-		
Purchasing & Contracting	05410	-	4,455	1,867	806		74	-	-	-		-		-		
Salvage & Surplus Property	05412	834	1,260	404	511		206	-	-	-		-		-		
Flying Personnel - Fuels & Lubes	07102	-	-	-	-		-	-	-	-		-		-		
Organizational Maint - Aircraft	07110	-	-	-	-		-	-	-	2,708		-		-		
Instructors - Flying & Ground	07114	-	-	-	-		-	-	3,035	-		-		-		
Instructors - Flying	07114.01	-	-	-	-		-	-	3,035	-		-		-		
Personnel at School	09102	1,045	3,793	4,847	-		1,118	-	559	1,161		-		125		
** Transient USAF Aircraft	09109	-	4,231	2,120	-		2,488	-	-	-		-		-		
Permanent Change of Station	12113	2,382	17,455	4,716	3,668		403	151	1,509	2,653		-		851		
*** Supplies & Services Furnished	12114	-	2,493	46	758		1,240	195	206	400		-		-		
Supplies & Services Furnished ANG	12122	-	-	2,368	-		232	32	51	-		-		-		

* Account Codes 02123 ≠ 02122

** Includes Payroll Costs, Parts & Supplies (excepting fuels & lubes) furnished transient USAF Aircraft other than Air Reserve, ANG & ARCTC Aircraft

*** Supplies & Services Furnished to Non-USAF Agencies

Page 6 of 8 Pages

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
5 May 1950

OPERATING COSTS

AIRCRAFT CONTROL AND WARNING ORGANIZATIONS

MARCH 1950

Item (A)	Account Code (B)	502d Tac Con Gp Pope (C)	503d AC & Wng Gp Roslyn, NY (D)	505th AC & Wng Gp Silver Lake (E)	540th AC & Wng Gp Stewart (F)	541st AC & Wng Gp Selfridge (G)	542d AC & Wng Gp Hamilton (H)	690th AC & Wng Sq (Separate) Kirtland (I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)
No. of Personnel Reported																
Officers		84	101	77	74	43	19	31								
Airmen		660	931	920	834	402	207	268								
Civilians		0	0	2	0	0	0	0								
Total Personnel		744	1,032	999	908	445	226	299								
Payroll Costs																
Officers		$ 42,207	$ 50,761	$ 37,615	$ 34,663	$ 20,379	$ 8,091	$ 14,021								
Airmen		85,667	110,555	116,574	98,787	45,733	26,049	32,175								
Civilians		-	-	531	-	-	-	-								
Total Payroll		$ 127,874	$ 161,316	$ 154,720	$ 133,450	$ 66,112	$ 34,140	$ 46,196								
▲ Non-Personnel Costs		$ 44,281	$ 58,629	$ 68,865	$ 57,469	$ 27,060	$ 11,103	$ 12,216								
Total Costs		$ 172,155	$ 219,945	$ 223,585	$ 190,919	$ 93,172	$ 45,243	$ 58,412								
Costs of Selected Functions																
Food Services (Mess Halls)	02110	$ 6,665	$ 5,059	$ 6,466	$ 5,836	$ -	$ 2,330	$ -								
Motor Pool	02136	6,043	8,089	6,508	5,752	182	2,684	1,047								
Rentals - Leased Facilities	02244	-	1,417	99	-	-	219	-								
Subsistence Issued	04112	10,661	20,094	19,926	18,935	1,091	2,482	4,093								
Separate Rations Paid Airmen	04113	4,225	5,512	4,548	5,388	1,415	749	1,642								
Personnel w/o Duty Assignment	04114	1,785	2,255	2,074	3,614	463	574	1,639								
Communications & Electronics	07108	64,956	85,282	98,188	77,125	1,714	12,410	30,480								
Personnel at School	09102	3,047	3,849	3,588	2,158	2,417	-	2,051								

OPERATING COSTS - HOSPITAL SQUADRONS

MARCH 1950

Item (A)	Account Code (B)	2200th Murphy Gen Hosp (C)	2201st Army Med Cntr (D)	2202d Oliver Gen Hosp (E)	2203d Valley Forge Gen Hosp (F)	2204th Percy Jones Gen Hosp (G)	2205th Army&Navy Gen Hosp (H)	2206th Brooke Army Med Cntr (I)	2207th Wm Beaumont Gen Hosp (J)	2208th Fitzsimmons Gen Hosp (K)	2209th Letterman Gen Hosp (L)	2210th Madigan Gen Hosp (M)
No. of Personnel Reported												
Officers		33	159	79	85	51	29	38	187	82	126	63
Airmen		135	310	164	210	183	75	154	1,140	401	287	182
Civilians		0	0	0	0	1	0	2	5	2	0	0
Total Personnel		168	469	243	295	235	104	194	1,332	485	413	245
Payroll Costs												
Officers		$ 13,610	$ 64,015	$ 33,668	$ 41,624	$ 24,454	$ 11,740	$ 15,565	$ 86,012	$ 37,377	$ 58,748	$ 26,303
Airmen		17,728	34,005	20,808	28,930	24,878	11,669	22,126	140,746	58,674	40,006	25,512
Civilians		-	-	-	-	221	-	499	1,274	513	-	-
Total Payroll		$ 31,338	$ 98,020	$ 54,476	$ 70,554	$ 49,553	$ 23,409	$ 38,190	$ 228,032	$ 96,564	$ 98,754	$ 51,815
▲ Non-Personnel Costs		$ 294	$ 750	$ 961	$ 315	$ 488	$ 315	$ 546	$ 4,050	$ 757	$ 777	$ 977
Total Costs		$ 31,632	$ 98,770	$ 55,437	$ 70,869	$ 50,041	$ 23,724	$ 38,736	$ 232,082	$ 97,321	$ 99,531	$ 52,792

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Cost
Hq ConAC
5 May 1950

OPERATING COSTS

WAF SQUADRONS, OVERSEAS REPLACEMENT DEPOTS, & LIAISON FLIGHTS

MARCH 1950

	Item (A)	Account Code (B)	2475th WAF Sq Selfridge (C)	2350th WAF Sq Moses Lake (D)	2351st WAF Sq Hamilton (E)	4412th WAF Sq Langley (F)	(G)	2225th AFORG Ft Dix, NJ (H)	2349th AFORD Hamilton (I)	2594th AFORD Leroy Johnson (J)	(K)	1st Liaison Flight Biggs (L)	2d Liaison Flight Langley (M)	3d Liaison Flight Lawson (N)	4th Liaison Flight Pope (O)	5th Liaison Flt (Helicopter) Pope (P)	(Q)	
1	No. of Personnel Reported																	1
2	Officers		1	1	1	1		80	318	6		6	3	4	5	3		2
3	Airmen		2	3	3	3		1,667	4,680	65		11	14	10	11	13		3
4	Civilians		0	0	0	0		36	19	1		0	0	0	0	0		4
5																		5
6	Total Personnel		3	4	4	4		1,783	5,017	72		17	17	14	16	16		6
7																		7
8	Payroll Costs																	8
9	Officers		$ 459	$ 334	$ 334	$ 402		$ 41,686	$ 179,722	$ 2,915		$ 2,926	$ 1,686	$ 1,957	$ 2,445	$ 1,581		9
10	Airmen		345	439	463	492		215,088	622,016	11,018		2,390	2,439	2,100	1,810	2,242		10
11	Civilians		-	-	-	-		8,289	4,484	253		-	-	-	-	-		11
12																		12
13	Total Payroll		$ 804	$ 773	$ 797	$ 894		$ 265,063	$ 806,222	$ 14,186		$ 5,316	$ 4,125	$ 4,057	$ 4,255	$ 3,823		13
14																		14
15	A Non-Personnel Costs		$ 212	$ 1,478	$ 1,059	$ 142		$ 270,237	$ 184,820	$ 7,060		$ 805	$ 664	$ 882	$ 866	$ 1,762		15
16																		16
17	Total Costs		$ 1,016	$ 2,251	$ 1,856	$ 1,036		$ 535,300	$ 991,042	$ 21,246		$ 6,121	$ 4,789	$ 4,939	$ 5,121	$ 5,585		17
18																		18
19																		19

OPERATING COSTS - COMMUNICATIONS SQUADRONS AND RADAR CALIBRATION DETACHMENTS

MARCH 1950

	Item (A)	Account Code (B)	28th Comm Sq Mitchel (C)	29th Comm Sq Langley (D)	34th Comm Sq Mitchel (E)	35th Comm Sq Hamilton (F)	36th Comm Sq Selfridge (G)	37th Comm Sq Robins (H)	40th Comm Sq Brooks (I)	42d Comm Sq Mitchel (J)	43d Comm Sq Hamilton (K)	(L)	5th Radar Cal Det Pope (M)	7th Radar Cal Det Langley (N)	11th Radar Cal Det Hamilton (O)	12th Radar Cal Det Langley (P)	(Q)	
1	No. of Personnel Reported																	1
2	Officers		9	5	5	4	1	2	7	1	1		5	8	6	8		2
3	Airmen		157	78	82	74	63	63	88	8	70		20	36	32	28		3
4	Civilians		0	0	0	0	0	0	0	0	0		0	0	0	0		4
5																		5
6	Total Personnel		166	83	87	78	64	65	95	9	71		25	44	38	36		6
7																		7
8	Payroll Costs																	8
9	Officers		$ 4,445	$ 2,532	$ 2,625	$ 1,986	$ 446	$ 1,019	$ 3,358	$ 560	$ 313		$ 2,773	$ 4,290	$ 3,085	$ 4,286		9
10	Airmen		24,567	10,540	11,545	11,502	8,258	9,832	11,990	1,302	7,883		3,411	6,403	6,027	5,304		10
11	Civilians		-	-	-	-	-	-	-	-	-		-	-	-	-		11
12																		12
13	Total Payroll		$ 29,012	$ 13,072	$ 14,170	$ 13,488	$ 8,704	$ 10,851	$ 15,348	$ 1,862	$ 8,196		$ 6,184	$ 10,693	$ 9,112	$ 9,590		13
14																		14
15	A Non-Personnel Costs		$ 18,866	$ 9,471	$ 3,949	$ 1,946	$ 2,538	$ 2,385	$ 5,006	$ 175	$ 3,053		$ 2,336	$ 8,080	$ 1,463	$ 3,313		15
16																		16
17	Total Costs		$ 47,878	$ 22,543	$ 18,119	$ 15,434	$ 11,242	$ 13,236	$ 20,354	$ 2,037	$ 11,249		$ 8,520	$ 18,773	$ 10,575	$ 12,903		17
18																		18
19																		19

OPERATING COSTS - MISCELLANEOUS ORGANIZATIONS

MARCH 1950

	Item (A)	Account Code (B)	1st Shoran Beacon Unit Langley (C)	2d Radio Relay Sq Pope (D)	30th Motor Trans Sq Shaw (E)	363d Rcn Tech Sq Langley (F)	691st AF Band Selfridge (G)	769th AF Band Robins (H)	803d Engr Avn Bn McChord (I)	Co"B" 803d Engr Avn Bn Moses Lake (J)	Co"C" 803d Engr Avn Bn Moses Lake (K)	934th Sig Bn Pope (L)	2220th Ext Sq Benj Harr (M)	2597th Air Police Sq Brooks (N)	2602d Tow Target Sq Biggs (O)	4410th Bomb Disp Unit Pope (P)	(Q)	
1	No. of Personnel Reported																	1
2	Officers		3	4	4	7	1	1	19	6	5	16	19	4	47	1		2
3	Airmen		31	74	94	127	30	28	473	129	123	265	194	94	261	13		3
4	Civilians		0	0	0	0	0	0	0	0	0	0	70	1	0	0		4
5																		5
6	Total Personnel		34	78	98	134	31	29	492	135	128	281	283	99	308	14		6
7																		7
8	Payroll Costs																	8
9	Officers		$ 1,402	$ 1,963	$ 2,086	$ 3,269	$ 380	$ 584	$ 10,257	$ 2,685	$ 2,087	$ 7,491	$ 9,577	$ 1,739	$ 24,505	$ 334		9
10	Airmen		4,909	10,258	12,960	17,953	4,168	4,338	50,419	13,673	13,404	34,622	28,211	16,144	48,220	1,792		10
11	Civilians		-	-	-	-	-	-	-	-	-	-	15,959	221	-	-		11
12																		12
13	Total Payroll		$ 6,311	$ 12,221	$ 15,046	$ 21,222	$ 4,548	$ 4,922	$ 60,676	$ 16,358	$ 15,491	$ 42,113	$ 53,747	$ 18,104	$ 72,725	$ 2,126		13
14																		14
15	A Non-Personnel Costs		$ 2,972	$ 2,789	$ 5,237	$ 11,627	$ 2,166	$ 1,002	$ 23,920	$ 4,588	$ 4,093	$ 13,225	$ 13,474	$ 5,323	$ 80,724	$ 1,901		15
16																		16
17	Total Costs		$ 9,283	$ 15,010	$ 20,283	$ 32,849	$ 6,714	$ 5,924	$ 84,596	$ 20,946	$ 19,584	$ 55,338	$ 67,221	$ 23,427	$ 153,449	$ 4,027		17
18																		18
19																		19

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PART II
COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
5 MAY 1950

RECAPITULATION OF CONTINENTAL AIR COMMAND

COST OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

MARCH 1950

LINE	ITEM (A)	USAF INSTALLATIONS PROVIDING OWN SERVICES (B)	AFR INSTALLATIONS PROVIDING OWN SERVICES (C)	INSTALLATIONS PROVIDED SERVICES BY OTHER THAN ConAC (D)	AGGREGATE * (E)
1	No. of Personnel Reported				
2	Officers	70	15	10	95
3	Airmen	1,621	422	381	2,424
4	Civilians	1,698	441	207	2,346
5					
6	TOTAL PERSONNEL	3,389	878	598	4,865
7					
8	Payroll Costs				
9	Officers	$ 28,772	$ 6,003	$ 4,354	$ 39,129
10	Airmen	190,382	52,775	41,743	284,900
11	Civilians	455,639	120,177	59,662	635,478
12					
13	Total Payroll	$ 674,793	$ 178,955	$ 105,759	$ 959,507
14					
15	▲ Non-Personnel Costs	$ 532,742	$ 156,240	$ 108,803	$ 797,785
16					
17	TOTAL COSTS	$ 1,207,535	$ 335,195	$ 214,562	$ 1,757,292

▲ Non-Personnel Costs - Includes Miscellaneous Costs, Contractual Services and Supplies.

SOURCE: Cost Control Reports - AF Forms 320, 320A, 322 & 322A.

* Does not include Inactive Installations.

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COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- USAF INSTALLATIONS PROVIDING OWN SERVICES -

MARCH 1950

Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
5 May 1950

	Item (A)	Account Code (B)	Brooks AFB (C)	Hamilton AFB (D)	Langley AFB (E)	McChord AFB (F)	McGuire AFB (G)	Mitchel AFB (H)	Moses Lake AFB (I)	Oscoda AFB (J)	Selfridge AFB (K)	Shaw AFB (L)	Sewart AFB (M)	Stewart Fld (N)	Turner AFB (O)	
1	No. of Personnel Reported															1
2	Officers		3	4	4	**8	5	6	***11	1	****9	5	6	2	6	2
3	Airmen		48	100	185	188	115	109	258	31	174	94	145	63	111	3
4	Civilians		90	144	296	93	83	258	118	16	160	121	99	103	117	4
5																5
6	Total Personnel		141	248	485	289	203	373	387	48	343	220	250	168	234	6
7																7
8	Payroll Costs															8
9	Officers		$ 1,402	$ 2,195	$ 1,761	$ 3,525	$ 2,257	$ 2,471	$ 4,210	$ 444	$ 2,395	$ 1,938	$ 2,662	$ 911	$ 2,601	9
10	Airmen		6,310	11,866	22,624	22,498	13,897	13,513	26,622	3,724	19,593	12,564	15,989	8,238	12,944	10
11	Civilians		22,198	46,743	77,544	29,609	20,844	72,852	31,037	4,401	45,513	27,538	23,365	28,648	24,347	11
12																12
13	Total Payroll		$ 29,910	$ 60,804	$ 101,929	$ 55,632	$ 36,998	$ 88,836	$ 61,869	$ 8,569	$ 68,501	$ 42,040	$ 42,016	$ 37,797	$ 39,892	13
14																14
15	▲ Non-Personnel Costs		$ 14,811	$ 49,669	$ 63,307	$ 44,769	$ 16,779	$ 137,224	$ 49,034	$ 4,585	$ 51,156	$ 30,997	$ 35,083	$ 20,784	$ 14,544	15
16																16
17	Total Costs		$ 44,721	$ 110,473	$ 165,236	$ 100,401	$ 53,777	$ 226,060	$ 110,903	$ 13,154	$ 119,657	$ 73,037	$ 77,099	$ 58,581	$ 54,436	17
18																18
19	Costs of Selected Utilities (Non-Payroll)															19
20																20
21	Purchased Water	06105	$ 813	$ 3,562	$ 547	$ -	$ 268	$ 342	$ -	$ -	$ 1,449	$ -	$ -	$ 272	$ 494	21
22	Purchased Sewage Disposal	06206	-	-	-	-	236	-	-	-	-	-	-	-	-	22
23	Purchased Electricity	06306	2,217	5,348	9,943	2,331	1,813	8,365	2,106	651	8,577	5,506	3,288	2,781	1,959	23
24	Purchased Gas	06509	2,861	12,054	1,440	-	-	5,595	-	-	1,228	-	-	851	567	24
25	Coal Issued *	06506	-	-	16,023	11,629	9,345	68,313	4,533	2,354	14,223	11,138	11,644	10,474	3,051	25
26	Fuel Oil Issued *	06507	-	1,020	12,386	13,714	-	8,724	15,945	462	1,918	-	-	2,149	4,169	26
27	O/B Facilities (Purchased Utilities)	08201	-	1,687	-	1,653	157	1,136	-	-	371	30	-	40	-	27
28																28
29																29
30	Costs of Selected Functions															30
31																31
32	Projects, Non-Recurring (Over $3,000)	09101 thru 09107	$ 1,621	$ -	$ 329	$ -	$ 157	$ 31,262	$ 43,406	$ -	$ 3,498	$ 381	$ 565	$ -	$ -	32
33	Modification (Under $3,000)	09108	533	1,344	3,864	2,984	1,681	7,689	14,575	888	Cr 1,723	2,098	1,996	5,740	785	33
34	Modification (Over $3,000)	09109	-	15,831	2,656	2,251	-	1,000	8,174	-	14,554	-	-	-	-	34
35	Accrued Annual Leave, 1 July thru 31 Mar	10101	24,890	40,418	67,566	29,969	16,910	64,031	22,325	4,658	30,813	20,002	17,299	28,170	17,457	35
36	Accrued Annual Leave, this month	10101	2,468	6,194	7,770	3,545	2,220	7,923	3,233	389	4,388	2,511	2,127	3,070	3,610	36
37	Sick Leave & Holiday Leave Taken, 1 July thru 31 Mar	10102	14,433	23,616	45,539	19,140	14,921	44,819	13,122	1,962	15,608	9,834	9,418	18,773	8,024	37
38	Sick Leave & Holiday Leave Taken, this month	10102	935	2,415	4,645	1,831	1,460	6,784	1,416	25	1,912	1,152	1,320	1,518	226	38
39																39
40																40
41	Inventory Value & Depreciation Costs															41
42																42
43	Depreciation, Mobile Maint Equip, 1 July thru 31 Mar	10109	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,046	$ -	$ -	$ -	$ -	43
44	Depreciation, Mobile Maint Equip, this month	10109	-	-	-	-	Cr 2,534	-	-	-	-	-	-	-	-	44
45	Value of Installed Equip & "MR" Property Salvaged,															45
46	1 July thru 31 Mar	10110	5,397	7,464	8,679	659	37	5,592	487	560	9,407	4,717	65	1,557	3,300	46
47	Value of Installed Equip & "MR" Property Salvaged,															47
48	this month	10110	1,035	1,067	408	-	2	503	224	560	780	60	-	244	-	48
49	Value of Non-expendable Property for which A.I.O. has															49
50	maintenance & repair responsibility	20104	401,970	791,791	305,382	629,423	176,109	696,957	260,963	60,264	726,486	298,797	252,025	237,062	379,989	50
51	Value (when new) of Mobile Equip issued A.I.O.	20105	143,685	174,168	218,382	213,919	50,755	344,913	86,773	89,579	284,435	70,813	130,469	316,075	145,998	51
52																52
53																53

	Item (A)	Account Code (B)	Brooks AM	Brooks Civ	Hamilton AM	Hamilton Civ	Langley AM	Langley Civ	McChord AM	McChord Civ	McGuire AM	McGuire Civ	Mitchel AM	Mitchel Civ	Moses Lake AM	Moses Lake Civ	Oscoda AM	Oscoda Civ	Selfridge AM	Selfridge Civ	Shaw AM	Shaw Civ	Sewart AM	Sewart Civ	Stewart AM	Stewart Civ	Turner AM	Turner Civ	
54	Utilization of Airmen & Civilians		AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	54
55																													55
56	Administrative and Engineering	30001	2	13	8	14	6	28	10	15	8	10	9	21	14	17	2	2	9	24	2	11	3	15	4	8	6	8	56
57	Fire Protection & Aircraft Crash Rescue	30002	30	2	48	27	105	4	24	6	46	3	47	12	28	11	9	2	42	3	43	3	73	3	50	3	38	5	57
58	Custodial	30003	0	0	0	3	34	1	0	1	1	0	0	33	0	0	0	0	0	0	0	0	2	0	0	1	0	5	58
59	Central Heating Plant Operators	30004	0	5	0	0	3	45	0	16	25	5	0	34	5	12	3	0	12	31	0	17	0	12	7	5	1	7	59
60	Other Utilities Plant Operators	30005	1	7	6	12	4	23	0	0	0	0	3	6	0	0	2	2	3	5	1	6	12	16	2	9	2	4	60
61	Carpenters	30006	1	12	5	17	4	18	4	14	4	17	8	15	8	17	3	3	17	25	1	15	1	9	0	13	8	21	61
62	Painters	30007	2	15	0	11	3	16	1	10	3	5	2	20	0	3	0	0	4	17	1	8	2	4	0	7	2	7	62
63	Electricians	30008	5	11	3	10	3	12	3	9	7	8	9	23	7	11	2	1	15	16	2	8	3	8	0	5	4	6	63
64	Plumbers & Steamfitters	30009	1	12	1	10	2	16	1	11	3	8	3	23	6	8	1	2	4	10	1	5	1	9	0	6	1	6	64
65	Structural - Steel & Metal	30010	0	0	1	3	1	5	0	4	1	3	0	0	2	3	0	0	0	0	4	4	0	2	0	4	3	4	65
66	Concrete Masonry & Plaster	30011	0	0	0	1	0	5	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	2	0	1	66
67	Machinists	30012	0	3	11	22	7	22	17	21	0	0	4	12	2	30	1	1	0	0	1	0	2	0	3	13	0	0	67
68	General Labor	30013	3	31	8	14	26	78	4	17	6	27	15	71	16	14	1	3	63	52	20	29	13	21	0	28	15	22	68
69	Totals	30099	45	111	91	144	200	275	64	127	164	86	100	289	88	126	24	16	169	183	76	106	112	99	66	104	80	96	69

70

71 * Cost of Coal & Fuel Oil Including transportation

72 ** Includes Headquarters Company & Company "A", 803d Engr Avn Bn

73 *** " Company "B" and Company "C", 803d Engr Avn Bn

74 **** " 541st Aircraft Control & Warning Group

75

76 SOURCE: Lines 1 - 17 Cost Control Reports - AF Forms 320, 322, 320A, & 322A

77 Lines 19 - 69 Real Estate Facilities Monthly Cost Report, AF Forms 329 and 330

NOTE: Payroll Costs shown on Line 10 are actual payroll costs for Airmen and are not based on civilian pay scales

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Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
5 May 1950

COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- AIR FORCE RESERVE INSTALLATIONS PROVIDING OWN SERVICES -

MARCH 1950

	Item (A)	Account Code (B)	Atterbury AFB (C)	Birmingham Mun Apt (D)	Greater Pittsburgh Apt (E)	Hanscom Apt (F)	Hensley Fld (G)	Long Beach Mun Apt (H)	Memphis Mun Apt (I)	Miami Int Apt (J)	O'Hare Int Apt (K)	Portland Apt (L)	Reading Mun Apt (M)	Wold-Chamberlain Fld (N)	(O)
1	No. of Personnel Reported														
2	Officers		1	1	1	1	1	1	2	1	2	2	1	1	
3	Airmen		58	38	52	31	36	23	34	15	30	28	32	45	
4	Civilians		31	6	33	50	25	31	42	28	103	40	26	31	
5															
6	Total Personnel		90	45	86	82	62	55	78	44	135	70	59	77	
7															
8	Payroll Costs														
9	Officers		$ 413	$ 413	$ 363	$ 398	$ 412	$ 504	$ 798	$ 384	$ 797	$ 839	$ 348	$ 334	
10	Airmen		6,438	5,091	6,301	3,576	4,952	3,310	4,464	2,217	3,249	3,084	3,657	6,436	
11	Civilians		8,041	1,278	8,571	15,288	6,072	9,444	11,184	6,620	27,406	10,796	6,450	9,027	
12															
13	Total Payroll		$ 14,892	$ 6,782	$ 15,235	$ 19,262	$ 11,436	$ 13,258	$ 16,446	$ 9,221	$ 31,452	$ 14,719	$ 10,455	$ 15,797	
14															
15	A Non-Personnel Costs		7,506	6,148	4,862	12,241	2,413	86,455	10,739	3,639	30,319	6,434	8,716	6,768	
16															
17	Total Costs		$ 22,398	$ 12,930	$ 20,097	$ 31,503	$ 13,849	$ 99,713	$ 27,185	$ 12,860	$ 61,771	$ 21,153	$ 19,171	$ 22,565	
18															
19	Costs of Selected Utilities (Non-Payroll)														
20															
21	Purchased Water	06105	$ -	$ 4	$ -	$ -	$ -	$ 34	$ 259	$ 125	$ 570	$ 4	$ 272	$ 249	
22	Purchased Sewage Disposal	06206	-	-	-	-	40	-	-	-	-	-	85	40	
23	Purchased Electricity	06306	1,083	1,085	931	1,687	723	577	565	1,741	5,342	83	641	1,177	
24	Purchased Gas	06309	1,441	-	-	42	1,138	618	825	-	125	822	-	425	
25	Coal Issued *	06506	1,938	391	1,874	1,316	-	-	459	-	17,937	1,422	1,662	1,391	
26	Fuel Oil Issued *	06507	148	-	-	160	-	682	-	257	133	2,531	1,207	638	
27	O/B Facilities (Purchased Utilities)	08201	-	-	-	-	-	19	3	6	Cr 130	-	-	-	
28															
29															
30	Costs of Selected Functions														
31															
32	Projects, Non-Recurring (Over $3,000)	09101 thru 09107	$ -	$ -	$ Cr 682	$ -	$ -	$ -	$ 5,584	$ -	$ -	$ -	$ -	$ -	
33	Modification (Under $3,000)	09108	1,996	164	651	5,185	201	4,350	1,388	1,044	3,007	3,121	150	1,626	
34	Modification (Over $3,000)	09109	-	-	722	-	-	56,035	-	-	73	-	-	1,197	
35	Accrued Annual Leave, 1 July thru 31 Mar	10101	4,994	2,340	9,060	9,818	5,043	8,321	7,966	5,675	26,487	4,766	5,548	[illegible]	
36	Accrued Annual Leave, this month	10101	858	206	965	1,310	645	1,059	1,149	709	3,133	1,357	740	852	
37	Sick Leave & Holiday Leave Taken, 1 July thru 31 Mar	10102	4,698	1,394	5,970	5,244	3,862	5,625	5,124	4,180	18,887	2,268	3,358	4,330	
38	Sick Leave & Holiday Leave Taken, this month	10102	797	19	654	392	152	159	434	251	1,618	292	183	584	
39															
40															
41	Inventory Value & Depreciation Costs														
42															
43	Depreciation, Mobile Maint Equip, 1 July thru 31 Mar	10109	$ -	$ -	$ 11,330	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
44	Depreciation, Mobile Maint Equip, this month	10109	-	-	-	-	-	-	100	-	-	-	-	-	
45	Value of Installed Equip & "MR" Property Salvaged,														
46	1 July thru 31 Mar	10110	232	-	930	353	11	2,302	20	481	45	-	-	-	
47	Value of Installed Equip & "MR" Property Salvaged,														
48	this month	10110	180	-	32	300	11	544	2,123	30	45	-	35	-	
49	Value of Non-Expendable Property for which A.I.O.														
50	has maint & repair responsibility	20104	26,371	1,729	34,018	66,381	48,941	114,519	111,365	39,444	1,386,139	216	25,158	5,487	
51	Value (when new) of Mobile Equip issued A.I.O.	20105	-	200,000	94,357	76,170	54,098	19,994	49,017	1,899	75,473	-	38,170	69,330	
52															
53															

	Item (A)	Account Code (B)	(C) AM	(C) Civ	(D) AM	(D) Civ	(E) AM	(E) Civ	(F) AM	(F) Civ	(G) AM	(G) Civ	(H) AM	(H) Civ	(I) AM	(I) Civ	(J) AM	(J) Civ	(K) AM	(K) Civ	(L) AM	(L) Civ	(M) AM	(M) Civ	(N) AM	(N) Civ	(O)
54	Utilization of Airmen & Civilians		AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	
55																											
56	Administrative and Engineering	30001	5	3	1	2	2	4	1	6	1	3	4	5	2	3	6	2	1	10	2	6	3	6	6	3	
57	Fire Protection & Aircraft Crash Rescue	30002	23	3	30	1	38	1	22	12	24	1	14	5	30	1	1	0	18	37	25	2	20	3	21	13	
58	Custodial	30003	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	5	-	4	-	-	1	1	-	1	
59	Central Heating Plant Operators	30004	9	4	-	-	-	8	-	9	-	-	-	-	-	5	-	-	1	8	-	4	-	-	-	4	
60	Other Utilities Plant Operators	30005	-	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	2	2	
61	Carpenters	30006	3	8	-	1	-	3	2	8	3	3	2	3	3	13	2	6	-	15	-	4	5	6	14	5	
62	Painters	30007	1	3	-	-	1	1	-	2	-	2	-	2	1	2	1	2	-	5	-	2	-	2	-	2	
63	Electricians	30008	3	4	-	1	2	2	-	1	1	2	2	3	1	3	1	1	6	6	1	5	-	1	3	4	
64	Plumbers & Steamfitters	30009	1	3	-	1	3	1	-	3	2	2	-	1	-	4	2	2	-	5	-	3	2	1	2	2	
65	Structural - Steel & Metal	30010	1	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	
66	Concrete Masonry & Plaster	30011	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
67	Machinists	30012	-	-	-	-	-	-	-	-	-	2	-	6	-	2	1	1	3	9	-	1	-	-	-	-	
68	General Labor	30013	4	11	-	1	-	11	2	7	1	10	3	11	-	10	-	10	-	6	2	10	1	3	-	7	
69	Totals	30099	50	44	31	7	46	33	27	52	32	25	25	37	37	44	14	31	29	105	30	38	32	32	48	43	

70

71 * Cost of Coal & Fuel Oil including transportation

72

73 SOURCE: Lines 1 - 17 Cost Control Reports - AF Forms 320, 322, 320A, and 322A

74 Lines 19 - 69 Real Estate Facilities Monthly Cost Report, AF Forms 329 and 330

75

76 NOTE : Payroll Costs shown on Line 10 are actual payroll costs for Airmen and are not based on civilian pay scales

77

Page 1 of 4 Pages

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Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
5 May 1950

COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- INSTALLATIONS PROVIDED SERVICES BY THE ARMY, THE NAVY, OR BY ANOTHER MAJOR AF COMMAND -

MARCH 1950

	Item (A)	Account Code (B)	Lawson AFB (Army) (C)	Marshall AFB (Army) (D)	Otis AFB (Army) (E)	Pope AFB (Army) (F)	Sherman AFB (Army) (G)	Fairfax Fld (Army) (H)	Godman AFB (Army) (I)	Floyd Bennett (Naval Air Station) (J)	Dobbins AFB (AMC) (K)	(L)	(M)	(N)	(O)
1	No. of ConAC Personnel Reported in AI Function														
2	Officers, ConAC		1	1	2	1	0	2	1	1	1				
3	Airmen, ConAC		28	14	164	46	13	29	37	19	31				
4	Civilians, ConAC		6	3	111	5	4	29	19	28	2				
5															
6	Total ConAC Personnel		35	18	277	52	17	60	57	48	34				
7															
8	Payroll Costs - ConAC Personnel														
9	Officers, ConAC		$ 398	$ 398	$ 885	$ 334	$ -	$ 881	$ 498	$ 490	$ 470				
10	Airmen, ConAC		3,834	1,400	18,795	1,186	1,604	3,470	4,967	1,953	4,534				
11	Civilians, ConAC		1,626	975	29,156	5,987	1,196	7,660	5,189	7,289	584				
12															
13	Total Payroll Cost - ConAC Personnel		$ 5,858	$ 2,773	$ 48,836	$ 7,507	$ 2,800	$ 12,011	$ 10,654	$ 9,732	$ 5,588				
14															
15	* Non-Personnel Costs		$ 15,963	$ 4,950	$ 29,420	$ 17,166	$ 10,250	$ 2,200	$ 3,800	$ 11,487	$ 13,567				
16															
17	Total Costs		$ 21,821	$ 7,723	$ 78,256	$ 24,673	$ 13,050	$ 14,211	$ 14,454	$ 21,219	$ 19,155				
18															
19															
20															
21															
22	Services Received By ConAC Activity														
23															
24	Utilities Furnished ConAC Activity, 1 July thru 31 Mar	08201	$ 7,917	$ 4,661	$ 49,392	$ 21,082	$ 5,152	$ 11,957	$ 10,651	$ -	$ 9,642				
25	Utilities Furnished ConAC Activity, this month	08201	627	554	9,000	2,552	534	1,648	1,133	-	1,868				
26	All Other Real Estate Facilities Services Furnished														
27	ConAC Activity, 1 July thru 31 Mar	08202	93,093	36,201	570,862	163,028	42,068	189,118	114,716	-	154,961				
28	All Other Real Estate Facilities Services Furnished														
29	ConAC Activity, this month	08202	10,207	4,000	57,050	18,266	5,667	16,996	13,930	-	8,582				
30															
31	Total Real Estate Facilities Services Furnished														
32	ConAC Activity, 1 July thru 31 Mar	08299	101,010	40,862	620,254	184,110	47,220	201,075	125,367	-	164,603				
33															
34	Total Real Estate Facilities Services Furnished														
35	ConAC Activity, this month	08299	10,834	4,554	66,050	20,818	6,201	18,644	15,063	-	10,450				

SOURCE: Lines 1 - 17 Cost Control Reports - AF Forms 320, 322, 320A, and 322A
Lines 19 - 35 Columns (C) through (G); Real Estate Facilities Monthly Cost Report, AF Form 329 - prepared in this Headquarters from Army type reports
Column (H): Real Estate Facilities Monthly Cost Report, AF Form 329 - submitted for Fairfax Field
Column (J): Data Not Available
Column (K): Real Estate Facilities Monthly Cost Report, AF Form 329 - received for Dobbins AF Base

REMARKS: Columns (C) through (K) - Parenthesis immediately under name of Installation indicates the agency responsible for accomplishing and/or providing for the ConAC Installation all or a major part of real estate facilities services

NOTE: Payroll Costs shown on Line 10 are actual payroll costs for Airmen and are not based on civilian pay scales

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Continental Air Command
Summary of Operating Costs
(By Organization)
April 1950

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COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
7 JUNE 1950

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CONTINENTAL AIR COMMAND

SUMMARY OF OPERATING COSTS

(BY ORGANIZATION)

APRIL 1950

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EO 11652

PART I OPERATING COSTS SELECTED FUNCTIONS
PART II COST OF MANAGEMENT & PRESERVATION OF REAL ESTATE FACILITIES

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PART I
COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
7 JUNE 1950

RECAPITULATION OF CONTINENTAL AIR COMMAND

OPERATING COSTS

APRIL 1950

LINE	ITEM (A)	HEADQUARTERS (B)	WINGS (C)	AFRTC'S (D)	ALL OTHER ORGANIZATIONS (E)	AGGREGATE (F)
1	No. of Personnel Reported					
2	Officers	2,295	3,106	781	2,378	8,560
3	Airmen	4,982	21,015	8,836	22,501	57,334
4	Civilians	1,227	3,102	2,435	1,669	8,433
5						
6	TOTAL PERSONNEL	8,504	27,223	12,052	26,548	74,327
7						
8	Payroll Costs					
9	Officers	$ 1,372,552	$ 1,566,708	$ 427,066	$ 1,143,268	$ 4,509,594
10	Airmen	1,013,795	3,385,751	1,713,268	3,044,601	9,157,415
11	Civilians	332,040	834,521	666,504	445,891	2,278,956
12						
13	Total Payroll	$ 2,718,387	$ 5,786,980	$ 2,806,838	$ 4,633,760	$ 15,945,965
14						
15	▲ Non-Personnel Costs	$ 646,844	$ 3,622,893	$ 1,669,338	$ 1,439,424	$ 7,378,499
16						
17	TOTAL COSTS	$ 3,365,231	$ 9,409,873	$ 4,476,176	$ 6,073,184	$ 23,324,464

▲ Non-Personnel Costs: Includes Miscellaneous Costs, Contractual Services and Supplies.

SOURCE: Cost Control Reports - AF Forms 321, 321A, 320, 320A, 322 & 322A.

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
7 June 1950

OPERATING COSTS
COMMAND AND INTERMEDIATE HEADQUARTERS
APRIL 1950

Item (A)	Account Code (B)	Hq ConAC Mitchel (C)	Hq TAC Langley (D)	Hq 1st AF Mitchel (E)	Hq 4th AF Hamilton (F)	Hq 9th AF Langley (G)	Hq 10th AF Selfridge (H)	Hq 12th AF Brooks (I)	Hq 14th AF Robins (J)	Hq 8th Air Div Pope (K)	Hq 9th Air Div Pope (L)	Hq 25th Air Div Everett, Wash (M)	Hq 26th Air Div Roslyn, NY (N)	Hq 28th Air Div Hamilton (O)	Hq 30th Air Div Selfridge (P)	Hq 32nd Air Div Stewart (Q)	Hq EADF Mitchel (R)	Hq WADF Hamilton (S)
No. of Personnel Reported																		
Officers		320	67	267	291	323	351	254	293	26	13	11	10	6	7	6	28	22
Airmen		712	44	683	542	756	737	541	724	29	25	23	30	16	16	22	41	41
Civilians		359	35	143	127	147	173	104	123	1	1	0	0	0	0	0	7	7
Total Personnel		1,391	146	1,093	960	1,226	1,261	899	1,140	56	39	34	40	22	23	28	76	70
Payroll Costs																		
Officers		$ 196,526	$ 44,726	$ 159,170	$ 173,949	$ 187,776	$ 207,521	$ 151,858	$ 172,012	$ 16,034	$ 7,600	$ 6,148	$ 5,930	$ 3,919	$ 4,118	$ 3,020	$ 17,981	$ 14,254
Airmen		126,076	7,844	144,421	124,128	156,229	157,982	111,535	145,950	5,259	3,595	4,234	4,302	3,001	2,643	3,636	6,928	6,032
Civilians		106,411	9,203	37,978	33,665	38,552	41,421	26,360	34,222	266	228	0	0	0	0	0	1,930	1,814
Total Payroll		$ 429,013	$ 61,773	$ 341,569	$ 331,742	$ 382,557	$ 406,924	$ 289,753	$ 352,184	$ 21,559	$ 11,423	$ 10,382	$ 10,232	$ 6,920	$ 6,761	$ 6,656	$ 26,839	$ 22,100
& Non-Personnel Costs		$ 141,326	$ 7,792	$ 71,882	$ 66,170	$ 104,001	$ 73,961	$ 71,590	$ 86,009	$ 6,079	$ 4,198	$ 1,921	$ 1,638	$ 1,549	$ 687	$ 1,664	$ 2,519	$ 3,858
Total Costs		$ 570,339	$ 69,565	$ 413,451	$ 397,912	$ 486,558	$ 480,885	$ 361,343	$ 438,193	$ 27,638	$ 15,621	$ 12,303	$ 11,870	$ 8,469	$ 7,448	$ 8,320	$ 29,358	$ 25,958
Costs of Selected Functions																		
Office of CG & VC	20003	$ 10,994	$ 3,123	$ 3,667	$ 6,901	$ 4,482	$ 3,435	$ 4,142	$ 5,952	$ 1,870	$ 1,315	$ 998	$ 922	$ 1,730	$ 0	$ 822	$ 1,163	$ 2,333
Air Adj Gen & Historical Section	*	23,651	8,365	17,477	31,200	21,496	27,913	22,438	23,026	2,638	1,695	1,103	1,029	1,308	301	1,083	3,912	2,134
IG, Air Comm, PM, Flying Safety	**	24,974	0	21,505	18,708	18,900	18,949	15,319	15,691	0	0	0	527	0	0	0	0	0
Public Information Office	20009	4,884	807	2,228	2,119	1,099	1,928	2,046	1,267	118	629	0	0	0	0	0	0	265
Air Surgeon	20207	5,114	0	3,291	2,238	1,367	2,890	2,471	3,082	0	0	0	0	0	0	0	0	0
Total Comptroller Function	20161	$ 63,163	$ 0	$ 24,471	$ 21,457	$ 23,476	$ 22,688	$ 21,129	$ 23,454	$ 0	$ 0	$ 0	$ 430	$ 981	$ 653	$ 0	$ 0	$ 0
Statistical Services	20107	$ 29,952	$ 0	$ 12,824	$ 13,102	$ 14,310	$ 12,899	$ 13,774	$ 13,307	$ 0	$ 0	$ 0	$ 334	$ 981	$ 653	$ 0	$ 0	$ 0
Programs & Costs	***	11,217	0	2,984	3,007	2,127	2,202	1,815	2,832	0	0	0	96	0	0	0	0	0
Total Deputy for Personnel	****	$ 36,539	$ 0	$ 37,182	$ 21,478	$ 28,084	$ 32,890	$ 25,274	$ 28,808	$ 0	$ 0	$ 0	$ 492	$ 228	$ 464	$ 272	$ 0	$ 0
Personnel Services	20217	$ 5,705	$ 0	$ 1,753	$ 1,862	$ 1,303	$ 1,160	$ 946	$ 2,104	$ 0	$ 0	$ 0	$ 195	$ 0	$ 0	$ 0	$ 0	$ 0
Military Personnel	20227	24,131	0	22,212	5,494	14,033	21,150	13,116	12,158	0	0	0	297	0	464	272	0	0
Total Deputy for Operations	*****	$ 74,585	$ 18,097	$ 18,379	$ 23,292	$ 16,207	$ 15759	$ 17,978	$ 24,984	$ 12,480	$ 5,205	$ 3,755	$ 3,779	$ 1,327	$ 2,990	$ 2,924	$ 15,296	$ 13,699
Operations & Training	20305	$ 27,563	$ 9,523	$ 5,392	$ 8,314	$ 6,265	$ 5,211	$ 6,416	$ 8,530	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,639	$ 0	$ 1,168	$ 0
Plans and Requirements	20307	20,814	12,278	3,354	3,762	2,947	1,515	2,347	4,044	0	0	0	0	0	0	0	4,422	8,254
Intelligence	20311	7,694	2,403	989	732	2,306	1,417	1,431	2,971	1,530	1,069	784	742	154	594	510	1,305	1,736
Communications & Electronics	20315	12,081	4,139	6,805	6,334	3,454	5,114	3,694	5,095	3,046	471	1,061	463	864	757	1,273	0	1,166
Total Deputy for Materiel	20461	$ 56,735	$ 0	$ 23,918	$ 20,830	$ 20,589	$ 24,583	$ 13,523	$ 29,729	$ 839	$ 768	$ 1,604	$ 0	$ 215	$ 0	$ 257	$ 0	$ 0
Maintenance	20405	$ 7,612	$ 0	$ 4,565	$ 3,345	$ 1,832	$ 1,226	$ 3,234	$ 2,645	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Supply	20407	15,955	0	3,967	4,311	5,070	3,978	4,311	8,781	839	768	272	0	215	0	257	0	0
Installations	20411	30,120	0	8,307	6,324	5,380	7,961	1,649	1,492	0	0	291	0	0	0	0	0	0
Hq Sq Administration Overhead	20503	$ 18,355	$ 2,001	$ 7,981	$ 6,719	$ 8,720	$ 6,359	$ 5,325	$ 11,645	$ 0	$ 0	$ 0	$ 307	$ 0	$ 1,384	$ 0	$ 0	$ 1,275
Flight Section - Flying	20505	23,573	0	9,271	13,879	23,206	0	1,428	13,318	0	0	0	0	0	0	0	0	2,172
Flight Section - Maintenance	20507	27,731	4	9,958	0	21,453	768	21,860	19,513	0	0	0	0	0	368	0	0	0
Personnel w/o Duty Assignment	20511	2,246	1,712	975	3,932	9,158	1,461	7,858	1,827	960	510	0	608	0	0	321	1,368	354
Communications Contractual	20527	2,156	216	556	351	461	555	178	1,334	342	228	0	16	25	5	53	26	47
TDY	20529	50,133	2,344	13,362	18,055	20,537	27,249	17,536	17,541	0	0	876	214	61	0	460	1,089	431
Overtime Paid Civilians	20530	483	0	25	0	0	0	0	128	0	0	0	0	0	0	0	0	0
Rentals - Leased Facilities	20531	0	0	2,226	0	0	0 0	0	887	0	0	0	0	0	0	0	0	0
Personnel at School	21001	8,392	1,662	4,428	560	5,204	11,802	4,800	3,121	0	0	0	0	0	0	0	0	0
Air Reserve	21005	1,214	0	21,787	13,229	10,286	25,546	14,093	10,520	0	0	0	0	0	0	0	0	0
Air National Guard	21007	0	0	37,095	34,211	31,871	46,371	15,403	20,889	0	0	0	0	0	0	0	0	0
Air ROTC	21009	4,758	0	51,001	59,806	84,000	102,849	58,886	54,988	0	0	0	0	0	0	0	0	0
Air Scout Liaison	21049.01	0	0	444	444	518	732	444	3	0	0	0	0	0	0	0	0	0
Other Liaison Activities	21049.02	83	0	1,438	4,091	0	612	0	1,989	0	0	0	0	0	0	0	0	0
Aviation Cadet & OCS Procurement	21049.03	0	0	3,402	4,214	1,900	4,992	3,762	4,621	0	0	0	0	0	0	0	0	0

* Account Codes 20007 + 20015
** Account Codes 20004 + 20005 + 20213 + 20309
*** Account Codes 20109 + 20113
**** Account Codes 20261 less 20213 less 20207
***** Account Codes 20361 less 20309

RESTRICTED

RESTRICTED

PART I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
7 June 1950

OPERATING COSTS

WINGS

APRIL 1950

	Item (A)	Account Code (B)	4th Ftr Intcp Wg Langley (C)	56th Ftr Intcp Wg Selfridge (D)	81st Ftr Intcp Wg Kirtland (E)	20th Ftr Bmr Wg Shaw (F)	31st Ftr Bmr Wg Turner (G)	33rd Ftr Intcp Wg Otis (H)	78th Ftr Intcp Wg Hamilton (I)	52d Ftr All Wea Wg McGuire (J)	325th Ftr All Wea Wg Moses Lake (K)	62d Tr Carr Wg McChord (L)	314th Tr Carr Wg Sewart (M)	316th Tr Carr Gp Sewart (N)	161st Tac Rcn Sq Shaw (O)	363d Tac Rcn Gp Langley (P)	318th Ftr All Wea Sq McChord (Q)	84th Bomb Sq (L) Langley (R)	85th Bomb Sq (L) Langley (S)	2601st Assault Sq Sewart (T)
1	No. of Personnel Reported																			
2	Officers		283	226	170	270	241	266	298	179	169	329	329	96	32	49	27	31	47	44
3	Airmen		2,723	2,009	1,232	1,819	1,531	1,800	2,604	1,269	1,137	1,847	1,886	270	109	185	89	190	193	122
4	Civilians		631	360	3	240	247	242	428	217	170	343	221	-	-	-	-	-	-	-
5																				
6	Total Personnel		3,637	2,595	1,405	2,329	2,019	2,308	3,330	1,665	1,476	2,519	2,436	366	141	234	116	221	240	166
7																				
8	Payroll Costs																			
9	Officers		$ 144,983	$ 110,757	$ 47,375	$ 135,130	$ 118,903	$ 131,328	$ 144,977	$ 96,404	$ 87,530	$ 161,282	$ 166,496	$ 49,160	$ 15,873	$ 27,193	$ 13,923	$ 28,047	$ 25,339	$ 22,008
10	Airmen		439,208	308,673	231,339	283,638	244,894	271,025	423,041	205,706	176,200	316,946	305,982	55,863	17,922	32,832	15,372	35,611	36,683	24,816
11	Civilians		168,730	102,028	766	57,294	57,348	62,655	127,360	55,316	47,998	101,174	53,852	-	-	-	-	-	-	-
12																				
13	Total Payroll		$ 752,921	$ 521,458	$ 279,480	$ 476,062	$ 421,145	$ 465,008	$ 695,378	$ 357,426	$ 311,728	$ 579,402	$ 526,330	$ 105,023	$ 33,795	$ 60,025	$ 29,295	$ 63,658	$ 62,022	$ 46,824
14																				
15	& Non-Personnel Costs		$ 495,575	$ 320,339	$ 136,487	$ 316,563	$ 235,720	$ 326,680	$ 194,536	$ 363,035	$ 223,468	$ 351,324	$ 292,603	$ 54,670	$ 54,294	$ 41,286	$ 16,422	$ 83,872	$ 96,505	$ 19,516
16																				
17	Total Costs		$1,248,496	$ 841,797	$ 415,967	$ 792,625	$ 656,865	$ 791,688	$ 889,914	$ 720,461	$ 535,196	$ 930,726	$ 818,933	$ 159,693	$ 88,089	$ 101,311	$ 45,717	$ 147,530	$ 158,527	$ 66,340
18																				
19	Costs of Selected Functions																			
20																				
21	CO and Staff	01051	$ 28,732	$ 21,132	$ 19,311	$ 25,858	$ 20,037	$ 21,068	$ 26,376	$ 20,605	$ 17,596	$ 23,896	$ 22,423	$ 9,533	$ 5,204	$ 11,186	$ -	$ 2,880	$ 2,800	$ 5,458
22	Sq Admin Overhead (AB Op Units)	02014	10,086	7,220	9,152	7,179	7,428	9,343	7,508	7,133	7,015	8,257	10,123	-	-	-	-	-	-	-
23	Food Services (Mess Halls)	02110	29,721	16,005	8,987	15,444	12,902	11,890	28,906	11,512	9,931	13,541	17,106	-	-	284	-	-	-	-
24	Accounting and Disbursing	02117	13,791	9,785	1,466	8,658	6,168	6,465	16,095	4,904	4,359	5,591	5,876	-	-	-	-	-	-	-
25	Civilian Personnel & Payroll	*	4,632	2,630	-	280	-	2,326	2,803	1,282	258	2,329	381	-	-	-	-	-	-	-
26	Personnel Services	02124	12,139	6,251	1,137	6,448	4,374	6,300	10,970	4,478	4,500	3,383	3,835	-	-	-	-	-	-	-
27	Motor Pool	02136	24,042	13,453	6,535	17,226	14,927	13,195	21,899	12,037	9,478	15,734	16,802	-	47	-	-	-	-	-
28	Base Operations	02142	4,391	3,427	1,831	3,415	4,121	3,772	7,624	6,138	3,064	2,985	3,917	-	-	-	-	-	-	-
29																				
30	Total Air Installations	02261	156,198	113,886	9,216	62,471	48,240	67,169	98,217	51,238	113,299	80,094	63,285	-	-	-	-	-	-	-
31	Fire Stations & Acft Crash Rescue	02218	12,495	7,809	6,192	11,265	7,039	6,063	16,037	7,473	10,581	3,844	9,647	-	-	-	-	-	-	-
32	Rentals - Leased Facilities	02244	-	93	-	-	174	-	80	-	127	-	-	-	-	-	-	-	-	-
33	Field Maintenance Automotive Equip	02302	28,982	13,997	8,177	11,489	14,753	18,566	10,496	10,490	9,015	17,009	9,587	-	-	-	-	-	-	-
34	Organizational Maint of Admin Acft	02306	35,721	23,010	10,938	10,833	10,398	14,227	46,407	9,036	7,364	12,705	15,379	-	-	-	-	-	-	-
35	Medical																			
36	Medical Administration	03002	8,537	6,022	1,278	4,087	5,475	8,037	10,236	4,157	4,806	6,959	3,449	-	-	198	-	-	-	-
37	Supplies - Hospital	03004	1,697	245	3	25	27	468	6	8	46	8	2,185	-	-	-	-	-	-	-
38	Dental Service	03102	4,590	2,617	596	1,994	1,612	2,229	8,010	2,116	2,071	1,662	2,367	-	-	-	-	-	-	-
39	Medical Service & Other Services	03104	12,230	8,953	2,730	6,422	7,375	4,629	14,423	2,365	6,783	4,104	5,572	-	-	-	-	-	-	-
40	X-Ray Service	03106	901	1,009	125	704	243	555	242	431	245	403	412	-	-	-	-	-	-	-
41	Laboratory	03108	722	956	125	368	125	608	840	270	244	248	367	-	-	-	-	-	-	-
42	Pharmacy	03110	1,669	809	-	507	492	704	1,354	450	504	701	1,122	-	-	-	-	-	-	-
43	Preventive Medicine	03112	1,261	757	-	937	1,270	492	1,220	287	417	1,752	901	-	-	-	-	-	-	-
44	Flight Surgeon	03114	2,507	2,735	90	691	478	272	2,295	827	228	933	1,261	162	-	-	-	-	-	-
45	Dietetic Service	03116	9,631	4,262	-	3,327	2,912	4,547	4,128	-	2,794	4,431	4,227	-	-	-	-	-	-	-
46	Medical Services	03277	43,745	28,365	4,945	19,056	20,007	22,541	42,754	10,911	18,140	21,201	23,963	162	-	198	-	-	-	-
47	Fuels & Lubes (Adm & Prof Flying)	04108	16,100	13,878	3,526	4,456	8,012	12,639	3,105	10,391	3,859	13,330	7,233	-	-	-	-	-	-	-
48	Subsistence	04112	39,934	27,486	18,054	22,844	14,992	27,705	13,817	22,134	16,263	26,437	20,026	2,611	1,469	1,835	1,302	2,141	1,937	1,200
49	Separate Rations Paid Airmen	04113	33,109	22,565	13,010	22,113	17,861	14,684	27,248	12,149	9,981	23,510	20,013	4,345	1,160	2,885	1,040	2,585	3,216	1,203
50	Personnel w/o Duty Assignment	04114	16,321	13,302	5,482	11,392	-	12,368	4,706	10,889	2,730	10,500	10,014	3,395	1,036	510	-	332	1,507	-
51	Prisoners	04116	1,934	2,408	970	565	183	1,067	4,318	719	311	1,046	821	-	-	80	95	-	-	-
52	Overtime Paid Civilians	04119	3,521	670	-	-	111	563	214	142	367	497	-	-	-	-	-	-	-	-
53	Field Maintenance & Supply Overhead	05050	12,441	11,226	7,301	10,271	9,427	9,461	6,723	8,613	6,825	8,040	12,297	-	-	-	-	-	-	-
54	Special Mission & Tenant Aircraft	05108	22,197	2,619	-	1,054	-	-	5,512	-	-	5,981	-	-	-	-	-	-	-	-
55	** Non-Aeronautical Maintenance	05112	132	3,062	-	2,414	3,972	35,890	9,266	3,399	3,126	1,389	12,671	-	-	-	-	-	-	-
56	Aircraft Shop Maintenance	05160	74,589	58,458	13,158	21,985	23,660	38,169	52,304	30,423	22,109	55,293	43,533	-	-	-	-	-	-	-
57																				
58	Total Supply Function	05450	66,315	32,637	10,168	41,913	33,231	28,811	50,110	29,813	23,118	41,944	32,197	-	307	164	-	312	269	-
59	Supply Control	05402	22,338	13,419	3,203	11,545	9,069	10,380	20,154	10,133	9,689	13,632	14,033	-	132	-	-	-	-	-
60	Supply Warehouse	05404	29,057	9,698	6,737	21,233	18,214	12,664	16,161	15,007	9,255	15,034	12,180	-	-	-	-	-	-	-
61	Subsistence Handling	05406	4,750	626	-	1,982	1,198	1,279	2,737	568	485	1,409	1,598	-	-	-	-	-	-	-
62	Commissary Sales Store	05408	1,687	3,071	-	1,631	1,644	1,103	3,211	-	1,187	2,631	1,081	-	-	-	-	-	-	-
63	Purchasing & Contracting Office	05410	3,009	2,770	-	1,365	1,654	1,193	3,188	1,561	1,180	1,996	1,514	-	-	-	-	-	-	-
64	Salvage & Surplus Property Activity	05412	2,796	1,183	228	1,601	1,134	498	1,886	-	485	941	1,283	-	-	-	-	-	-	-
65	Combat Group Operations & Tng Ovhd	07061	14,886	14,969	13,296	11,132	8,402	15,277	9,954	12,025	10,152	11,823	14,533	3,035	-	498	-	-	-	792
66	Fuels & Lubes - Mission Aircraft	07102	74,879	77,960	41,270	131,486	119,114	102,390	28,455	15,343	18,205	18,268	33,504	25,830	44,180	20,160	9,372	64,854	57,389	9,370
67	Orgn Maintenance (Combat Group)	07110	57,815	52,531	60,162	53,810	46,638	59,128	46,784	30,744	26,070	59,223	54,628	38,385	10,660	21,554	14,248	33,128	32,401	15,854
68	Personnel at School	09100	12,321	9,253	7,658	12,311	6,971	5,894	12,586	5,268	6,681	12,669	6,553	556	430	1,801	992	1,197	1,709	577
69	Special Missions (Group A)	09161	33,156	11,639	7,658	15,634	7,133	6,690	23,343	7,222	8,574	18,354	6,729	556	764	1,801	992	1,197	1,709	577
70	Supplies & Services Furnished Others																			
71	(Non-USAF)	12114	4,865	140	-	-	-	6,079	4,462	75	-	1,173	1,366	-	-	-	-	-	-	-
72	Supplies & Services Furnished ANG	12122	751	437	-	1,624	-	-	-	4,005	-	338	261	-	-	-	-	-	-	-
73	Tenant Organizations of other Major																			
74	Commands	14335	3,442	44,277	-	-	-	-	138,136	-	-	87,170	-	-	-	-	-	-	-	-
75																				
76	* 02122 / 02123																			
77	** Non-Aeronautical Maintenance Performed in Aircraft Field Maintenance Shops																			

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OPERATING COSTS

AIR FORCE RESERVE TRAINING CENTERS

APRIL 1950

Part I
Comptroller Chart 6
Prepared By:
  Director Programs & Costs
  Hq ConAC
  7 June 1950

		GROUP I							GROUP II							
Item (A)	Account Code (B)	2466th Atterbury (C)	2234th Hanscom (D)	2589th Dobbins (E)	2239th Gr Pitts (F)	2472nd Fairfax (G)	2236th Godman (H)	(I)	2592nd Tinker (J)	2240th Schlegel AF Plant (K)	2242nd Selfridge (L)	2469th Scott (M)	2346th Hamilton (N)	2473rd Offutt (O)	2233rd Mitchel (P)	(Q)
No. of Personnel Reported																
Officers		41	38	44	31	32	32		22	12	23	22	25	25	25	
Airmen		446	418	448	446	384	397		272	474	182	255	218	218	245	
Civilians		119	149	116	108	98	107		58	75	59	59	58	63	39	
Total Personnel		606	605	608	585	514	536		352	561	264	336	301	306	309	
Payroll Costs																
Officers		$ 22,148	$ 20,284	$ 23,499	$ 17,181	$ 17,473	$ 16,506		$ 13,084	$ 18,116	$ 11,584	$ 11,945	$ 14,747	$ 14,170	$ 13,705	
Airmen		75,118	74,874	87,500	77,165	76,739	72,114		54,431	86,995	34,437	51,281	46,901	40,357	49,190	
Civilians		30,011	42,514	29,076	30,331	26,054	30,309		15,348	21,480	19,324	16,467	18,000	15,600	10,260	
Total Payroll		$ 127,277	$ 137,672	$ 140,075	$ 124,677	$ 120,266	$ 118,929		$ 81,863	$ 126,591	$ 65,345	$ 79,693	$ 79,648	$ 70,127	$ 73,155	
Non-Personnel Costs		$ 76,480	$ 66,464	$ 91,816	$ 61,936	$ 62,067	$ 61,802		$ 43,297	$ 95,312	$ 56,730	$ 33,227	$ 43,903	$ 40,790	$ 36,210	
Total Costs		$ 203,757	$ 204,136	$ 231,891	$ 186,613	$ 182,333	$ 180,731		$ 125,160	$ 221,903	$ 122,075	$ 112,920	$ 123,551	$ 110,917	$ 109,365	
Costs of Selected Functions																
CO and Staff	01051	$ 8,868	$ 13,311	$ 14,437	$ 10,528	$ 9,359	$ 10,918		$ 5,864	$ 11,882	$ 6,859	$ 8,974	$ 7,874	$ 10,182	$ 9,799	
Food Services (Mess Halls)	02110	3,391	2,387	3,299	2,268	2,853	2,507		288	0	0	0	0	360	0	
Civilian Personnel & Payroll	*	254	280	4,988	650	753	493		0	863	0	0	0	0	0	
Motor Pool	02136	6,837	3,031	4,531	6,152	2,583	4,027		104	3,384	189	749	0	88	0	
Work Details	02138	0	0	0	550	425	0		0	706	0	0	0	0	0	
Base Operations	02142	3,497	4,574	3,775	4,013	6,105	4,247		0	6,224	2,819	3,535	3,244	3,372	4,443	
Air Instl Office & Shop Ovhd	02202	1,731	2,634	509	2,560	1,826	1,700		0	897	0	0	0	0	0	
Maint of Air Instl Machinery	02204	73	992	0	358	126	0		0	0	0	0	0	0	0	
Maint Bldg & Other Structures	02206	3,167	1,873	1,500	1,359	649	0		0	0	0	0	0	0	0	
Operation Utility Plants & Systems	02216	9,318	10,656	4,632	4,661	2,133	0		0	0	0	0	0	0	0	
Fire Station & Crash Rescue	02218	5,406	6,351	8,165	4,559	2,607	4,251		0	2,339	0	0	0	0	0	
Rentals - Leased Facilities	02244	0	2,083	0	300	1,062	0		0	10,750	0	0	0	0	0	
Medical Services	03277	2,982	2,187	3,094	1,550	827	1,731		0	1,983	0	0	0	50	0	
Subsistence Issued	04112	8,005	2,686	5,583	5,635	3,756	6,299		3,181	0	1,598	3,784	744	3,224	2,419	
Separate Rations Paid Airmen	04113	6,786	6,905	8,215	7,015	9,387	6,692		5,450	30,375	1,229	4,728	4,019	1,416	1,714	
Personnel w/o Duty Assignment	04114	541	1,068	1,782	890	908	795		1,558	1,758	0	474	518	154	759	
Total Supply Function	05450	$ 15,375	$ 12,871	$ 12,239	$ 8,666	$ 9,114	$ 7,999		$ 3,877	$ 9,253	$ 3,697	$ 3,416	$ 0	$ 5,031	$ 3,546	
Supply Control (Officers & Staff)	05402	$ 4,737	$ 5,518	$ 6,911	$ 3,636	$ 4,815	$ 4,094		$ 3,839	$ 4,847	$ 2,468	$ 3,416	$ 0	$ 4,688	$ 0	
Supply Warehouse	05404	4,204	5,874	3,928	3,040	3,130	3,580		0	4,114	1,050	0	0	0	3,271	
Subsistence Handling	05406	1,033	0	184	0	0	0		0	0	0	0	0	0	0	
Commissary Sales Store	05408	0	0	0	0	0	0		0	0	0	0	0	0	0	
Purchasing & Contracting	05410	968	988	513	1,123	855	0		0	260	0	0	0	0	0	
Salvage & Surplus Property	05412	0	0	457	0	0	0		0	0	0	0	0	0	0	
Flying Personnel - Fuels & Lubes	07102	$ 24,131	$ 24,453	$ 28,974	$ 16,680	$ 22,449	$ 15,778		$ 24,519	$ 21,432	$ 36,421	$ 18,851	$ 35,648	$ 22,290	$ 22,031	
Organizational Maintenance - Aircraft	07110	33,387	42,516	40,236	34,229	47,366	48,146		40,663	48,953	37,176	44,486	45,081	34,007	40,817	
Instructors - Flying & Ground	07114	4,324	506	2,649	6,386	2,149	1,007		11,963	6,925	4,373	3,958	3,825	3,135	1,879	
Instructors - Flying	07114.01	2,901	506	1,053	3,271	416	1,008		4,585	1,049	3,200	2,854	2,426	2,708	0	
Personnel at School	09102	7,256	1,919	1,159	478	2,936	1,301		892	1,522	1,507	2,602	695	1,747	444	
** Transient USAF Aircraft	09105	0	0	0	1,294	1,318	1,800		0	0	0	0	0	0	0	
Permanent Change of Station	12113	1,303	1,522	303	2,563	740	2,867		0	329	469	804	2,017	1,211	2,169	
***Supplies & Services Furnished	12114	48	1,285	3,140	874	892	5,466		0	0	0	0	0	0	0	
Supplies & Services Furnished AMC	12122	11	119	2,025	9,957	872	856		0	0	0	0	0	0	0	

* Account Codes 02123 & 02122

** Includes Payroll Costs, Parts & Supplies (excepting Fuels & Lubes furnished) transient USAF Aircraft other than Air Reserve, ANG & AROTC Aircraft

*** Supplies & Services furnished to Non-USAF Agencies

GROUP I - Bases Maintained and Operated with ConAC Reserve Funds

GROUP II - USAF Bases where a Proportionate Share of the Runway Maintenance and the Area occupied by the AFRTC is Supported by Reserve Funds

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Part I
Comptroller Chart 6
Prepared by:
Director Program & Costs
Hq ConAC
7 June 1950

OPERATING COSTS

AIR FORCE RESERVE TRAINING CENTERS

APRIL 1950

Item (A)	Account Code (B)	GROUP III 2471st O'Hare (C)	2347th Long Beach (D)	2584th Memphis (E)	2237th New Castle Co. Apt (F)	2465th Wold-Chamberlain (G)	2587th Birmingham (H)	2585th Miami (I)	2343rd Portland (J)	(K)	GROUP IV 2596th Hensley (L)	2230th Floyd Bennett (M)	(N)	(O)	(P)	(Q)
No. of Personnel Reported																
Officers		55	56	31	28	38	38	43	38		35	27				
Airmen		552	682	400	403	396	433	432	419		420	317				
Civilians		281	157	119	94	120	96	115	136		91	118				
Total Personnel		887	895	550	525	554	567	590	593		546	462				
Payroll Costs																
Officers		$ 29,015	$ 31,815	$ 17,378	$ 15,567	$ 20,469	$ 20,926	$ 24,248	$ 20,707		$ 19,334	$ 16,165				
Airmen		100,829	148,566	75,114	76,561	83,602	94,766	86,264	80,113		82,589	57,762				
Civilians		81,049	42,151	31,567	23,286	32,150	26,116	29,542	39,385		23,326	31,158				
Total Payroll		$ 210,893	$ 222,532	$ 124,059	$ 115,414	$ 136,221	$ 141,808	$ 140,054	$ 140,205		$ 125,249	$ 105,085				
▲ Non-Personnel Costs		$ 126,190	$ 152,679	$ 73,180	$ 55,128	$ 91,351	$ 91,049	$ 79,322	$ 89,981		$ 83,679	$ 54,745				
Total Costs		$ 337,083	$ 375,211	$ 197,239	$ 170,542	$ 227,572	$ 232,857	$ 219,376	$ 230,186		$ 208,928	$ 159,830				
Costs of Selected Functions																
Co and Staff	01051	$ 15,216	$ 18,695	$ 11,977	$ 9,447	$ 9,514	$ 12,567	$ 11,875	$ 9,110		$ 11,542	$ 12,435				
Food Service (Mess Halls)	02110	4,193	3,757	3,534	3,770	0	3,175	2,617	2,817		2,964	2,390				
Civilian Personnel and Payroll	*	2,581	0	534	-340	524	260	280	248		228	321				
Motor Pool	02136	4,212	8,601	2,981	4,662	4,812	3,175	2,561	5,677		2,782	2,995				
Work Details	02138	0	177	0	0	0	0	0	0		0	0				
Base Operations	02142	7,034	5,661	6,847	2,845	3,347	2,713	4,844	4,750		4,870	2,734				
Air Instl Office & Shop Overhead	02202	6,146	3,542	2,314	1,800	2,597	1,061	2,043	3,094		1,436	490				
Maint of Air Instl Machinery	02204	361	165	369	53	148	24	435	0		543	0				
Maint Buildings & Other Structures	02206	5,689	2,433	2,632	4,285	1,731	142	1,386	1,349		1,691	0				
Operation Utility Plants & Systems	02216	28,321	5,471	6,383	6,033	7,037	4,248	3,381	10,469		3,101	0				
Fire Stations & Crash Rescue	02218	11,023	3,825	4,932	2,876	4,974	6,237	293	3,199		3,818	0				
Rentals - Leased Facilities	02244	377	3,762	1,875	3,398	0	2,919	5	0		0	0				
Medical Services	03277	2,570	4,190	1,284	1,030	1,654	1,790	2,762	2,724		1,940	1,307				
Subsistence Issued	06112	7,390	6,666	5,641	6,824	0	3,968	6,287	6,014		4,745	5,480				
Separate Rations - Paid Airmen	06113	8,757	15,152	7,081	5,306	26,393	11,494	7,943	6,935		7,600	4,896				
Personnel w/o Duty Assignment	06114	1,160	1,913	235	1,680	0	272	331	178		0	1,716				
Total Supply Function	05450	$ 20,875	$ 17,627	$ 10,160	$ 11,508	$ 11,534	$ 11,103	$ 9,805	$ 14,996		$ 9,378	$ 10,102				
Supply Control (Officers & Staff)	05402	$ 8,134	$ 7,265	$ 6,334	$ 4,543	$ 4,338	$ 5,142	$ 4,976	$ 7,482		$ 5,241	$ 3,230				
Supply Warehouse	05404	9,462	9,568	2,417	5,692	6,498	4,474	3,840	3,992		3,692	6,335				
Subsistence Handling	05406	0	265	0	0	0	323	397	1,044		0	0				
Commissary Sales Store	05408	0	0	0	0	0	0	0	0		0	0				
Purchasing & Contracting	05410	1,141	529	590	1,148	494	1,164	592	1,566		279	0				
Salvage & Surplus Property	05412	746	0	203	0	0	0	0	184		0	0				
Flying Personnel - Fuels & Lubes	07102	$ 39,352	$ 53,991	$ 19,166	$ 11,825	$ 31,055	$ 18,448	$ 30,616	$ 36,618		$ 29,421	$ 16,319				
Organizational Maint - Aircraft	07110	61,766	82,566	37,302	32,478	44,402	45,578	47,197	49,662		38,391	44,998				
Instructors - Flying & Ground	07114	8,891	3,331	0	3,569	5,934	3,540	7,358	0		5,462	1,896				
Instructors - Flying	07114.01	1,759	3,331	0	2,429	2,528	1,358	4,695	0		3,481	1,138				
Personnel at School	09102	1,085	2,806	1,671	964	1,568	1,554	1,830	726		2,648	1,025				
**Transient USAF Aircraft	09109	214	3	0	0	1,571	0	786	0		1,516	0				
Permanent Change of Station	12113	1,624	4,277	2,038	5,205	1,130	3,650	6,532	4,269		4,979	1,774				
*** Supplies & Services Furnished	12114	497	583	20	0	0	429	1,386	247		35	8,901				
Supplies & Services Furnished ANG	12122	9,329	908	206	5,343	387	0	2,977	5,483		4,626	481				

* Account Codes 02123 / 02122

** Includes Payroll Costs, Parts & Supplies (excepting fuels & lubes) furnished transient USAF aircraft other than Air Reserve, ANG & AROTC Aircraft

*** Supplies & Services Furnished to Non-USAF Agencies

GROUP III - Leased Facilities, Maintained by Municipality, Except Areas Occupied by AFRTC's which are Supported by Reserve Funds

GROUP IV - Naval Air Stations, Facilities Used and Proportionate Share of Base Maintenance is Supported by Reserve Funds

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Part I
Comptroller Chart 6
Prepared By:
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OPERATING COSTS

NON WING-BASE AIR BASE GROUPS & SQUADRONS, BASE SERVICE AND ASSEMBLY & PROCESSING SQUADRONS

APRIL 1950

Item (A)	Account Code (B)	2463rd Stdby BSq Benj Harr (C)	2500th AB Gp Mitchel (D)	2595th AB Gp Brooks (E)	4400th AB Gp Stewart (F)	(G)	2600th AB Sq Pope (H)	4405th AB Sq Sherman (I)	4406th AB Sq Marshall (J)	4409th AB Sq Lawson (K)	(L)	2476th BS Sq Oscoda (M)	(N)	2212th A&F Sq Langley (O)	(P)	(Q)
No. of Personnel Reported																
Officers		9	157	68	40		36	9	5	29		5		4		
Airmen		147	1,629	686	378		469	154	162	204		129		147		
Civilians		106	770	204	291		40	11	4	74		16		0		
TOTAL PERSONNEL		262	2,556	958	709		545	174	171	307		150		151		
Payroll Costs																
Officers		$ 4,090	$ 79,203	$ 33,521	$ 18,545		$ 17,869	$ 4,612	$ 2,394	$ 14,698		$ 2,671		$ 3,553		
Airmen		21,140	249,718	115,662	63,119		82,039	26,024	26,061	36,065		20,443		17,428		
Civilians		29,605	211,268	51,180	81,046		9,773	3,142	1,425	19,543		3,778		0		
Total Payroll		$ 54,835	$ 540,189	$ 200,363	$ 162,710		$ 109,681	$ 33,778	$ 29,880	$ 70,306		$ 26,892		$ 20,981		
▲ Non-Personnel Costs		$ 17,792	$ 270,756	$ 59,948	$ 76,698		$ 97,209	$ 22,025	$ 31,971	$ 34,310		$ 11,176		$ 5,987		
TOTAL COSTS		$ 72,627	$ 810,945	$ 260,311	$ 239,408		$ 206,890	$ 55,803	$ 61,851	$ 104,616		$ 38,068		$ 26,968		
Costs of Selected Functions																
CO and Staff	01052	$ 5,197	$ 19,486	$ 15,450	$ 10,092		$ 11,077	$ 2,757	$ 2,354	$ 10,150		$ 2,792		$ 3,435		
Food Service (Mess Halls)	02110	0	20,799	7,276	4,520		5,119	0	944	1,773		1,207		0		
Civilian Personnel & Payroll	*	0	7,780	0	1,919		280	0	0	310		0		0		
Motor Pool	02136	2,523	16,801	7,631	5,906		5,821	1,299	518	2,818		3,458		0		
Work Details	02138	0	564	0	0		0	0	0	0		0		0		
Base Operations	02142	0	7,108	1,867	3,065		2,792	686	948	2,316		1,482		0		
Air Instl Office & Shop Overhead	02202	5,515	13,388	5,175	4,027		314	0	0	1,740		1,516		0		
Maint of Air Instl Machinery	02204	2,801	2,257	1,117	1,486		0	0	0	0		321		0		
Maint of Bldg & Other Structures	02206	2,060	25,911	5,823	7,287		1,595	0	0	0		1,683		0		
Operation Utility Plants & Systems	02216	16,144	74,578	15,464	23,109		108	161	0	0		4,588		0		
Fire Stations & Crash Rescue	02218	5,764	12,674	4,118	6,261		1,916	1,673	1,727	4,360		1,192		0		
Rentals - Leased Facilities	02244	0	511	4	27		0	0	0	0		0		0		
Medical Services	03277	1,155	50,769	6,428	7,357		875	1,065	551	0		840		0		
Subsistence Issued	04112	2,607	20,089	4,674	5,809		6,087	1,151	1,472	3,006		3,139		1,223		
Separate Rations Paid Airmen	04113	1,564	18,795	10,529	1,477		7,537	2,552	2,678	4,010		1,619		299		
Personnel w/o Duty Assignment	04114	0	2,811	5,460	1,353		560	0	823	0		125		0		
Aircraft Shop Maintenance	05160	0	53,088	11,638	17,271		0	0	0	0		0		0		
TOTAL SUPPLY FUNCTION	05450	$ 3,765	$ 56,875	$ 22,199	$ 17,710		$ 15,311	$ 3,185	$ 5,971	$ 6,780		$ 1,332		$ 14		
Supply Control (Officers & Staff)	05402	$ 1,764	$ 32,084	$ 9,209	$ 6,604		$ 7,524	$ 2,406	$ 337	$ 3,827		$ 1,231		0		
Supply Warehouse	05404	1,302	18,987	4,091	8,395		5,256	732	5,522	2,628		0		0		
Subsistence Handling	05406	0	5,024	1,347	235		1,126	0	0	0		0		0		
Commissary Sales Store	05408	0	2,423	1,480	0		0	0	0	0		0		0		
Purchasing and Contracting	05410	0	4,476	1,876	1,149		107	0	0	0		0		0		
Salvage & Surplus Property	05412	485	1,142	436	415		0	0	0	0		0		0		
Flying Personnel - Fuels & Lubes	07102	$ 0	$ 0	$ 0	$ 0		$ 0	$ 0	$ 0	$ 0		$ 0		$ 0		
Organizational Maint - Aircraft	07110	0	0	0	0		0	0	0	0		0		0		
Instructors - Flying & Ground	07114	0	0	0	0		0	0	0	0		0		0		
Instructors - Flying	07114.01	0	0	0	0		0	0	0	0		0		0		
Personnel at School	09102	98	4,007	1,726	1,870		2,308	170	110	1,448		0		125		
**Transient USAF Aircraft	09104	0	4,111	2,120	931		2,613	0	0	0		0		0		
Permanent Change of Station	12113	325	12,174	4,192	6,762		2,575	328	4,575	2,095		385		145		
*** Supplies & Services Furnished	12114	0	993	47	521		1,858	201	374	658		0		0		
Supplies & Services Furnished ANG	12122	0	1,603	2,023	0		526	43	0	25		0		0		

* Account Codes 02123 & 02122

** Includes Payroll Costs, Parts & Supplies (excepting fuels & lubes) furnished transient USAF aircraft other than Air Reserve, ANG & AFROTC aircraft

*** Supplies & services furnished to Non-USAF agencies

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Part I
Comptroller Chart 6
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OPERATING COSTS

AIRCRAFT CONTROL AND WARNING ORGANIZATIONS

APRIL 1950

	(A)	Account Code (B)	502d Tac Com Gp Pope (C)	503d AC & Wng Gp Roslyn, NY (D)	505th AC & Wng Gp Silver Lake (E)	540th AC & Wng Gp Stewart (F)	541st AC & Wng Gp Selfridge (G)	542d AC & Wng Gp Hamilton (H)	690th AC & Wng Sq(Seperate) Kirtland (I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)
1	No. of Personnel Reported																
2	Officer		91	101	87	73	50	27	32								
3	Airmen		829	940	1,029	831	492	261	336								
4	Civilians		0	0	2	0	0	0	0								
5																	
6	Total Personnel		920	1,041	1,118	904	542	288	368								
7																	
8	Payroll Costs																
9	Officers		$ 44,184	$ 49,676	$ 44,085	$ 34,138	$ 22,944	$ 13,147	$ 14,846								
10	Airmen		102,282	113,748	127,716	99,112	60,645	31,459	40,481								
11	Civilians		0	0	531	0	0	0	0								
12																	
13	Total Payroll		$ 146,466	$ 163,424	$ 172,332	$ 133,250	$ 83,589	$ 44,606	$ 55,327								
14																	
15	▲ Non-Personnel Costs		$ 45,277	$ 46,843	$ 43,926	$ 50,306	$ 28,144	$ 5,115	$ 10,923								
16																	
17	Total Costs		$ 191,743	$ 210,267	$ 216,258	$ 183,556	$ 111,733	$ 49,721	$ 66,250								
18																	
19	Costs of Selected Functions																
20																	
21	Food Services (Mess Halls)	02110	$ 7,451	$ 5,040	$ 6,346	$ 5,667	$ 2,101	$ 1,961	$ 1,549								
22	Motor Pool	02136	7,500	6,238	7,687	4,658	1,872	2,849	1,229								
23	Rentals - Leased Facilities	02244	0	1,417	90	0	0	219	0								
24	Subsistence Issued	06112	10,531	18,985	11,226	17,343	9,117	1,829	4,903								
25	Separate Rations Paid Airmen	06113	5,298	5,986	6,773	5,209	1,731	1,071	1,964								
26	Personnel w/o Duty Assignment	06114	3,054	2,822	5,404	2,568	2,385	4,067	940								
27	Communications & Electronics	07108	90,421	94,633	101,677	74,059	30,439	18,352	36,481								
28	Personnel at School	09102	1,111	2,653	2,804	2,624	1,267	0	1,761								
29																	
30																	
31																	
32																	
33																	
34																	
35																	

OPERATING COSTS - HOSPITAL SQUADRONS

APRIL 1950

	(A)	Account Code (B)	2200th Murphy Gen Hosp (C)	2201st Army Med Cntr (D)	2202d Oliver Gen Hosp (E)	2203d Valley Forge Gen Hosp (F)	2204th Percy Jones Gen Hosp (G)	2205th Army&Navy Gen Hosp (H)	2206th Brooke Army Med Cntr (I)	2207th Wm Beaumont Gen Hosp (J)	2208th Fitzsimons Gen Hosp (K)	2209th Letterman Gen Hosp (L)	2213th Madigan Gen Hosp (M)	(N)	(O)	(P)	(Q)
1	No. of Personnel Reported																
2	Officers		25	146	56	58	28	29	193	42	99	111	61				
3	Airmen		73	366	90	178	138	83	1,239	164	523	357	173				
4	Civilians		0	0	0	0	1	0	5	3	3	0	0				
5																	
6	Total Personnel		98	512	146	236	167	112	1,437	209	625	468	234				
7																	
8	Payroll Costs																
9	Officers		$ 9,929	$ 59,705	$ 23,095	$ 27,913	$ 13,380	$ 14,943	$ 83,915	$ 17,292	$ 38,916	$ 50,138	$ 25,492				
10	Airmen		9,313	40,285	11,197	25,188	19,638	13,217	139,729	23,762	79,212	50,591	26,480				
11	Civilians		0	0	0	0	221	0	1,280	739	773	0	0				
12																	
13	Total Payroll		$ 19,242	$ 99,990	$ 34,292	$ 53,101	$ 33,239	$ 28,160	$ 224,924	$ 41,793	$ 118,901	$ 100,729	$ 51,972				
14																	
15	▲ Non-Personnel Costs		$ 245	$ 930	$ 284	$ 315	$ 410	$ 928	$ 4,337	$ 931	$ 1,103	$ 1,127	$ 1,070				
16																	
17	Total Costs		$ 19,487	$ 100,920	$ 34,576	$ 53,416	$ 33,649	$ 29,088	$ 229,261	$ 42,724	$ 120,004	$ 101,856	$ 53,042				
18																	
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Part I
Comptroller Chart 6
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7 June 1950

OPERATING COSTS

WAF SQUADRONS, OVERSEAS REPLACEMENT GROUPS, & LIAISON FLIGHTS

APRIL 1950

Item (A)	Account Code (B)	2214th WAF Sq McChord (C)	2350th WAF Sq Moses Lake (D)	2351st WAF Sq Hamilton (E)	2475th WAF Sq Selfridge (F)	4412th WAF Sq Langley (G)	(H)	2225th AFORD Ft Dix (I)	2349th AFORD Hamilton (J)	(K)	1st Liaison Flight Biggs (L)	2nd Liaison Flight Langley (M)	3rd Liaison Flight Lawson (N)	4th Liaison Flight Pope (O)	5th Liaison Flt(Helicopter) Pope (P)	(Q)
No. of Personnel Reported																
Officers		1	1	1	1	1		103	372		4	4	4	5	3	
Airmen		1	2	3	2	3		1,764	5,554		11	13	10	11	20	
Civilians		0	0	0	0	0		37	20		0	0	0	0	0	
Total Personnel		2	3	4	3	4		1,904	5,946		15	17	14	16	23	
Payroll Costs																
Officers		$ 384	$ 334	$ 334	$ 384	$ 459		$ 51,678	$ 211,651		$ 2,106	$ 2,102	$ 1,957	$ 2,444	$ 1,581	
Airmen		83	345	463	345	492		218,049	733,240		2,403	2,294	2,189	1,817	3,038	
Civilians		0	0	0	0	0		9,060	4,711		0	0	0	0	0	
Total Payroll		$ 467	$ 679	$ 797	$ 729	$ 951		$ 278,787	$ 949,602		$ 4,509	$ 4,396	$ 4,146	$ 4,261	$ 4,619	
▲ Non-Personnel Costs		$ 78	$ 1,326	$ 778	$ 79	$ 309		$ 201,684	$ 166,323		$ 654	$ 1,068	$ 640	$ 1,431	$ 1,112	
Total Costs		$ 545	$ 2,005	$ 1,575	$ 808	$ 1,260		$ 480,471	$ 1,115,925		$ 5,163	$ 5,464	$ 4,786	$ 5,692	$ 5,731	

OPERATING COSTS - COMMUNICATIONS SQUADRONS AND RADAR CALIBRATION DETACHMENTS

APRIL 1950

Item (A)	Account Code (B)	28th Comm Sq Mitchel (C)	29th Comm Sq Langley (D)	34th Comm Sq Mitchel (E)	35th Comm Sq Hamilton (F)	36th Comm Sq Selfridge (G)	37th Comm Sq Robins (H)	40th Comm Sq Brooks (I)	42nd Comm Sq Mitchel (J)	43rd Comm Sq Hamilton (K)	(L)	5th Radar Cal Det Pope (M)	7th Radar Cal Det Langley (N)	11th Radar Cal Det Hamilton (O)	12th Radar Cal Det Langley (P)	(Q)
No of Personnel Reported																
Officers		9	5	4	6	1	4	6	1	3		6	8	6	9	
Airmen		184	76	75	76	69	61	90	18	71		24	36	29	31	
Civilians		0	0	0	0	0	0	0	0	0		0	0	0	0	
Total Personnel		193	81	79	82	70	65	96	19	74		30	44	35	40	
Payroll Costs																
Officers		$ 4,445	$ 2,532	$ 2,213	$ 2,991	$ 446	$ 1,896	$ 2,764	$ 446	$ 1,187		$ 2,932	$ 4,221	$ 3,087	$ 4,577	
Airmen		27,086	10,010	10,997	11,328	9,060	9,817	12,192	2,231	8,503		4,013	6,395	5,321	5,673	
Civilians		0	0	0	0	0	0	0	0	0		0	0	0	0	
Total Payroll		$ 31,531	$ 12,542	$ 13,210	$ 14,319	$ 9,506	$ 11,713	$ 14,956	$ 2,677	$ 9,690		$ 6,945	$ 10,616	$ 8,408	$ 10,250	
▲ Non-Personnel Costs		$ 12,126	$ 4,893	$ 3,185	$ 2,820	$ 3,839	$ 1,918	$ 4,049	$ 355	$ 1,880		$ 3,015	$ 3,555	$ 2,056	$ 1,642	
Total Costs		$ 43,657	$ 17,435	$ 16,395	$ 17,139	$ 13,345	$ 13,631	$ 19,005	$ 3,032	$ 11,570		$ 9,960	$ 14,171	$ 10,464	$ 11,892	

OPERATING COSTS - MISCELLANEOUS ORGANIZATIONS

APRIL 1950

Item (A)	Account Code (B)	1st Shoran Beacon Unit Langley (C)	2nd Radio Relay Sq Pope (D)	30th Motor Trans Sq Shaw (E)	363rd Rcn Tech Sq Langley (F)	472nd Sig Avn & Const Co - Kelly (G)	691st AF Band Selfridge (H)	769th AF Band Robins (I)	803rd Engr Avn Bn McChord (J)	Co"B" 803d Engr Avn Bn Moses Lake (K)	Co"C" 803rd Engr Avn Bn Moses Lake (L)	934th Sig Bn Pope (M)	2220th Ext Gp Benj Harr (N)	2597th Air Police Sq Brooks (O)	2602nd Tow Target Sq Biggs (P)	4410th Bomb Disp Unit Pope (Q)
No. of Personnel Reported																
Officers		3	4	4	9	3	1	1	19	6	5	14	18	5	46	1
Airmen		30	73	93	123	153	31	34	383	139	133	255	211	88	301	13
Civilians		0	0	0	0	0	0	0	0	0	0	0	81	1	0	0
Total Personnel		33	77	97	132	156	32	35	402	145	138	269	310	94	347	14
Payroll Costs																
Officers		$ 1,402	$ 1,778	$ 1,991	$ 4,125	$ 1,450	$ 380	$ 362	$ 9,459	$ 2,700	$ 2,086	$ 6,842	$ 9,110	$ 2,399	$ 22,777	$ 334
Airmen		4,757	10,208	12,927	17,662	18,467	4,116	4,894	43,660	15,114	14,533	33,637	30,261	15,404	56,844	1,777
Civilians		0	0	0	0	0	0	0	0	0	0	0	17,705	221	0	0
Total Payroll		$ 6,159	$ 11,986	$ 14,918	$ 21,787	$ 19,917	$ 4,496	$ 5,256	$ 53,119	$ 17,814	$ 16,619	$ 40,479	$ 57,076	$ 18,024	$ 79,621	$ 2,111
▲ Non-Personnel Costs		$ 2,641	$ 2,311	$ 9,589	$ 9,974	$ 4,441	$ 834	$ 830	$ 13,373	$ 3,849	$ 3,617	$ 17,912	$ 12,924	$ 2,860	$ 63,047	$ 341
Total Costs		$ 8,800	$ 14,297	$ 24,507	$ 31,761	$ 24,358	$ 5,330	$ 6,086	$ 66,492	$ 21,663	$ 20,236	$ 58,391	$ 70,000	$ 20,884	$ 142,668	$ 2,452

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RECAPITULATION OF CONTINENTAL AIR COMMAND

COST OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

APRIL 1950

PART II
COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
7 JUNE 1950

LINE	ITEM (A)	USAF INSTALLATIONS PROVIDING OWN SERVICES (B)	AFR INSTALLATIONS PROVIDING OWN SERVICES (C)	INSTALLATIONS PROVIDED SERVICES BY OTHER THAN ConAC (D)	AGGREGATE * (E)
1	No. of Personnel Reported				
2	Officers	56	14	11	81
3	Airmen	1,646	408	359	2,413
4	Civilians	1,822	473	155	2,450
5					
6	TOTAL PERSONNEL	3,524	895	525	4,944
7					
8	Payroll Costs				
9	Officers	$ 24,331	$ 5,634	$ 4,597	$ 34,562
10	Airmen	192,705	51,500	44,767	288,972
11	Civilians	486,773	129,148	41,809	657,730
12					
13	Total Payroll	$ 703,809	$ 186,282	$ 91,173	$ 981,264
14					
15	▲ Non-Personnel Costs	$ 408,659	$ 122,015	$ 119,480	$ 650,154
16					
17	TOTAL COSTS	$ 1,112,468	$ 308,297	$ 210,653	$ 1,631,418

▲ Non-Personnel Costs - Includes Miscellaneous Costs, Contractual Services and Supplies.

SOURCE: Cost Control Reports - AF Forms 320, 320A, 322 & 322A.

* Does not include Inactive Installations.

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COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- USAF INSTALLATIONS PROVIDING OWN SERVICES -

APRIL 1950

Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
7 June 1950

	Item (A)	Account Code (B)	Brooks AFB (C)	Hamilton AFB (D)	Langley AFB (E)	McChord AFB (F)	McGuire AFB (G)	Mitchel AFB (H)	Moses Lake AFB (I)	Oscoda AFB (J)	Selfridge AFB (K)	Sewart AFB (L)	Shaw AFB (M)	Stewart AFB (N)	Turner AFB (O)	
1	No. of Personnel Reported															1
2	Officers		2	4	4	*7	5	6	**7	1	***4	4	****5	2	5	2
3	Airmen		48	98	205	171	108	99	276	37	188	131	111	61	113	3
4	Civilians		112	145	307	126	86	286	115	16	184	98	128	103	116	4
5																5
6	Total Personnel		162	247	516	304	199	391	398	54	376	233	244	166	234	6
7																7
8	Payroll Costs															8
9	Officers		$ 782	$ 2,195	$ 1,767	$ 3,012	$ 2,257	$ 2,471	$ 2,817	$ 444	$ 1,800	$ 1,777	$ 2,066	$ 911	$ 2,032	9
10	Airmen		6,301	11,784	24,216	20,358	12,936	12,260	28,835	4,480	21,665	14,601	14,156	7,883	13,230	10
11	Civilians		27,324	47,093	80,027	38,170	21,598	77,842	32,877	3,778	51,976	23,343	28,763	28,708	25,274	11
12																12
13	Total Payroll		$ 34,407	$ 61,072	$ 106,010	$ 61,540	$ 36,791	$ 92,573	$ 64,529	$ 8,702	$ 75,441	$ 39,721	$ 44,985	$ 37,502	$ 40,536	13
14																14
15	A Non-Personnel Costs		$ 11,667	$ 37,431	$ 50,188	$ 37,749	$ 14,447	$ 78,248	$ 70,049	$ 3,242	$ 40,291	$ 23,564	$ 17,662	$ 16,417	$ 7,704	15
16																16
17	Total Costs		$ 46,074	$ 98,503	$ 156,198	$ 99,289	$ 51,238	$ 170,821	$ 134,578	$ 11,944	$ 115,732	$ 63,285	$ 62,647	$ 53,919	$ 48,240	17
18																18
19	Costs of Selected Utilities (Non-Payroll)															19
20																20
21	Purchased Water	06105	$ 206	$ 3,692	$ 547	$ -	$ 256	$ 561	$ -	$ -	$ 14,679	$ -	$ -	$ 213	$ 561	21
22	Purchased Sewage Disposal	06206	-	-	-	-	230	-	-	-	-	-	-	-	-	22
23	Purchased Electricity	06306	2,115	5,207	8,551	2,438	1,668	10,759	2,009	830	8,425	2,072	3,371	2,543	2,014	23
24	Purchased Gas	06509	1,963	8,830	1,502	-	-	6,624	-	-	1,329	-	-	708	381	24
25	Coal Issued #	06506	-	-	8,690	8,014	3,896	19,139	38,647	1,667	12,442	4,234	3,987	7,438	756	25
26	Fuel Oil Issued #	06507	-	482	8,167	3,772	-	8,162	9,204	-	-	-	-	1,952	858	26
27	O/B Facilities (Purchased Utilities)	08201	-	1,109	44	1,835	478	1,038	-	-	268	-	35	32	-	27
28																28
29																29
30	Costs of Selected Functions															30
31																31
32	Projects, Non-Recurring (Over $3,000) 09101 thru	09107	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	32
33	Modification (Under $3,000)	09108	873	3,174	1,307	5,827	1,608	300	10,477	560	6,549	1,332	657	1,483	951	33
34	Modification (Over $3,000)	09109	-	4,681	2,524	1,445	-	6,091	71,974	-	3,589	-	-	-	-	34
35	Accrued Annual Leave, 1 July thru 30 Apr	10101	27,404	44,597	74,579	33,575	18,943	70,225	19,066	5,095	31,216	20,591	22,234	30,836	19,109	35
36	Accrued Annual Leave, this month	10101	2,514	4,179	7,013	3,606	2,033	6,194	Cr 1,259	437	2,403	1,292	2,232	2,686	1,852	36
37	Sick Leave & Holiday Leave Taken, 1 July thru 30 Apr	10102	13,212	25,399	47,285	19,985	15,711	48,440	14,677	1,998	17,030	10,644	10,914	19,689	8,349	37
38	Sick Leave & Holiday Leave Taken, this month	10102	779	1,783	1,746	845	789	3,621	1,555	36	1,421	1,226	1,080	917	326	38
39																39
40																40
41	Inventory Value & Depreciation Costs															41
42																42
43	Depreciation, Mobile Maint Equip, 1 July thru 30 Apr	10109	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,046	$ -	$ -	$ -	$ -	43
44	Depreciation, Mobile Maint Equip, this month	10109	-	-	-	-	-	-	-	-	-	-	-	-	-	44
45	Value of Installed Equip & "MR" Property Salvaged,															45
46	1 July thru 31 Mar	10110	6,262	9,354	8,838	659	324	6,169	487	560	10,239	65	4,717	2,607	3,010	46
47	Value of Installed Equip & "MR" Property Salvaged,															47
48	this month	10110	866	1,890	159	-	287	577	-	-	832	-	-	1,050	30	48
49	Value of Non-expendable Property for which A.I.O. has															49
50	maintenance & repair responsibility	20104	536,264	795,434	522,566	629,372	176,109	699,120	260,963	60,264	746,056	252,025	300,347	217,271	379,959	50
51	Value (when new) of Mobile Equip issued A.I.O.	20105	143,988	174,168	218,382	213,919	51,572	344,913	86,773	89,579	284,435	130,469	70,813	320,596	143,998	51
52																52
53																53

	Item (A)	Account Code (B)	Brooks AM	Brooks Civ	Hamilton AM	Hamilton Civ	Langley AM	Langley Civ	McChord AM	McChord Civ	McGuire AM	McGuire Civ	Mitchel AM	Mitchel Civ	Moses Lake AM	Moses Lake Civ	Oscoda AM	Oscoda Civ	Selfridge AM	Selfridge Civ	Sewart AM	Sewart Civ	Shaw AM	Shaw Civ	Stewart AM	Stewart Civ	Turner AM	Turner Civ	
54	Utilization of Airmen & Civilians		AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	AM	Civ	54
55																													55
56	Administrative and Engineering	30001	4	13	9	14	5	26	6	15	10	10	7	25	14	17	3	2	9	21	2	14	2	10	1	8	7	8	56
57	Fire Protection & Aircraft Crash Rescue	30002	32	2	44	27	108	4	28	6	43	3	85	12	38	11	10	2	46	3	57	3	35	3	36	3	32	4	57
58	Custodial	30003	0	0	0	3	28	1	0	1	0	0	0	33	0	0	0	0	0	14	2	0	0	0	0	1	0	4	58
59	Central Heating Plant Operators	30004	0	5	0	0	3	44	0	17	25	5	0	34	5	9	1	0	11	31	0	12	0	17	0	3	1	7	59
60	Other Utilities Plant Operators	30005	1	7	6	13	4	23	0	0	0	0	3	6	0	1	2	2	3	3	5	16	0	6	3	9	2	4	60
61	Carpenters	30006	1	12	6	17	15	36	4	14	4	17	1	15	8	18	5	3	14	22	1	9	1	15	0	13	7	21	61
62	Painters	30007	2	15	0	11	3	21	1	10	4	5	2	20	0	5	0	0	2	16	2	4	1	8	0	7	2	7	62
63	Electricians	30008	7	11	4	11	8	14	4	11	8	8	8	17	7	11	3	1	15	18	4	8	4	8	0	5	3	6	63
64	Plumbers & Steamfitters	30009	1	12	1	10	5	17	2	11	4	8	2	23	6	8	2	2	5	10	1	9	1	5	0	6	2	6	64
65	Structural - Steel & Metal	30010	0	0	2	3	2	7	0	4	1	1	0	0	2	3	0	0	0	0	0	2	2	4	0	4	2	4	65
66	Concrete Masonry & Plaster	30011	0	0	0	1	0	6	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	2	1	0	66
67	Machinists	30012	0	3	10	21	7	22	16	23	0	0	1	12	2	21	1	1	0	0	2	0	0	0	4	13	0	0	67
68	General Labor	30013	4	30	10	16	28	81	5	16	6	27	11	76	5	11	3	3	58	39	11	21	23	34	17	38	3	23	68
69	Totals	30099	52	110	92	147	216	302	66	128	105	86	122	278	87	117	32	16	163	179	97	98	69	110	61	104	62	94	69
70																													70

71 # Cost of Coal & Fuel Oil Including transportation
72 * Includes Headquarters Company & Company "A", 803d Engr Avn Bn
73 ** " Company "B" and Company "C", 803d Engr Avn Bn
74 *** " 541st Aircraft Control & Warning Group
75 **** " 605th Aircraft Control & Warning Group
76 SOURCE: Lines 1 - 17 Cost Control Reports - AF Forms 320, 348, 320A, & 322A
77 Lines 19 - 69 Real Estate Facilities Monthly Cost Report, AF Forms 329 and 330

NOTE: Payroll Costs shown on Line 10 are actual payroll costs for Airmen and are not based on civilian pay scales

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COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- AIR FORCE RESERVE INSTALLATIONS PROVIDING OWN SERVICES -

APRIL 1950

Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
7 June 1950

Line	Item (A)	Account Code (B)	Atterbury AFB (C)	Birmingham Mun Apt (D)	Greater Pittsburg Apt (E)	Hanscom Apt (F)	Hensley Fld (G)	Long Beach Mun Apt (H)	Memphis Mun Apt (I)	Miami Int Apt (J)	O'Hare Int Apt (K)	Portland Apt (L)	New Castle County Apt (M)	Wold-Chamberlain Fld (N)	(O)
1	No. of Personnel Reported														
2	Officers		1	1	1	1	1	1	1	1	2	2	1	1	
3	Airmen		52	42	41	30	33	24	40	14	27	28	29	48	
4	Civilians		40	7	35	52	24	38	35	32	105	42	26	37	
6	Total Personnel		93	50	77	83	58	63	76	47	134	72	56	86	
8	Payroll Costs														
9	Officers		413	413	363	398	371	504	470	384	797	839	348	334	
10	Airmen		5,833	5,736	4,830	3,303	4,528	3,414	5,252	2,100	3,087	3,178	3,262	6,777	
11	Civilians		9,678	2,054	9,253	15,911	5,876	10,593	9,178	7,276	31,173	11,994	6,398	9,764	
13	Total Payroll		15,924	8,203	14,446	19,612	10,775	14,511	14,900	9,760	35,057	16,011	10,008	16,875	
15	▲ Non-Personnel Costs		9,251	7,342	4,045	9,469	2,766	9,757	19,390	4,243	29,405	8,891	9,744	7,712	
17	Total Costs		25,175	15,545	18,491	29,281	13,541	24,268	34,290	14,003	64,462	24,902	19,752	24,587	
19	Costs of Selected Utilities (Non-Payroll)														
21	Purchased Water	06105	$ -	$ 4	$ -	$ -	$ -	$ 53	$ 267	$ 300	$ 723	$ Cr 5	$ 237	$ 282	
22	Purchased Sewage Disposal	06206	-	-	-	-	40	-	-	-	-	-	86	45	
23	Purchased Electricity	06306	1,303	3,314	864	1,764	746	1,107	713	1,452	4,830	29	718	1,349	
24	Purchased Gas	06509	508	-	-	30	1,101	320	444	267	118	1,862	-	415	
25	Coal Issued #	06506	1,404	816	279	4,211	-	-	198	-	15,647	1,039	671	814	
26	Fuel Oil Issued #	06507	70	-	-	153	-	310	-	342	50	1,903	409	600	
27	O/B Facilities (Purchased Utilities)	08201	1,616	-	75	-	-	-	3	-	-	-	-	-	
30	Costs of Selected Functions														
32	Projects, Non-Recurring (Over $3,000)	09101 thru 09107	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
33	Modification (Under $3,000)	09108	2,814	286	1,150	1,583	634	1,925	3,558	1,384	2,607	2,237	-	893	
34	Modification (Over $3,000)	09109	-	-	170	-	-	-	7,974	-	4,250	2,216	-	3,748	
35	Accrued Annual Leave, 1 July thru 30 Apr	10101	5,968	2,610	9,972	11,088	6,877	9,359	8,758	6,475	29,556	5,319	5,890	7,958	
36	Accrued Annual Leave, this month	10101	974	269	912	1,270	1,833	1,038	802	800	3,069	553	342	873	
37	Sick Leave & Holiday Leave Taken, 1 July thru 30 Apr	10102	5,267	1,484	6,435	5,868	3,952	6,249	5,493	4,561	19,995	2,678	3,579	4,964	
38	Sick Leave & Holiday Leave Taken, this month	10102	569	90	465	624	90	624	369	381	1,108	410	225	632	
41	Inventory Value & Depreciation Costs														
43	Depreciation, Mobile Maint Equip, 1 July thru 30 Apr	10109	$ -	$ -	$ 11,333	$ -	$ -	$ -	$ 100	$ -	$ -	$ -	$ -	$ -	
44	Depreciation, Mobile Maint Equip, this month	10109	-	-	-	-	-	-	-	-	-	-	-	-	
45	Value of Installed Equip & "MR" Property Salvaged, 1 July thru 30 Apr	10110	232	-	1,339	394	30	2,302	2,284	481	45	-	35	5	
47	Value of Installed Equip & "MR" Property Salvaged, this month	10110	-	-	409	41	19	-	161	-	-	-	-	5	
49	Value of Non-Expendable Property for which A.I.O. has maint & repair responsibility	20104	26,985	1,729	58,589	66,381	48,922	114,312	113,215	39,467	1,386,167	216	25,108	3,629	
51	Value (when new) of Mobile Equip issued A.I.O.	20105	-	20,000	118,260	76,170	54,098	19,994	49,017	1,899	75,473	-	38,170	69,330	

Line	Utilization of Airmen & Civilians	Account Code	C AM	C Civ	D AM	D Civ	E AM	E Civ	F AM	F Civ	G AM	G Civ	H AM	H Civ	I AM	I Civ	J AM	J Civ	K AM	K Civ	L AM	L Civ	M AM	M Civ	N AM	N Civ
56	Administrative and Engineering	30001	4	4	1	2	2	5	2	6	1	3	5	6	2	3	4	2	0	10	3	6	3	6	9	3
57	Fire Protection & Aircraft Crash Rescue	30002	18	3	30	1	31	1	22	12	25	1	17	3	32	1	1	0	21	24	22	2	20	3	20	6
58	Custodial	30003	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	5	0	4	0	0	0	1	0	1
59	Central Heating Plant Operators	30004	8	4	0	0	0	8	0	9	0	0	0	0	0	5	0	0	0	8	0	2	0	0	0	4
60	Other Utilities Plant Operators	30005	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	2
61	Carpenters	30006	4	6	0	1	0	3	2	8	3	3	2	4	3	7	1	7	0	14	0	6	4	7	11	3
62	Painters	30007	1	3	0	0	0	1	0	2	0	1	0	2	0	2	1	2	0	5	0	2	0	1	0	2
63	Electricians	30008	3	4	0	1	1	2	0	3	1	2	2	3	0	3	1	3	0	6	1	5	0	1	3	3
64	Plumbers & Steamfitters	30009	2	3	0	1	2	1	0	3	2	2	0	1	0	4	0	2	0	7	0	4	2	1	2	2
65	Structural - Steel & Metal	30010	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
66	Concrete Masonry & Plaster	30011	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	Machinists	30012	0	0	0	0	0	0	0	0	0	2	0	7	0	2	0	1	1	9	0	2	0	0	0	0
68	General Labor	30013	6	10	0	1	0	12	2	7	1	10	3	11	0	7	0	10	0	15	2	13	0	3	1	8
69	Totals	30099	48	42	31	7	36	35	28	52	33	24	29	38	37	35	8	32	22	102	28	43	29	26	48	36

71 # Cost of Coal & Fuel Oil including transportation

73 SOURCE: Lines 1 - 12 Cost Control Reports - AF Forms 320, 322, 320A, and 322A

74 Lines 19 - 69 Real Estate Facilities Monthly Cost Report, AF Forms 329 and 330

76 NOTE : Payroll Costs shown on Line 10 are actual payroll costs for Airmen and are not based on civilian pay scales

Page 1 of 1 Pages

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Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
7 June 1950

COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- INSTALLATIONS PROVIDED SERVICES BY THE ARMY, THE NAVY, OR BY ANOTHER MAJOR AF COMMAND -

APRIL 1950

Line	Item (A)	Account Code (B)	Lawson AFB (Army) (C)	Marshall AFB (Army) (D)	Otis AFB (Army) (E)	Pope AFB (Army) (F)	Sherman AFB (Army) (G)	Fairfax Fld (Army) (H)	Godman AFB (Army) (I)	Floyd Bennett (Naval Air Station) (J)	Dobbins AFB (AMC) (K)	(L)	(M)	(N)	(O)
1	No. of ConAC Personnel Reported in AI Function														
2	Officers, ConAC		1	-	4	1	-	2	1	1	1				
3	Airmen, ConAC		30	10	163	44	11	29	36	-	36				
4	Civilians, ConAC		8	3	106	5	1	11	19	-	2				
6	Total ConAC Personnel		39	13	273	50	12	42	56	1	39				
8	Payroll Costs - ConAC Personnel														
9	Officers, ConAC		$ 398	$ -	$ 1,646	$ 334	$ -	$ 761	$ 498	$ 490	$ 470				
10	Airmen, ConAC		3,974	1,039	18,665	5,604	1,388	3,650	5,018	-	5,429				
11	Civilians, ConAC		2,046	975	28,481	1,186	367	2,975	5,195	-	584				
13	Total Payroll Cost - ConAC Personnel		$ 6,418	$ 2,014	$ 48,792	$ 7,124	$ 1,755	$ 7,386	$ 10,711	$ 490	$ 6,483				
15	A Non-Personnel Costs		$ 9,281	$ 4,470	$ 38,377	$ 38,071	$ 2,112	$ 1,934	$ 4,345	$ 8,461	$ 12,429				
17	Total Costs		$ 15,699	$ 6,484	$ 87,169	$ 45,195	$ 3,867	$ 9,320	$ 15,056	$ 8,951	$ 18,912				
22	Services Received by ConAC Activity														
24	Utilities Furnished ConAC Activity, 1 July thru 30 Apr	08201	$ 8,619	$ 5,121	$ 49,392	$ 21,082	$ 5,655	$ 12,900	$ 11,652	$ -	$ 11,470				
25	Utilities Furnished ConAC Activity, this month	08201	701	460	-	-	504	942	1,001	-	1,829				
26	All Other Real Estate Facilities Services Furnished														
27	ConAC Activity, 1 July thru 30 Apr	08202	103,105	39,629	570,862	163,028	44,122	192,286	127,851	-	165,287				
28	All Other Real Estate Facilities Services Furnished														
29	ConAC Activity, this month	08202	10,012	3,428	-	-	2,054	3,170	13,135	-	10,326				
31	Total Real Estate Facilities Services Furnished														
32	ConAC Activity, 1 July thru 30 Apr	08299	111,724	44,750	620,254	184,110	49,777	205,186	139,503	-	176,757				
34	Total Real Estate Facilities Services Furnished														
35	ConAC Activity, this month	08299	10,713	3,888	-	-	2,558	4,112	14,136	-	12,155				

SOURCE: Lines 1 - 17 Cost Control Reports - AF Forms 320, 322, 320A, and 322A
Lines 19 - 35 Columns (C) through (G); Real Estate Facilities Monthly Cost Report, AF Form 329 - prepared in this Headquarters from Army type reports
Column (H); Real Estate Facilities Monthly Cost Report, AF Form 329 - submitted for Fairfax Field
Column (J); Data Not Available
Column (K); Real Estate Facilities Monthly Cost Report, AF Form 329 - received for Dobbins AF Base

REMARKS: Columns (C) through (K) Parenthesis immediately under name of Installation indicates the agency responsible for accomplishing and/or providing for the ConAC Installation all or a major part of real estate facilities services.

NOTE: Payroll Costs shown on line 10 are actual payroll costs for Airmen and are not based on civilian pay scales. The reporting of personnel and costs in the Air Installations account codes of the Cost Reporting system (Lines 1-13) should be accomplished with reference to paragraph 42b(1)(a) and (b) of ConAC Letter 170-1B, 15 March 1950 and the cross servicing agreement which makes provision for such services.

Langley AFB 6-8-50-250

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Con AC - Summary of Operating Costs
June 1950

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COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ , CONAC
4 AUG 1950

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CONTINENTAL AIR COMMAND

SUMMARY OF OPERATING COSTS

(BY ORGANIZATION)

JUNE 1950

PART I OPERATING COSTS OF SELECTED FUNCTIONS.
PART II COST OF MANAGEMENT & PRESERVATION OF REAL ESTATE FACILITIES.

IN THE EVENT ANY INFORMATION CONTAINED HEREIN IS EXTRACTED OR THE PUBLICATION IS REPRODUCED IN ANY WAY THE SOURCE OF THE INFORMATION SHOULD BE SHOWN.

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PART I
COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
4 AUG 1950

RECAPITULATION OF CONTINENTAL AIR COMMAND

OPERATING COSTS

JUNE 1950

LINE	(A)	HEADQUARTERS (B)	WINGS (C)	AFRTC'S (D)	ALL OTHER ORGANIZATIONS (E)	AGGREGATE (F)
1	No. of Personnel Reported					
2	Officers	2,300	2,949	748	1,637	7,634
3	Airmen	4,994	20,455	8,829	19,519	53,797
4	Civilians	1,289	3,227	2,577	1,682	8,775
5						
6	TOTAL PERSONNEL	8,583	26,631	12,154	22,838	70,206
7						
8	Payroll Costs					
9	Officers	$ 1,380,973	$ 1,474,344	$ 406,898	$ 760,540	$ 4,022,755
10	Airmen	1,025,712	3,266,718	1,718,724	2,650,244	8,661,398
11	Civilians	345,224	867,089	694,368	458,816	2,365,497
12						
13	Total Payroll	$ 2,751,909	$ 5,608,151	$ 2,819,990	$ 3,869,600	$ 15,049,650
14						
15	▲ Non-Personnel Costs	$ 614,136	$ 4,273,930	$ 2,277,987	$ 1,761,107	$ 8,927,160
16						
17	TOTAL COSTS	$ 3,366,045	$ 9,882,081	$ 5,097,977	$ 5,630,707	$ 23,976,810

NOTE: Cost Control Report for 62d Tr Carr Gp (H) - Kelly AFB (AMC) delinquent. Payroll Costs for 62d Tr Carr Gp (H) have been shown on Page 4 but have not been included in the Recapitulation of ConAC Operating Costs as shown above.

▲ Non-Personnel Costs: Includes Miscellaneous Costs, Contractual Services and Supplies.

SOURCE: Cost Control Reports - AF Forms 321, 321A, 320, 320A, 322 & 322A.

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ComAC
4 August 1950

OPERATING COSTS

COMMAND AND INTERMEDIATE HEADQUARTERS

JUNE 1950

Item (A)	Account Code (B)	Hq ComAC Mitchel (C)	Hq TAC Langley (D)	Hq 1st AF Mitchel (E)	Hq 4th AF Hamilton (F)	Hq 9th AF Langley (G)	Hq 10th AF Selfridge (H)	Hq 12th AF Brooks (I)	Hq 14th AF Robins (J)	Hq 8th Air Div Pope (K)	Hq 9th Air Div Pope (L)	Hq 25th Air Div Everett, Wash (M)	Hq 26th Air Div Roslyn, NY (N)	Hq 28th Air Div Hamilton (O)	Hq 30th Air Div Selfridge (P)	Hq 32d Air Div Stewart (Q)	Hq EADF Mitchel (R)	Hq WADF Hamilton (S)
No. of Personnel Reported																		
Officers		310	64	263	316	314	355	252	284	23	12	12	7	10	9	9	31	29
Airmen		704	42	658	595	710	793	472	730	30	25	30	28	31	20	21	51	54
Civilians		346	34	153	135	150	174	104	176	1	1	0	0	0	0	0	7	8
Total Personnel		1,360	140	1,074	1,046	1,174	1,322	828	1,190	54	38	42	35	41	29	30	89	91
Payroll Costs																		
Officers		$ 192,219	$ 43,244	$ 156,208	$ 195,511	$ 186,802	$ 208,204	$ 148,814	$ 164,335	$ 14,678	$ 6,891	$ 7,312	$ 4,504	$ 5,837	$ 5,094	$ 4,449	$ 20,540	$ 18,433
Airmen		128,640	7,395	141,859	135,099	151,682	174,220	100,719	141,980	5,188	3,706	4,978	3,898	5,525	3,256	3,752	8,199	7,616
Civilians		104,134	8,999	39,314	36,034	38,752	41,965	27,000	44,627	266	228	-	-	-	-	-	1,906	2,020
Total Payroll		$ 422,993	$ 59,638	$ 337,381	$ 364,644	$ 376,616	$ 424,389	$ 276,533	$ 351,440	$ 20,132	$ 10,825	$ 12,290	$ 8,402	$ 11,362	$ 8,350	$ 8,201	$ 30,644	$ 28,069
▲ Non-Personnel Costs		$ 99,337	$ 3,078	$ 66,810	$ 86,827	$ 99,893	$ 71,019	$ 62,650	$ 99,988	$ 2,281	$ 1,648	$ 1,172	$ 1,666	$ 992	$ 1,086	$ 2,615	$ 7,024	$ 6,250
Total Costs		$ 522,330	$ 62,716	$ 404,191	$ 451,471	$ 476,509	$ 495,408	$ 339,183	$ 451,428	$ 22,413	$ 12,473	$ 13,462	$ 10,068	$ 12,354	$ 9,436	$ 10,816	$ 37,668	$ 34,319
Costs of Selected Functions																		
Office of CG & VC	20005	$ 10,150	$ 3,153	$ 4,906	$ 7,223	$ 5,695	$ 6,065	$ 4,370	$ 6,495	$ 2,290	$ 1,315	$ 1,001	$ 922	$ 1,730	$ 1,040	$ 822	$ 3,001	$ 3,006
Air Adj Gen & Historical Section	*	25,345	7,770	14,396	22,493	7,762	24,783	21,939	26,842	2,120	1,724	1,228	684	2,073	301	1,106	3,617	2,415
IG, Air Insp, PM, Flying Safety	**	23,380	-	17,128	17,489	16,126	16,316	14,152	13,953	-	-	-	-	-	-	569	-	-
Public Information Office	20009	4,571	814	2,207	3,222	1,099	2,195	2,042	1,267	125	643	-	-	-	-	-	-	288
Air Surgeon	20207	5,271	-	2,888	2,417	3,113	2,477	2,489	3,226	-	-	-	-	-	-	-	-	-
Total Comptroller Function	20161	63,123	-	25,361	25,673	22,563	21,772	17,095	22,546	-	-	473	108	1,194	125	417	-	-
Statistical Services	20107	30,314	-	13,229	13,943	14,135	11,239	10,325	12,219	-	-	473	-	1,194	125	-	-	-
Programs & Costs	***	13,739	-	3,584	3,014	2,944	2,720	2,007	2,597	-	-	-	108	-	-	83	-	-
Total Deputy for Personnel	****	55,917	-	33,152	31,902	39,360	35,937	25,601	26,182	-	-	410	628	637	362	835	-	-
Personnel Services	20217	5,173	-	1,740	1,773	1,305	1,168	946	2,392	-	-	-	331	-	-	-	-	-
Military Personnel	20227	28,467	-	23,194	13,761	26,295	26,704	14,154	11,929	-	-	-	297	-	362	835	-	-
Total Deputy for Operations	*****	72,994	39,241	19,233	24,811	14,170	15,883	13,360	21,605	12,598	5,090	4,498	3,373	2,947	2,909	2,508	17,299	18,143
Operations & Training	20305	26,483	10,223	6,483	6,858	5,872	5,061	5,350	8,755	-	-	-	582	-	1,485	-	591	-
Plans & Requirements	20307	20,941	11,017	2,990	3,127	1,145	902	1,685	3,325	678	-	-	-	-	-	-	4,975	10,838
Intelligence	20311	7,426	3,763	1,276	1,809	2,435	1,652	1,008	2,655	1,575	1,279	784	742	154	469	162	1,450	1,589
Communications & Electronics	20315	11,398	4,930	6,953	7,048	3,190	4,710	3,184	4,824	1,671	904	617	257	1,030	757	1,176	1,360	1,283
Total Deputy for Materiel	20461	63,411	-	23,193	24,091	16,654	23,033	13,980	27,168	1,023	663	1,529	-	588	-	95	-	-
Maintenance	20405	7,384	-	4,024	3,985	1,829	2,506	3,042	2,645	-	-	-	-	-	-	-	-	-
Supply	20407	12,308	-	4,909	5,594	4,395	4,060	3,511	7,439	639	663	390	-	90	-	95	-	-
Installations	20413	29,500	-	7,883	7,284	4,656	8,706	2,491	8,037	-	-	291	-	-	-	-	-	-
Hq Sq Administrative Overhead	20503	12,412	1,522	7,369	4,583	7,795	6,004	5,403	12,006	-	-	-	297	-	1,723	-	1,127	2,027
Flight Section - Flying	20506	29,441	-	13,346	18,332	23,137	-	1,478	18,721	-	-	-	-	-	-	-	-	1,529
Flight Section - Maintenance	20507	24,824	-	9,467	-	23,767	768	25,939	18,198	-	-	178	-	-	368	-	-	-
Personnel w/o Duty Assignment	20511	10,970	760	2,600	8,330	5,167	7,386	5,960	3,764	184	198	574	140	1,258	-	674	1,738	1,544
Communications Contractual	20527	-	155	780	712	343	637	234	1,385	54	36	-	8	-	3	61	-	50
TDY	20529	3	1,442	3,921	6,892	13,288	15,290	3,678	20,077	-	-	158	-	100	-	732	-	1,052
Overtime Paid Civilians	20530	549	-	-	79	-	-	-	270	-	-	-	-	-	-	-	-	-
Rentals - Leased Facilities	20531	-	-	4,667	632	-	1,714	-	887	-	-	-	-	-	-	-	-	-
Personnel at School	21005	7,445	591	3,195	973	6,313	5,396	6,385	3,285	-	-	-	-	-	398	-	140	-
Air Reserve	21006	321	-	26,046	17,993	9,369	23,973	10,731	9,925	-	-	-	-	-	-	-	-	-
Air National Guard	21007	-	-	36,998	38,309	32,968	52,681	16,235	23,989	-	-	-	-	-	-	-	-	-
Air ROTC	21009	6,422	-	52,723	71,346	88,037	117,008	61,575	71,906	-	-	-	-	-	-	-	-	-
Air Scout Liaison	21049.01	-	96	444	444	-	815	444	-	-	-	-	-	-	-	-	-	-
Other Liaison Activities	21049.02	96	-	1,138	8,162	-	-	-	1,232	-	-	-	-	-	-	-	-	-
Aviation Cadet & OCS Procurement	21049.03	-	-	4,810	4,485	-	2,748	3,634	4,737	-	-	-	-	-	-	-	-	-

* Account Codes 20007 ≠ 20015
** Account Codes 20004 ≠ 20008 ≠ 20215 ≠ 20309
*** Account Codes 20109 ≠ 20113
**** Account Codes 20261 less 20217 less 20227
***** Account Codes 20361 less 20309

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Part I
Comptroller Chart 8
Prepared By:
Director Programs & Costs
Hq ConAC
4 August 1950

OPERATING COSTS

WINGS

JUNE 1950

	Item (A)	Account Code (B)	4th Ftr Intcp Wg Langley (C)	33d Ftr Intcp Wg Otis (D)	56th Ftr Intcp Wg Selfridge (E)	78th Ftr Intcp Wg Hamilton (F)	81st Ftr Intcp Wg Larson (G)	(H)	20th Ftr Bmr Wg Shaw (I)	31st Ftr Bmr Wg Turner (J)	(K)	52d Ftr A/W Wg McGuire (L)	325th Ftr A/W Wg McChord (M)	(N)	314th Tr Carr Wg Sewart (O)	(P)	(Q)
1	No. of Personnel Reported																
2	Officers		304	247	248	312	195		261	252		179	237		306		
3	Airmen		2,708	1,843	2,116	2,513	1,614		1,751	1,609		1,276	1,864		1,799		
4	Civilians		712	240	374	433	171		265	229		213	245		223		
5																	
6	Total Personnel		3,724	2,330	2,738	3,258	1,980		2,277	2,090		1,665	2,246		2,327		
7																	
8	Payroll Costs																
9	Officers		$ 149,331	$ 127,327	$ 114,368	$ 149,433	$ 96,993		$ 130,118	$ 122,338		$ 94,733	$ 121,318		$ 154,324		
10	Airmen		428,125	280,910	314,519	409,933	237,673		272,991	261,232		203,353	265,139		306,439		
11	Civilians		186,084	62,196	105,433	129,370	49,010		70,406	54,069		54,356	101,563		54,610		
12																	
13	Total Payroll		$ 763,540	$ 465,433	$ 534,506	$ 688,736	$ 385,676		$ 473,515	$ 437,638		$ 352,442	$ 488,020		$ 515,373		
14																	
15	▲ Non-Personnel Costs		$ 695,389	$ 362,475	$ 381,444	$ 335,196	$ 274,453		$ 400,081	$ 186,096		$ 381,633	$ 339,563		$ 349,126		
16																	
17	Total Costs		$1,458,929	$ 827,908	$ 915,749	$1,023,932	$ 660,129		$ 873,596	$ 623,724		$ 734,075	$ 827,583		$ 864,499		
18																	
19	Costs of Selected Functions																
20																	
21	CO and Staff	01061	$ 28,088	$ 23,381	$ 22,576	$ 24,636	$ 21,836		$ 25,175	$ 22,087		$ 19,897	$ 36,609		$ 20,993		
22	S1 Admin Overhead (AS Gp Units)	02014	8,881	10,436	9,153	8,907	8,148		8,266	8,127		6,900	8,265		5,541		
23	Food Services (Mess Halls)	02110	29,602	10,132	16,999	20,606	16,720		12,636	10,693		11,221	14,092		16,695		
24	Accounting and Disbursing	02117	13,113	8,617	10,374	14,646	4,386		6,653	6,741		4,860	6,116		5,989		
25	Civilian Personnel & Payroll	*	4,887	1,925	2,630	3,044	258		280	280		884	2,347		-		
26	Personnel Services	02124	8,887	5,946	6,464	13,613	4,570		7,427	4,977		4,717	6,194		10,760		
27	Motor Pool	02136	25,902	14,673	14,606	21,444	16,035		16,348	14,180		11,461	15,184		16,651		
28	Base Operations	02142	4,447	3,821	6,748	7,616	2,430		3,239	2,652		5,725	997		3,028		
29																	
30	Total Air Installations	02261	189,173	27,040	124,500	121,243	111,715		90,859	76,167		38,945	107,569		72,545		
31	Fire Stations & Acft Crash Rescue	02218	12,206	7,175	10,671	13,852	16,753		12,846	7,870		69	6,158		7,916		
32	Rentals - Leased Facilities	02244	584	324	93	61	345		-	74		-	-		1		
33	Field Maintenance Automotive Equipment	02302	25,304	19,087	13,099	12,020	15,406		13,395	17,245		11,247	15,506		10,086		
34	Organizational Maint of Admin Acft	02306	26,497	13,431	29,065	42,737	17,445		9,406	11,422		9,653	22,156		14,387		
35																	
36	Medical																
37	Medical Administration	03002	9,569	7,869	5,852	11,528	4,844		4,616	5,003		3,725	7,140		5,434		
38	Supplies - Hospital	03004	378	81	25	90	740		19	67		1	69		191		
39	Dental Service	03102	4,581	1,471	2,295	7,080	2,264		2,308	2,125		2,109	3,799		2,553		
40	Medical Services & Other Services	03104	12,654	5,369	9,131	14,464	7,479		6,506	7,244		2,625	3,440		4,670		
41	X-Ray Service	03106	1,436	514	1,129	484	632		636	522		463	413		752		
42	Laboratory	03108	1,181	450	717	748	271		321	375		269	234		467		
43	Pharmacy	03110	1,583	846	543	1,106	1,166		1,036	722		200	780		1,512		
44	Preventive Medicine	03112	1,888	382	654	1,154	426		1,211	1,306		420	1,260		892		
45	Flight Surgeon	03114	2,578	467	1,861	1,837	246		941	-		188	1,255		960		
46	Dietetic Service	03116	10,390	4,046	4,152	5,674	2,895		3,476	3,980		8	4,343		4,083		
47	Medical Services	03277	46,516	21,496	26,257	47,134	20,933		21,071	21,382		10,028	22,733		21,764		
48																	
49	Fuels & Lubes (Admin & Prof Flying)	04106	12,691	18,777	24,426	4,111	11,801		6,273	7,286		9,859	-		9,679		
50	Subsistence	04112	39,114	35,109	26,877	35,745	22,906		26,121	24,354		28,523	20,072		26,670		
51	Separate Rations Paid Airmen	04113	29,828	15,718	24,876	32,696	14,853		23,230	19,856		14,111	21,230		24,884		
52	Personnel w/o Duty Assignment	04114	20,347	13,026	11,728	26,925	3,874		12,116	8,447		11,669	6,735		8,984		
53	Prisoners	04116	1,170	441	1,862	2,596	470		1,185	356		956	1,026		386		
54	Overtime Paid Civilians	04119	16,280	5,454	2,217	4,268	33		161	-		555	514		-		
55	Field Maint & Supply Overhead	05050	11,650	10,369	9,595	7,577	9,562		9,172	9,850		8,106	8,613		9,649		
56	Special Mission & Tenant Aircraft	05108	29,330	-	2,619	6,504	1,365		1,378	-		-	18,876		-		
57	** Non-Aeronautical Maintenance	05112	2,154	4,240	4,651	12,901	5,577		2,294	4,226		1,064	3,296		10,753		
58	Aircraft Shop Maintenance	05160	104,953	38,990	57,210	67,845	25,447		28,990	27,965		28,822	67,632		35,769		
59																	
60	Total Supply Function	05450	73,378	32,610	36,827	44,910	28,851		36,375	31,997		32,794	41,480		36,499		
61	Supply Control	05402	22,166	11,090	14,666	16,157	11,626		11,532	9,725		10,126	12,883		14,366		
62	Supply Warehouse	05404	34,565	15,360	11,374	13,620	12,117		19,604	15,409		17,704	15,225		15,257		
63	Subsistence Handling	05406	4,616	1,298	1,013	2,380	529		1,622	2,134		849	2,320		1,736		
64	Commissary Sales Store	05408	1,890	1,074	3,255	5,917	1,634		1,235	1,618		-	1,347		1,065		
65	Purchasing & Contracting Office	05410	4,136	1,927	3,194	3,987	1,255		1,365	1,727		1,581	2,206		1,734		
66	Salvage & Surplus Property Activity	05412	2,850	246	1,190	2,119	731		1,376	1,046		-	1,066		1,180		
67	Combat Group Operations & Tng Ovhd	07061	12,771	13,907	15,180	10,823	7,398		8,842	6,217		11,588	12,475		10,110		
68	Fuels & Lubes - Mission Aircraft	07102	165,840	129,900	75,238	91,874	36,600		138,421	7,812		18,631	21,274		123,282		
69	Organizational Maint (Combat Group)	07110	59,702	55,509	47,668	55,087	34,288		60,682	54,972		30,149	34,070		52,343		
70	Personnel at School	09102	13,524	6,193	9,934	11,255	10,994		7,384	5,404		4,802	12,753		6,069		
71	Special Missions (Group A)	09161	23,944	6,955	11,707	19,824	11,207		10,380	5,800		6,423	16,476		8,750		
72	Supplies & Services Furnished Others																
73	(Non-USAF)	12114	6,668	65,256	375	252	18,399		-	-		-	931		3,987		
74	Supplies & Services Furnished ANG	12122	4,284	-	1,316	-	19,786		2,159	-		5,467	2,640		110		
75	Tenant Organizations of other Major																
76	Commands	14155	5,752	-	44,124	138,224	-		-	-		-	20,524		-		
77																	

* Account Code 02122 ≠ 02123

** Non-Aeronautical Maint Performed in Acft Field Maint Shops

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
4 August 1950

OPERATING COSTS

WINGS

JUNE 1950

	Item (A)	Account Code (B)	93d Ftr Intcp Sq Kirtland (C)	(D)	84th Bomb Sq (L) Langley (E)	85th Bomb Sq (L) Langley (F)	(G)	319th Ftr A/W Sq Larson (H)	(I)	4th Tr Carr Sq McChord (J)	63d Tr Carr Gp(H) Kelly (K)	316th Tr Carr Gp Sewart (L)	(M)	161st Tac Rcn Sq Shaw (N)	363d Tac Rcn Gp Langley (O)	(P)	2601st Assault Sq Sewart (Q)	
1	No. of Personnel Reported																	1
2	Officers		33		51	52		29		44	95	96		26	42		41	2
3	Airmen		256		189	188		99		136	294	273		117	190		134	3
4	Civilians		0		0	0		0		0	0	0		0	0		0	4
5																		5
6	Total Personnel		289		240	240		128		180	389	369		143	232		175	6
7																		7
8	Payroll Costs																	8
9	Officers		$ 16,363		$ 28,740	$ 27,929		$ 15,137		$ 23,397	$ 48,608	$ 48,553		$ 13,247	$ 22,968		$ 20,747	9
10	Airmen		39,349		34,956	35,211		16,055		26,479	58,279	56,209		18,984	32,018		27,143	10
11	Civilians		-		-	-		-		-	-	-		-	-		-	11
12																		12
13	Total Payroll		$ 55,712		$ 63,696	$ 63,140		$ 31,192		$ 49,876	$ 106,887	$ 104,762		$ 32,231	$ 54,986		$ 47,890	13
14																		14
15	$ Non-Personnel Costs		$ 73,165		$ 101,483	$ 95,984		$ 27,174		$ 46,629	$ ***	$ 87,477		$ 48,374	$ 56,296		$ 31,890	15
16																		16
17	Total Costs		$ 128,877		$ 165,179	$ 159,124		$ 58,366		$ 96,505	$	$ 192,239		$ 80,605	$ 111,282		$ 79,780	17
18																		18
19	Costs of Selected Functions																	19
20																		20
21	CO and Staff	01061	$ -		$ 3,118	$ 2,076		$ 1,732		$ 1,700	$	$ 4,212		$ 4,119	$ 10,966		$ 2,150	21
22	Sq Admin Overhead (AB Gp Units)	02014	-		-	-		-		-		-		-	-		-	22
23	Food Services (Mess Halls)	02110	1,338		-	-		-		-		-		-	-		-	23
24	Accounting and Disbursing	02117	-		-	-		-		-		-		-	-		-	24
25	Civilian Personnel & Payroll	*	-		-	-		-		-		-		-	-		-	25
26	Personnel Services	02124	-		-	-		-		-		-		-	-		-	26
27	Motor Pool	02136	2,153		-	-		-		-		-		58	-		-	27
28	Base Operations	02142	-		-	-		-		-		-		-	-		-	28
29																		29
30	Total Air Installations	02261	2,783		-	-		-		-		-		-	-		-	30
31	Fire Stations & Acft Crash Rescue	02218	1,982		-	-		-		-		-		-	-		-	31
32	Rentals - Leased Facilities	02244	-		-	-		-		-		-		-	-		-	32
33	Field Maintenance Automotive Equipment	02302	495		-	-		-		-		-		-	-		-	33
34	Organizational Maint of Admin Aircraft	02306	1,187		-	-		-		-		-		-	-		-	34
35																		35
36	Medical																	36
37	Medical Administration	03002	-		-	-		-		-		-		-	198		-	37
38	Supplies - Hospital	03004	-		-	-		-		-		-		-	-		-	38
39	Dental Service	03102	-		-	-		-		-		-		-	-		-	39
40	Medical Service & Other Services	03104	634		-	-		-		-		-		-	-		-	40
41	X-Ray Service	03108	-		-	-		-		-		-		-	-		-	41
42	Laboratory	03106	-		-	-		-		-		-		-	-		-	42
43	Pharmacy	03110	-		-	-		-		-		-		-	-		-	43
44	Preventive Medicine	03112	757		-	-		-		74		-		-	-		-	44
45	Flight Surgeon	03114	-		-	-		-		-		182		-	-		-	45
46	Dietetic Service	03118	-		-	-		-		-		-		-	-		-	46
47	Medical Services	03277	1,391		-	-		-		74		182		-	198		-	47
48																		48
49	Fuels & Lubes (Admin & Prof Flying)	04108	2,588		-	-		-		-		-		-	-		-	49
50	Subsistence	04112	4,154		3,186	2,507		1,447		1,501		2,725		2,082	2,639		1,910	50
51	Separate Rations Paid Airmen	04113	3,434		2,486	2,993		959		2,082		4,678		1,435	3,276		1,576	51
52	Personnel w/o Duty Assignment	04114	90		1,403	1,452		-		154		1,864		1,506	679		736	52
53	Prisoners	04116	-		-	-		-		-		-		-	80		-	53
54	Overtime Paid Civilians	04119	-		-	-		-		-		-		-	-		-	54
55	Field Maintenance & Supply Overhead	06080	-		-	-		-		-		-		-	-		-	55
56	Special Mission & Tenant Aircraft	05108	-		-	-		-		-		-		-	-		-	56
57	** Non-Aeronautical Maintenance	06112	-		-	-		-		-		-		-	-		-	57
58	Aircraft Shop Maintenance	06160	6,375		-	-		-		-		-		-	-		-	58
59																		59
60	Total Supply Function	06480	7,539		441	310		-		-		-		508	265		-	60
61	Supply Control	06402	901		-	-		-		-		-		132	-		-	61
62	Supply Warehouse	06404	1,338		-	-		-		-		-		-	-		-	62
63	Subsistence Handling	06406	-		-	-		-		-		-		-	-		-	63
64	Commissary Sales Store	06408	-		-	-		-		-		-		-	-		-	64
65	Purchasing & Contracting Office	06410	-		-	-		-		-		-		-	-		-	65
66	Salvage & Surplus Property Activity	06412	-		-	-		-		-		-		-	-		-	66
67	Combat Group Operations & Tng Ovhd	07061	3,740		-	-		-		-		3,217		-	-		723	67
68	Fuels & Lubes - Mission Aircraft	07102	35,723		73,304	75,956		16,712		31,930		60,942		30,595	24,021		15,563	68
69	Organizational Maint (Combat Group)	07110	17,058		42,497	40,002		17,536		26,137		29,918		10,460	31,007		17,510	69
70	Personnel at School	09102	657		2,633	518		537		874		600		2,509	1,642		860	70
71	Special Missions (Group A)	09161	657		2,633	518		537		874		600		2,543	1,649		860	71
72	Supplies & Services Furnished Others																	72
73	(Non-USAF)	12114	-		-	-		-		-		-		-	-		-	73
74	Supplies & Services Furnished ANG	12122	-		-	-		-		-		-		-	-		-	74
75	Tenant Organizations of other Major																	75
76	Commands	14155	-		-	-		-		-		-		-	-		-	76
77																		77

* Account Code 02122 ≠ 02123
** Non-Aeronautical Maint Performed in Acft Field Maint Shops

*** See Note on Page 1 (Recapitulation of ConAC Operating Costs June 1950)

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
4 August 1950

OPERATING COSTS

AIR FORCE RESERVE TRAINING CENTERS

JUNE 1950

		GROUP I						GROUP II								
Item	Account Code	2466th Atterbury	2234th Hanscom	2589th Dobbins	2239th Gr Pitts	2238th Godman		2592d Tinker	2242d Selfridge	2469th Scott	2346th Hamilton	2473d Offutt	2233d Mitchel			
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)
No. of Personnel Reported																
Officers		37	41	44	30	31		22	25	21	25	21	22			
Airmen		473	415	423	431	373		275	221	249	204	201	202			
Civilians		191	153	123	114	111		60	60	59	56	66	41			
Total Personnel		701	609	590	575	515		357	306	329	285	288	265			
Payroll Costs																
Officers		$ 19,753	$ 21,381	$ 23,153	$ 16,507	$ 15,848		$ 11,711	$ 13,439	$ 10,952	$ 13,120	$ 11,823	$ 12,080			
Airmen		85,494	73,706	82,371	77,198	67,808		57,213	43,680	50,248	44,172	39,469	41,406			
Civilians		43,586	42,761	31,449	32,385	30,665		15,964	19,574	16,487	17,393	16,485	11,028			
Total Payroll		$ 148,833	$ 137,847	$ 136,973	$ 126,090	$ 114,321		$ 84,888	$ 76,693	$ 77,687	$ 74,685	$ 67,777	$ 64,513			
# Non-Personnel Costs		$ 109,549	$ 79,450	$ 150,313	$ 107,109	$ 117,442		$ 43,879	$ 51,828	$ 63,267	$ 26,749	$ 57,383	$ 73,156			
Total Costs		$ 258,382	$ 217,297	$ 287,286	$ 233,199	$ 231,763		$ 128,767	$ 128,521	$ 140,954	$ 101,434	$ 125,160	$ 137,668			
Costs of Selected Functions																
CO and Staff	01051	$ 11,495	$ 17,848	$ 13,065	$ 10,414	$ 10,185		$ 5,259	$ 8,294	$ 10,144	$ 8,188	$ 10,018	$ 10,397			
Food Services (Mess Halls)	02110	12,941	1,626	3,591	2,660	2,295		242	-	-	-	330	-			
Civilian Personnel & Payroll	*	458	280	5,959	650	493		-	-	-	-	-	-			
Motor Pool	02136	7,740	3,682	4,656	6,406	3,172		1,362	106	787	-	84	-			
Work Details	02138	-	-	-	-	-		-	-	-	-	-	-			
Base Operations	02142	3,673	4,423	3,224	3,996	4,947		-	3,132	2,886	3,907	3,534	2,917			
Air Instl Office & Shop Overhead	02202	2,217	2,551	470	2,096	1,530		-	-	-	-	-	-			
Maint of Air Instl Machinery	02204	291	799	-	41	-		-	-	-	-	-	-			
Maint Bldg & Other Structures	02208	1,796	1,651	10,987	915	-		-	-	-	-	-	-			
Operation Utility Plants & Systems	02216	6,531	7,070	5,087	2,551	-		-	221	-	-	-	-			
Fire Stations & Crash Rescue	02218	7,619	4,909	6,506	11,251	3,901		-	-	-	-	-	-			
Rentals - Leased Facilities	02244	-	2,083	-	300	-		-	-	-	-	-	-			
Medical Services	03277	3,769	1,952	2,770	1,606	1,479		-	-	-	-	-	-			
Subsistence Issued	04112	28,954	5,753	4,927	6,965	22,504		5,609	1,453	2,858	1,881	2,751	1,672			
Separate Rations Paid Airmen	04113	7,322	6,858	7,546	7,322	6,888		2,500	4,284	4,455	3,502	3,499	3,339			
Personnel w/o Duty Assignment	04114	1,315	1,135	683	419	142		147	1,705	518	-	-	-			
Total Supply Function	05480	15,297	11,374	11,950	11,727	8,064		4,301	4,708	2,764	-	4,298	2,811			
Supply Control (Officers & Staff)	05402	4,655	4,560	7,088	3,588	4,054		4,151	3,121	2,764	-	3,988	-			
Supply Warehouse	05404	7,048	5,483	3,093	3,154	3,350		-	1,428	-	-	-	2,507			
Subsistence Handling	05406	1,332	-	182	-	-		-	-	-	-	-	-			
Commissary Sales Store	05408	-	-	-	-	-		-	-	-	-	-	-			
Purchasing & Contracting	05410	1,343	868	557	1,557	-		-	-	-	-	-	-			
Salvage & Surplus Property	05412	-	-	457	-	-		-	-	-	-	-	-			
Flying Personnel - Fuels & Lubes	07102	29,890	26,090	63,759	38,135	38,582		23,880	30,758	23,994	11,161	27,274	24,987			
Organizational Maint - Aircraft	07110	58,263	45,097	59,774	37,724	47,153		44,589	46,735	44,269	42,695	35,975	40,882			
Instructors - Flying & Ground	07114	2,020	1,985	2,810	6,389	2,958		a 11,649	4,358	4,502	3,247	3,196	1,361			
Instructors - Flying	07114.01	458	1,965	1,509	3,258	1,468		4,246	3,302	2,676	-	1,791	-			
Personnel at School	09102	259	1,639	1,771	1,009	1,374		1,469	1,879	1,307	603	1,014	638			
** Transient USAF Aircraft	09109	-	-	-	1,323	1,795		-	-	-	-	-	-			
Permanent Change of Station	12113	2,761	2,048	45	3,200	2,618		1,652	456	1,415	1,428	1,189	2,351			
*** Supplies & Services Furnished	12114	12	962	3,706	1,060	6,134		-	-	-	-	-	-			
Supplies & Services Furnished ANG	12122	479	2,523	14,916	12,182	483		-	-	-	-	-	-			

* Account Codes 02123 / 02122

** Includes Payroll Costs, Parts & Supplies (excepting fuels & lubes furnished) transient USAF Aircraft other than Air Reserve, ANG & AROTC Aircraft

*** Supplies & Services Furnished to Non-USAF Agencies

GROUP I - Bases Maintained and Operated with ConAC Reserve Funds

GROUP II - USAF Bases where a proportionate share of the Runway Maintenance and the Area Occupied by the AFRTC is Supported by Reserve Funds

Page 5 of 15 Pages

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OPERATING COSTS

AIR FORCE RESERVE TRAINING CENTERS

JUNE 1950

Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
4 August 1950

		GROUP III										GROUP IV				
Item (A)	Account Code (B)	2471st O'Hare (C)	2347th Long Beach (D)	2584th Memphis (E)	2237th New Castle Cty. Apt (F)	2465th Wold-Chamberlain (G)	2587th Birmingham (H)	2585th Miami (I)	2343d Portland (J)	2240th Schlegel AF Plant (K)	(L)	2596th Hensley (M)	2250th Floyd Bennett (N)	2472d Olathe (O)	(P)	(Q)
No. of Personnel Reported																
Officers		53	60	35	26	35	37	36	37	31		33	21	27		
Airmen		616	632	561	400	386	394	385	419	473		399	325	372		
Civilians		279	170	127	114	135	95	118	135	81		89	114	86		
Total Personnel		948	862	725	540	556	526	539	591	585		521	460	485		
Payroll Costs																
Officers		$ 29,346	$ 31,793	$ 19,179	$ 14,480	$ 19,410	$ 19,868	$ 20,440	$ 20,643	$ 17,565		$ 17,954	$ 11,484	$ 14,973		
Airmen		119,661	135,783	98,736	76,213	84,781	84,404	77,938	80,415	90,846		79,301	56,992	70,891		
Civilians		76,821	45,298	32,586	27,717	35,455	26,348	30,613	38,921	22,969		24,664	32,067	23,154		
Total Payroll		$ 225,828	$212,874	$ 150,501	$ 118,410	$ 139,646	$ 130,616	$ 128,991	$ 139,979	$ 131,378		$ 121,919	$ 100,543	$ 109,018		
A Non-Personnel Costs		$ 140,882	$245,247	$ 166,323	$ 74,724	$ 89,170	$ 62,293	$ 83,943	$ 176,519	$ 137,886		$ 94,397	$ 60,799	$ 65,860		
Total Costs		$ 366,710	$458,121	$ 316,824	$ 193,134	$ 228,816	$ 192,909	$ 212,934	$ 316,498	$ 269,264		$ 216,316	$ 161,342	$ 174,878		
Costs of Selected Functions																
CO and Staff	01061	$ 17,811	$ 17,288	$ 12,933	$ 12,528	$ 9,091	$ 10,502	$ 10,610	$ 10,065	$ 12,128		$ 12,167	$ 11,277	$ 9,879		
Food Services (Mess Halls)	02110	4,384	4,632	8,040	3,271	-	2,494	4,155	3,403	2,924		3,072	2,767	1,401		
Civilian Personnel and Payroll	*	2,585	-	534	567	530	260	541	248	602		228	321	753		
Motor Pool	02136	4,872	5,434	4,290	5,192	4,392	2,915	2,084	5,332	3,568		3,155	3,061	3,199		
Work Details	02138	-	-	-	-	-	-	-	-	-		-	-	425		
Base Operations	02142	5,838	5,248	6,276	2,737	3,165	2,345	4,379	4,924	6,229		4,464	2,250	6,102		
Air Instl Office & Shop Overhead	02202	4,384	5,461	2,515	2,377	3,792	1,493	1,343	2,792	757		2,153	490	1,331		
Maint of Air Instl Machinery	02204	848	671	289	683	105	-	1	38	-		342	-	4		
Maint Bldg & Other Stuctures	02206	8,438	3,957	3,966	2,359	2,239	789	1,289	1,792	2,582		3,815	-	531		
Operation Utility Plants & Systems	02216	14,088	5,207	4,127	7,180	3,924	4,645	3,620	10,001	-		3,323	-	-		
Fire Stations & Crash Rescue	02218	7,993	4,139	4,433	3,477	3,830	4,580	217	3,889	4,893		2,182	-	2,120		
Rentals - Leased Facilities	02244	380	-	1,375	3,917	-	623	5	-	[illegible]		-	-	-		
Medical Services	03277	2,654	3,179	1,875	1,502	1,677	1,327	3,352	2,187	[illegible]		1,726	1,367	1,585		
Subsistence Issued	04112	8,818	15,388	20,165	7,979	-	4,142	4,851	11,412	7,479		4,362	4,399	3,907		
Separate Rations Paid Airmen	04113	9,321	14,069	7,451	5,358	2,563	8,617	7,389	8,932	8,686		6,996	3,610	6,363		
Personnel w/o Duty Assignment	04114	3,308	95	941	1,458	774	1,729	404	855	479		448	976	394		
Total Supply Function	05450	20,328	17,527	10,307	11,143	13,804	11,094	8,755	17,353	8,547		8,912	9,460	8,219		
Supply Control (Officers & Staff)	05402	8,494	8,437	6,907	4,921	4,674	4,495	4,243	7,315	4,910		4,841	3,290	4,044		
Supply Warehouse	05404	7,023	7,828	2,425	4,569	6,938	4,405	3,340	6,676	3,164		3,598	5,552	2,921		
Subsistence Handling	05406	-	397	-	-	-	485	257	1,667	-		-	-	-		
Commissary Sales Store	05408	-	-	-	-	-	-	-	-	-		-	-	-		
Purchasing & Contracting	05410	1,622	867	590	1,254	1,554	1,259	768	1,294	456		279	-	1,061		
Salvage & Surplus Property	05412	679	-	203	-	-	-	189	184	-		-	-	-		
Flying Personnel - Fuels & Lubes	07102	41,345	106,747	81,232	22,166	29,636	10,581	9,761	64,292	59,283		27,044	22,681	22,277		
Organizational Maint - Aircraft	07110	70,951	106,351	52,030	37,300	44,575	45,061	44,696	55,607	50,365		37,333	42,650	40,169		
Instructors - Flying & Ground	07114	5,502	7,455	3,460	3,201	5,676	4,034	5,424	-	6,383		5,751	917	2,069		
Instructors - Flying	07114.01	1,241	3,845	3,460	2,383	2,158	1,548	3,543	-	1,049		1,086	917	416		
Personnel at School	09102	827	1,727	2,099	616	2,817	2,415	1,136	524	412		1,957	467	3,266		
** Transient USAF Aircraft	09109	105	-	-	-	1,296	-	1,176	-	-		1,663	1,272	1,236		
Permanent Change of Station	12113	383	5,370	1,277	2,405	3,609	3,102	5,278	3,607	2,341		4,194	1,109	284		
*** Supplies & Services Furnished	12114	541	-	359	118	-	201	2,266	1,031	1,772		118	9,344	-		
Supplies & Services Furnished ANG	12122	11,300	-	569	2,995	1,121	-	676	4,380	11,472		5,168	1,669	-		

* Account Codes 02123 / 02122

** Includes Payroll Costs, Parts & Supplies (excepting Fuels & Lubes) furnished transient USAF Aircraft other than Air Reserve, ANG & ARCTC Aircraft

*** Supplies & Services Furnished to Non-USAF Agencies

GROUP III - Leased Facilities, Maintained by Municipality, Except Areas Occuppied by ARTC's which are Supported by Reserve Funds

GROUP IV - Naval Air Stations, Facilities Used and Proportionate Share of Base Maintenance is Supported by Reserve Funds

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Part I
Comptroller Chart 8
Prepared By:
Director Programs & Costs
Hq ComAC
4 August 1950

OPERATING COSTS

NON WING-BASE AIR BASE GROUPS & SQUADRONS, BASE SERVICE AND ASSEMBLY & PROCESSING SQUADRONS

JUNE 1950

Item (A)	Account Code (B)	2500th AB Gp Mitchel (C)	2596th AB Gp Brooks (D)	4400th AB Gp Stewart (E)	(F)	2579th AB Sq George (G)	2581st AB Sq Eglin #2 (H)	2600th AB Sq Pope (I)	4408th AB Sq Sherman (J)	4405th AB Sq Lawson (K)	(L)	2478th BS Sq Oscoda (M)	(N)	2218th AAF Sq Langley (O)	(P)	(Q)
No. of Personnel Reported																
Officers		167	89	34		8	3	34	7	24		7		2		
Airmen		1,663	663	408		126	72	461	164	182		163		86		
Civilians		806	198	217		231	0	60	11	76		19		0		
Total Personnel		2,636	950	659		365	75	555	182	282		189		88		
Payroll Costs																
Officers		$ 80,878	$ 29,275	$ 16,097		$ 4,892	$ 1,393	$ 16,293	$ 3,377	$ 11,989		$ 3,417		$ 1,025		
Airmen		258,097	116,206	64,215		18,041	10,294	76,934	27,087	32,024		24,194		10,834		
Civilians		224,316	49,816	61,414		63,933	-	9,868	3,168	20,575		4,753		-		
Total Payroll		$ 563,291	$ 195,297	$ 141,726		$ 86,866	$ 11,687	$ 103,095	$ 33,632	$ 64,588		$ 32,364		$ 11,859		
▲ Non-Personnel Costs		$ 272,022	$ 85,921	$ 109,219		$ 20,700	$ 30,324	$ 115,631	$ 27,994	$ 71,424		$ 15,586		$ 4,333		
Total Costs		$ 835,313	$ 281,218	$ 250,945		$ 107,566	$ 42,011	$ 218,726	$ 61,626	$ 136,012		$ 47,950		$ 16,192		
Costs of Selected Functions																
CO and Staff	01051	$ 25,080	$ 14,696	$ 9,333		$ 3,727	$ -	$ 9,772	$ 3,187	$ 8,358		$ 2,651		$ 2,617		
Food Service (Mess Halls)	02110	19,364	5,143	2,517		1,562	1,176	4,245	-	1,098		1,366		-		
Civilian Personnel & Payroll	*	8,209	-	1,650		394	-	280	-	350		191		-		
Motor Pool	02136	17,997	8,010	7,896		863	2,061	2,061	3,684	2,469		2,335		-		
Work Details	02138	720	-	-		935	-	-	-	-		-		-		
Base Operations	02142	7,450	2,995	3,011		885	-	1,962	1,527	1,988		1,082		-		
Air Instl Office & Shop Overhead	02202	18,382	4,604	4,584		3,781	-	334	-	1,569		1,806		-		
Maint of Air Instl Machinery	02204	1,374	775	3,358		389	-	-	887	-		592		-		
Maint Bldg & Other Structures	02206	45,290	9,368	4,950		3,878	862	472	-	-		3,192		-		
Operation Utility Plants & Systems	02216	39,991	14,324	12,625		25,031	2,881	-	-	-		3,154		-		
Fire Stations & Crash Rescue	02218	10,746	5,279	6,209		1,374	169	3,406	1,344	3,777		4,020		-		
Rentals - Leased Facilities	02244	709	-	17		-	-	-	-	-		-		-		
Medical Services	03277	60,502	5,281	7,328		590	-	742	781	-		1,375		-		
Subsistence Issued	04112	17,569	5,415	5,672		10,241	23,518	5,699	1,437	2,529		4,188		2,111		
Separate Rations Paid Airmen	04113	20,109	10,273	5,790		788	596	7,519	2,741	3,357		1,758		163		
Personnel w/o Duty Assignment	04114	6,389	5,552	4,168		2,039	-	3,333	-	-		696		-		
Aircraft Shop Maintenance	05160	47,512	15,962	6,917		9,098	-	-	-	-		-		-		
Total Supply Function	05450	62,704	18,895	13,454		22,396	420	14,330	3,432	8,450		1,362		8		
Supply Control (Officers & Staff)	05402	19,851	8,050	5,491		6,604	118	6,631	2,806	4,441		1,069		-		
Supply Warehouse	05404	20,715	7,445	6,771		13,643	302	6,172	610	3,684		147		-		
Subsistence Handling	05406	5,583	-	-		-	-	1,024	-	-		-		-		
Commissary Sales Store	05408	3,077	601	-		-	-	-	-	-		-		-		
Purchasing and Contracting	05410	4,654	2,101	1,875		1,901	-	165	-	-		-		-		
Salvage & Surplus Property	05412	1,636	368	415		248	-	-	-	-		-		-		
Flying Personnel - Fuels & Lubes	07102	-	-	-		-	-	-	-	-		-		-		
Organizational Maint - Aircraft	07110	-	-	-		-	-	-	-	-		-		-		
Instructors - Flying & Ground	07114	-	-	-		-	-	-	-	-		-		-		
Instructors - Flying	07114.01	-	-	-		-	-	-	-	-		-		-		
Personnel at School	09102	1,601	4,323	2,587		-	-	1,063	331	1,300		444		-		
** Transient USAF Aircraft	09109	3,541	1,591	1,242		1,117	-	2,130	-	382		-		-		
Permanent Change of Station	12113	9,496	6,964	4,974		-	-	2,225	623	1,114		-		181		
*** Supplies & Services Furnished	12114	2,694	406	1,970		-	-	1,168	47	852		-		-		
Supplies & Services Furnished ANG	12122	5,571	6,263	8		-	-	150	373	9		2,326		-		

* Account Codes 02123 / 02122

** Includes Payroll Costs, Parts & Supplies (excepting fuels & lubes) furnished transient USAF Aircraft other than Air Reserve, ANG & AROTC Aircraft

*** Supplies & Services Furnished to Non-USAF Agencies

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
4 August 1950

OPERATING COSTS

AIRCRAFT CONTROL AND WARNING ORGANIZATIONS

JUNE 1950

	Item (A)	Account Code (B)	502d Tac Con Gp Pope (C)	503d AC & Wng Gp Roslyn, NY (D)	508th AC & Wng Gp Silver Lake (E)	540th AC & Wng Gp Stewart (F)	541st AC & Wng Gp Selfridge (G)	543d AC & Wng Gp Hamilton (H)	690th AC & Wng Sq (Separate) Kirtland (I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	
1	No. of Personnel Reported																	1
2	Officers		88	104	93	87	61	46	42									2
3	Airmen		937	1,066	1,012	932	860	459	418									3
4	Civilians		0	0	2	0	0	0	0									4
5																		5
6	Total Personnel		1,025	1,170	1,107	1,019	921	505	460									6
7																		7
8	Payroll Costs																	8
9	Officers		$ 44,597	$ 50,344	$ 45,962	$ 40,247	$ 27,833	$ 17,493	$ 20,999									9
10	Airmen		111,936	124,217	126,152	111,981	96,517	53,542	51,136									10
11	Civilians		-	-	531	-	-	-	-									11
12																		12
13	Total Payroll		$ 156,533	$ 174,561	$ 172,645	$ 152,228	$ 124,350	$ 71,035	$ 72,135									13
14																		14
15	& Non-Personnel Costs		$ 36,079	$ 52,087	$ 66,533	$ 48,080	$ 25,659	$ 19,782	$ 72,006									15
16																		16
17	Total Costs		$ 192,612	$ 226,648	$ 239,178	$ 200,308	$ 150,009	$ 90,817	$ 144,141									17
18																		18
19	Costs of Selected Functions																	19
20																		20
21	Food Services (Mess Halls)	02110	$ 7,175	$ 4,940	$ 6,224	$ 6,229	$ 4,811	$ 2,327	$ 2,383									21
22	Motor Pool	02136	7,063	8,043	5,326	5,523	6,357	3,448	982									22
23	Rentals - Leased Facilities	02244	-	1,818	99	-	-	325	-									23
24	Subsistence Issued	04112	14,967	20,277	1,911	21,203	9,618	7,510	9,990									24
25	Separate Rations Paid Airmen	04113	4,810	5,696	7,036	7,108	2,924	3,064	4,523									25
26	Personnel w/o Duty Assignment	04114	1,400	9,022	2,218	704	9,035	6,669	118									26
27	Communications & Electronics	07106	103,039	100,939	127,672	87,160	62,715	33,151	42,213									27
28	Personnel at School	09102	649	2,830	1,653	2,695	1,793	-	701									28
29																		29
30																		30
31																		31
32																		32
33																		33
34																		34
35																		35

OPERATING COSTS

WAF SQUADRONS, OVERSEAS REPLACEMENT GROUPS, & LIAISON FLIGHTS

JUNE 1950

	Item (A)	Account Code (B)	2214th WAF Sq McChord (C)	2350th WAF Sq Larson (D)	2351st WAF Sq Hamilton (E)	2475th WAF Sq Selfridge (F)	4412th WAF Sq Langley (G)	(H)	2225th APORG Ft Dix (I)	2349th APORD Camp Stoneman (J)	(K)	1st Liaison Flight Biggs (L)	2d Liaison Flight Langley (M)	3d Liaison Flight Lawson (N)	4th Liaison Flight Pope (O)	5th Liaison Flt (Helicopter) Pope (P)	(Q)	
1	No. of Personnel Reported																	1
2	Officers		1	1	1	1	1		87	446		3	4	4	16	3		2
3	Airmen		3	3	3	2	5		1,243	5,287		11	13	12	33	19		3
4	Civilians		0	0	0	0	0		37	20		0	0	0	0	0		4
5																		5
6	Total Personnel		4	4	4	3	6		1,367	5,753		14	17	16	49	22		6
7																		7
8	Payroll Costs																	8
9	Officers		$ 384	$ 334	$ 334	$ 384	$ 459		$ 40,669	$ 187,353		$ 1,633	$ 2,133	$ 1,927	$ 8,016	$ 1,562		9
10	Airmen		354	428	362	345	657		164,371	714,024		2,411	2,294	2,393	4,914	3,314		10
11	Civilians		-	-	-	-	-		9,085	4,897		-	-	-	-	-		11
12																		12
13	Total Payroll		$ 738	$ 762	$ 696	$ 729	$ 1,116		$ 214,125	$ 906,274		$ 4,044	$ 4,427	$ 4,320	$ 12,930	$ 4,876		13
14																		14
15	& Non-Personnel Costs		$ 128	$ 995	$ 722	$ 565	$ 385		$ 157,617	$ 241,395		$ 640	$ 714	$ 1,014	$ 2,255	$ 2,289		15
16																		16
17	Total Costs		$ 866	$ 1,757	$ 1,418	$ 1,294	$ 1,501		$ 371,742	$1,147,669		$ 4,684	$ 5,141	$ 5,334	$ 15,185	$ 7,165		17
18																		18
19																		19
20																		20
21																		21
22																		22
23																		23
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30																		30

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Part I
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ComAC
4 August 1950

OPERATING COSTS

COMMUNICATIONS SQUADRONS AND RADAR CALIBRATION DETACHMENTS

JUNE 1950

Item (A)	Account Code (B)	28th Comm Sq Mitchel (C)	29th Comm Sq Langley (D)	34th Comm Sq Mitchel (E)	35th Comm Sq Hamilton (F)	36th Comm Sq Selfridge (G)	37th Comm Sq Robins (H)	40th Comm Sq Brooks (I)	42d Comm Sq Mitchel (J)	43d Comm Sq Hamilton (K)	(L)	5th Radar Cal Det Pope (M)	7th Radar Cal Det Langley (N)	11th Radar Cal Det Hamilton (O)	12th Radar Cal Det Langley (P)	(Q)
No. of Personnel Reported																
Officers		8	6	2	4	3	6	6	1	5		7	9	9	10	
Airmen		187	109	74	89	68	77	110	48	81		24	51	39	54	
Civilians		0	0	0	0	0	0	0	0	0		0	0	0	0	
Total Personnel		195	115	76	93	71	83	116	49	86		31	60	48	64	
Payroll Costs																
Officers		$ 3,806	$ 3,072	$ 1,101	$ 1,986	$ 1,475	$ 2,772	$ 2,446	$ 556	$ 1,921		$ 3,771	$ 4,763	$ 4,747	$ 5,011	
Airmen		26,215	17,426	10,570	13,296	8,518	10,882	13,961	6,005	9,588		3,984	9,764	6,996	9,636	
Civilians		-	-	-	-	-	-	-	-	-		-	-	-	-	
Total Payroll		$ 30,020	$ 20,498	$ 11,671	$ 15,282	$ 9,993	$ 13,654	$ 16,407	$ 6,561	$ 11,509		$ 7,755	$ 14,527	$ 11,743	$ 14,647	
A Non-Personnel Costs		$ 9,336	$ 5,881	$ 4,753	$ 14,082	$ 2,956	$ 2,906	$ 11,901	$ 1,188	$ 3,746		$ 4,538	$ 13,609	$ 14,233	$ 14,445	
Total Costs		$ 39,356	$ 26,379	$ 16,424	$ 29,364	$ 12,949	$ 16,560	$ 28,308	$ 7,749	$ 15,255		$ 12,293	$ 28,136	$ 25,976	$ 29,092	

OPERATING COSTS - MISCELLANEOUS ORGANIZATIONS

JUNE 1950

Item (A)	Account Code (B)	1st Shoran Beacon Unit Langley (C)	1st Tow Target Sq Biggs (D)	2d Radio Relay Sq Pope (E)	30th Motor Trans Sq Shaw (F)	363d Rcn Tech Sq Langley (G)	472d Sig Avn&Constr Co (H) Kelly (H)	691st AF Band Selfridge (I)	769th AF Band Robins (J)	803d Engr Avn Bn McChord (K)	Co"B" 803d Engr Avn Bn Larson (L)	Co"C" 803d Engr Avn Bn Larson (M)	934th Sig Bn Pope (N)	2220th Fld Print Sq Langley (O)	2597th Air Police Sq Brooks (P)	4410th Bomb Disp Unit Pope (Q)
No. of Personnel Reported																
Officers		4	41	5	4	9	5	0	1	21	5	5	16	5	5	1
Airmen		32	324	86	91	129	149	27	38	520	174	171	293	62	80	16
Civilians		0	0	0	0	0	0	0	0	0	0	0	0	24	1	0
Total Personnel		36	365	91	95	138	154	27	39	541	179	176	309	91	86	17
Payroll Costs																
Officers		$ 1,969	$ 21,403	$ 2,364	$ 1,991	$ 4,156	$ 2,441	$ -	$ 362	$ 10,287	$ 2,226	$ 2,087	$ 7,702	$ 2,223	$ 2,415	$ 391
Airmen		4,835	60,484	11,417	12,419	18,430	17,644	3,452	5,263	60,956	18,443	18,590	37,266	9,657	12,893	2,380
Civilians		-	-	-	-	-	-	-	-	-	-	-	-	6,039	[illegible]	-
Total Payroll		$ 6,804	$ 81,887	$ 13,781	$ 14,410	$ 22,586	$ 20,085	$ 3,452	$ 5,625	$ 71,243	$ 20,669	$ 20,677	$ 44,968	$ 17,919	$ 15,627	$ 2,771
A Non-Personnel Costs		$ 1,639	$ 63,119	$ 3,190	$ 6,497	$ 15,693	$ 4,513	$ 1,197	$ 808	$ 34,447	$ 3,938	$ 3,880	$ 21,774	$ 11,747	$ 2,368	$ 424
Total Costs		$ 8,443	$ 145,006	$ 16,971	$ 20,907	$ 38,279	$ 24,598	$ 4,649	$ 6,433	$ 105,690	$ 24,607	$ 24,557	$ 66,742	$ 29,666	$ 17,995	$ 3,195

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PART II
COMPTROLLER CHART 6
PREPARED BY:
DIRECTOR, PROGRAMS & COSTS
HQ, CONAC
4 AUG 1950

RECAPITULATION OF CONTINENTAL AIR COMMAND

COST OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

JUNE 1950

LINE	ITEM (A)	USAF INSTALLATIONS PROVIDING OWN SERVICES (B)	AFR INSTALLATIONS PROVIDING OWN SERVICES (C)	INSTALLATIONS PROVIDED SERVICES BY OTHER THAN ConAC (D)	AGGREGATE * (E)
1	No. of Personnel Reported				
2	Officers	58	15	12	85
3	Airmen	2,137	414	544	3,095
4	Civilians	2,065	524	177	2,766
5					
6	TOTAL PERSONNEL	4,260	953	733	5,946
7					
8	Payroll Costs				
9	Officers	$ 25,204	$ 6,072	$ 4,771	$ 36,047
10	Airmen	248,088	53,301	55,500	356,889
11	Civilians	553,441	137,392	47,593	738,426
12					
13	Total Payroll	$ 826,733	$ 196,765	$ 107,864	$ 1,131,362
14					
15	▲ Non-Personnel Costs	$ 688,582	$ 171,131	$ 152,029	$ 1,011,742
16					
17	TOTAL COSTS	$ 1,515,315	$ 367,896	$ 259,893	$ 2,143,104

▲ Non-Personnel Costs - Includes Miscellaneous Costs, Contractual Services and Supplies.

SOURCE: Cost Control Reports - AF Forms 320, 320A, 322, & 322A.

* Does not include Inactive Installations.

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COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- USAF INSTALLATIONS PROVIDING OWN SERVICES -

JUNE 1950

Part II
Comptroller Chart 8
Prepared By:
Director Programs & Costs
Hq ComAC
4 August 1950

Line	Item (A)	Account Code (B)	Brooks AFB (C)	George AFB (D)	Hamilton AFB (E)	Langley AFB (F)	Larson AFB (G)	McChord AFB (H)	McGuire AFB (I)	Mitchel AFB (J)	Oscoda AFB (K)	Selfridge AFB (L)	Sewart AFB (M)	Shaw AFB (N)	Stewart AFB (O)	Turner AFB (P)	(Q)
1	No. of Personnel Reported				*****		*	**				***		****			
2	Officers		2	2	5	3	8	6	5	6	1	2	4	5	2	7	
3	Airmen		50	12	109	197	450	423	110	115	64	202	132	105	64	104	
4	Civilians		110	94	162	372	120	134	92	316	18	192	98	170	75	122	
6	Total Personnel		162	108	276	572	578	563	207	437	83	396	234	280	141	233	
8	Payroll Costs																
9	Officers		$ 782	$ 987	$ 2,555	$ 1,337	$ 2,802	$ 2,542	$ 2,387	$ 2,664	$ 413	$ 946	$ 1,670	$ 2,069	$ 911	$ 3,939	
10	Airmen		8,505	1,619	12,747	23,096	48,635	48,100	13,021	13,327	7,325	22,828	16,063	13,672	8,324	12,336	
11	Civilians		24,685	27,039	50,807	93,637	34,347	37,701	23,396	89,114	4,493	54,476	23,744	39,875	21,333	26,484	
13	Total Payroll		$ 33,972	$ 29,645	$ 66,109	$ 118,070	$ 85,784	$ 88,343	$ 38,804	$ 105,106	$ 12,231	$ 78,250	$ 41,477	$ 55,616	$ 30,568	$ 42,759	
15	▲ Non-Personnel Costs		$ 14,601	$ 6,073	$ 55,526	$ 71,103	$ 63,485	$ 57,373	$ 197,810	$ 58,418	$ 3,079	$ 47,640	$ 31,068	$ 35,323	$ 13,674	$ 33,408	
17	Total Costs		$ 48,573	$ 35,718	$ 121,635	$ 189,173	$ 149,269	$ 145,716	$ 236,614	$ 163,524	$ 15,310	$ 125,890	$ 72,545	$ 90,939	$ 44,242	$ 76,167	
19	Costs of Selected Utilities (Non-Payroll)																
21	Purchased Water	06105	$ 1,182	$ 561	$ 5,065	$ 1,346	$ -	$ -	$ 439	$ 473	$ -	$ 1,973	$ -	$ -	$ 261	$ 2,489	
22	Purchased Sewage Disposal	06205	-	-	-	-	-	-	359	-	-	-	-	-	-	-	
23	Purchased Electricity	06306	1,369	1,613	4,749	7,474	15,730	1,969	Cr 2,409	7,693	463	6,775	1,998	4,548	2,160	4,238	
24	Purchased Gas	06509	340	1,452	5,659	152	-	-	-	4,063	-	1,068	-	-	372	414	
25	Coal Issued #	06506	-	-	-	13,995	1,579	6,746	1,062	3,785	73	5,328	1,389	1,914	49	166	
26	Fuel Oil Issued #	06507	-	-	324	2,461	5,852	6,910	-	134	274	-	-	-	2,860	738	
27	C/B Facilities (Purchased Utilities)	06201	-	-	1,427	20	152	3,184	Cr 752	1,253	-	166	1,019	29	29	-	
29	Costs of Selected Functions																
31	Projects, Non-Recurring (Over $3,000)																
32	09101 thru	09107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
33	Modification (Under $3,000)	09108	1,336	-	16,523	5,369	41,147	13,274	2,660	5,671	566	14,879	537	6,948	2,361	1,220	
34	Modification (Over $3,000)	09109	-	-	13,249	6,679	40,583	5,264	-	3,993	1,091	12,125	2,189	60	Cr 1	2,418	
35	Accrued Annual Lv, 1 July thru 30 June	10101	33,008	10,487	51,555	65,539	58,076	41,508	26,074	84,527	6,062	48,136	25,147	31,361	35,724	23,501	
36	Accrued Annual Lv, this month	10101	2,772	1,185	2,152	2,357	3,404	3,994	4,680	6,040	508	2,373	2,183	6,698	2,093	1,958	
37–38	Sick Lv & Holiday Lv Taken, 1 July thru 30 June	10102	15,394	4,237	30,904	53,282	18,180	24,293	18,455	56,738	2,254	22,392	12,842	13,281	22,112	11,179	
39	Sick Lv & Holiday Lv Taken, this month	10102	893	347	1,551	4,955	766	1,455	872	1,642	Cr 1	1,508	610	676	387	1,135	
41	Inventory Value & Depreciation Costs																
43–44	Depreciation, Mobile Maint Equipment, 1 July thru 30 June	10109	12,821	20,135	27,217	42,553	13,015	10,879	32,807	37,144	9,223	42,463	66,224	14,521	50,587	14,600	
45–46	Depreciation, Mobile Maint Equipment, this month	10109	12,821	3,582	27,217	42,553	13,015	10,879	1,276	37,144	9,223	34,417	66,224	14,521	50,887	14,600	
47–48	Value of Installed Equipment & "MR" Property Salvaged, 1 July thru 30 June	10110	8,726	-	11,456	10,332	1,655	901	7,138	8,604	580	11,043	943	4,771	3,008	3,892	
49–50	Value of Installed Equipment & "MR" Property Salvaged, this month	10110	1,206	-	688	451	1,168	242	6,804	1,618	-	714	679	36	313	600	
51–53	Value of Non-Expendable Property for which A.I.C. has maint & repair responsibility	20104	551,974	463,136	915,915	911,230	259,795	676,065	113,936	706,849	60,284	525,468	505,967	394,116	216,354	379,346	
54–55	Value (when new) of Mobile Equipment issued A.I.C.	20105	150,401	180,819	181,444	233,068	86,775	237,969	296,026	319,927	89,579	284,455	213,802	109,806	332,578	145,998	

Line	Utilization of Airmen & Civilians	Account Code	Brooks Amn	Brooks Civ	George Amn	George Civ	Hamilton Amn	Hamilton Civ	Langley Amn	Langley Civ	Larson Amn	Larson Civ	McChord Amn	McChord Civ	McGuire Amn	McGuire Civ	Mitchel Amn	Mitchel Civ	Oscoda Amn	Oscoda Civ	Selfridge Amn	Selfridge Civ	Sewart Amn	Sewart Civ	Shaw Amn	Shaw Civ	Stewart Amn	Stewart Civ	Turner Amn	Turner Civ
59	Administrative & Engineering	30001	2	9	2	10	7	19	6	28	11	15	10	16	12	10	9	25	3	3	5	22	2	14	3	10	3	10	4	9
60	Fire Protection & Acft Crash Res	30002	37	2	34	4	50	56	58	4	42	3	32	5	39	3	65	12	29	2	62	3	58	3	39	3	38	3	44	4
61	Custodial	30003	0	0	0	0	0	3	31	0	0	0	0	1	-	-	-	34	0	0	0	14	0	5	0	0	0	0	1	4
62	Central Heating Plant Operators	30004	0	5	0	11	0	0	0	44	0	9	0	17	-	5	-	34	4	0	10	29	0	17	0	17	0	0	1	7
63	Other Utilities Plant Operators	30005	1	7	0	4	7	13	2	19	64	1	0	0	-	-	2	6	3	2	1	5	0	11	1	6	2	9	2	4
64	Carpenters	30006	1	16	3	13	6	27	9	28	5	21	4	14	3	17	6	17	4	4	10	27	4	9	3	15	2	8	9	21
65	Painters	30007	2	14	0	11	2	17	4	19	8	6	2	8	9	4	3	20	1	3	4	21	2	4	3	6	2	2	2	7
66	Electricians	30008	6	12	6	11	8	14	8	14	5	13	3	11	8	9	7	17	5	1	17	18	8	8	5	8	1	4	6	7
67	Plumbers & Steamfitters	30009	1	13	2	15	1	10	6	19	8	9	1	11	5	6	1	22	2	2	6	10	7	7	1	5	0	11	3	6
68	Structural - Steel & Metal	30010	0	0	0	4	2	3	2	5	2	3	0	4	2	3	-	-	0	0	0	0	0	0	2	4	0	2	4	5
69	Concrete Masonry & Plaster	30011	0	0	0	1	0	1	0	6	0	0	0	0	-	-	-	5	0	0	0	0	0	0	25	33	0	2	1	1
70	Machinists	30012	1	3	0	2	6	18	9	22	2	25	12	24	-	-	1	11	2	1	0	0	4	4	0	0	4	3	0	0
71	General Labor	30013	4	29	10	6	12	16	38	69	5	10	6	15	25	30	15	75	9	3	62	38	27	14	0	0	12	16	13	26
72	Totals	30099	55	110	57	94	101	167	205	297	152	113	70	126	101	89	109	276	62	21	177	187	112	96	80	109	64	70	90	101

74 # Cost of Coal & Fuel Oil Including Transportation

75 * Includes 472d Sig Heavy Constr Co., Company "B" & Company "C" - 808d Engr Avn Bn

76 ** Includes 636th AC & Wng Sq - Hqs Company & Company "A" - 808d Engr Avn Bn

*** Includes 541st AC & Wng Gp & 2242d AFRTC

**** Includes 606th AC & Wng Sq

***** Includes 35th Comm Sq & 542d AC & Wng Gp

NOTE: Payroll Costs shown on Line 10 are actual payroll costs for Airmen and are not based on civilian pay scales

SOURCE: Lines 1 - 17 Cost Control Reports - AF Forms 320, 322, 322A, & 322A
19 - 72 Real Estate Facilities Monthly Cost Report, AF Forms 325 & 330

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COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- AIR FORCE RESERVE INSTALLATIONS PROVIDING OWN SERVICES -

JUNE 1950

Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
4 August 1950

Line	Item (A)	Account Code (B)	Atterbury AFB (C)	Birmingham Mun Apt (D)	Greater Pittsburgh Apt (E)	Hanscom Apt (F)	Hensley Fld (G)	Long Beach Mun Apt (H)	Memphis Mun Apt (I)	Miami Int Apt (J)	New Castle County Apt (K)	O'Hare Int Apt (L)	Portland Apt (M)	Schlegel AF Plant (N)	Wold-Chamberlain Fld (O)	(P)	(Q)
1	No. of Personnel Reported			*													
2	Officers		1	1	1	1	1	1	1	1	2	1	2	1	1		
3	Airmen		45	38	45	36	20	28	36	9	35	33	26	26	37		
4	Civilians		44	9	36	55	27	41	44	31	38	110	41	3	45		
5																	
6	Total Personnel		90	48	82	92	48	70	81	41	75	144	69	30	83		
7																	
8	Payroll Costs																
9	Officers		$ 413	$ 413	$ 363	$ 455	$ 412	$ 518	$ 348	$ 398	$ 711	$ 398	$ 825	$ 484	$ 334		
10	Airmen		5,446	5,231	5,449	4,207	3,017	4,171	4,497	1,389	4,024	3,653	3,019	3,694	5,504		
11	Civilians		10,831	2,553	9,880	15,714	7,252	11,241	10,164	7,129	9,038	29,764	11,672	949	11,205		
12																	
13	Total Payroll		$ 16,690	$ 8,197	$ 15,692	$ 20,376	$ 10,681	$ 15,930	$ 15,009	$ 8,916	$ 13,773	$ 33,815	$ 15,516	$ 5,127	$ 17,043		
14																	
15	& Non-Personnel Costs		$ 11,947	$ 8,130	$ 6,046	$ 10,722	$ 4,123	$ 11,358	$ 18,361	$ 11,571	$ 8,965	$ 15,482	$ 44,257	$ 13,892	$ 6,279		
16																	
17	Total Costs		$ 28,637	$ 16,327	$ 21,738	$ 31,098	$ 14,804	$ 27,288	$ 33,370	$ 20,487	$ 22,738	$ 49,297	$ 59,773	$ 19,019	$ 23,322		
18																	
19	Costs of Selected Utilities (Non-Payroll)																
20																	
21	Purchased Water	06105	$ -	$ 25	$ -	$ -	$ -	$ 72	$ 268	$ 149	$ 238	$ 407	$ 11	$	$ 249		
22	Purchased Sewage Disposal	06206	-	-	-	-	40	-	-	-	236	-	-		44		
23	Purchased Electricity	06306	929	2,990	615	1,518	749	1,045	825	2,070	1,200	4,118	43		1,126		
24	Purchased Gas	06509	1,019	-	-	39	311	445	183	-	68	799	748		Cr 7		
25	Coal Issued #	06506	211	-	79	575	-	-	177	-	650	307	268		55		
26	Fuel Oil Issued #	06507	-	-	-	126	-	267	-	323	1,211	-	2,291		-		
27	O B Facilities (Purchased Utilities)	06201	Cr 882	-	46	-	-	-	3	3	-	-	-		-		
28																	
29	Costs of Selected Functions																
30																	
31	Projects, Non-Recurring (Over $3,000)																
32	09101 thru	09107	-	-	-	-	-	-	-	-	-	-	-		-		
33	Modification (Under $3,000)	09108	5,860	851	3,572	65	224	5,721	4,938	8,507	686	2,637	3,133		1,623		
34	Modification (Over $3,000)	09109	-	-	1,667	6,974	-	-	-	407	24	861	33,665		2,643		
35	Accrued Annual Lv, 1 July thru 30 June	10101	8,985	2,977	11,867	20,852	8,315	11,667	10,824	6,868	1,813	35,863	9,784		17,388		
36	Accrued Annual Lv, this month	10101	1,939	150	891	8,529	750	1,318	1,081	Cr 381	901	3,291	819		8,438		
37	Sick Lv & Holiday Lv Taken, 1 July																
38	thru 30 June	10102	6,559	1,665	7,559	6,840	4,120	7,754	6,289	5,774	627	24,565	4,069		6,439		
39	Sick Lv & Holiday Lv Taken, this month	10102	370	65	530	218	138	435	259	456	245	1,870	469		545		
40																	
41	Inventory Value & Depreciation Costs																
42																	
43	Depreciation, Mobile Maint Equipment,																
44	1 July thru 30 June	10109	-	20,750	24,125	7,047	5,410	2,654	4,195	380	4,942	7,560	-		6,153		
45	Depreciation, Mobile Maint Equipment,																
46	this month	10109	-	20,750	12,790	7,047	5,410	2,654	4,095	380	4,942	7,580	-		6,153		
47	Value of Installed Equipment & "MR"																
48	Property Salvaged, 1 July thru 30 June	10110	298	-	1,445	771	222	2,302	2,705	898	-	45	2,115		5		
49	Value of Installed Equipment & "MR"																
50	Property Salvaged, this month	10110	15	-	104	65	192	-	38	57	-	-	1,515		-		
51	Value of Non-Expendable Property for																
52	which A.I.C. has maint & repair																
53	responsibility	20104	28,504	4,190	59,258	66,035	-	163,062	120,091	29,452	-	1,534,294	457,367		32,319		
54	Value (when new) of Mobile Equipment																
55	issued A.I.C.	20105	-	50,000	125,060	76,170	54,098	28,130	49,728	1,899	36,170	146,563	-		89,230		
56																	

Line	Item (A)	Account Code (B)	(C) Amn	(C) Civ	(D) Amn	(D) Civ	(E) Amn	(E) Civ	(F) Amn	(F) Civ	(G) Amn	(G) Civ	(H) Amn	(H) Civ	(I) Amn	(I) Civ	(J) Amn	(J) Civ	(K) Amn	(K) Civ	(L) Amn	(L) Civ	(M) Amn	(M) Civ	(N)	(O) Amn	(O) Civ	(P)	(Q)
57	Utilization of Airmen & Civilians		Amn	Civ	Amn	Civ	Amn	Civ	Amn	Civ	Amn	Civ	Amn	Civ	Amn	Civ	Amn	Civ	Amn	Civ	Amn	Civ	Amn	Civ		Amn	Civ		
58																													
59	Administrative & Engineering	30001	6	5	1	2	3	5	2	5	2	3	4	6	2	5	4	2	4	5	0	12	3	6		5	3		
60	Fire Protection & Acft Crash Res	30002	34	3	30	1	32	1	30	3	12	1	16	3	28	1	1	0	19	3	36	4	24	2		18	4		
61	Custodial	30003	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	5	0	2	0	4	0	0		0	2		
62	Central Heating Plant Operators	30004	0	4	0	0	0	7	0	9	0	0	0	0	0	5	0	0	0	4	0	9	0	2		0	4		
63	Other Utilities Plant Operators	30005	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0		2	2		
64	Carpenters	30006	4	6	0	1	1	3	2	11	3	5	3	6	2	10	0	7	5	6	0	17	0	6		7	9		
65	Painters	30007	0	3	0	0	0	1	0	3	0	2	0	2	0	3	1	1	0	1	0	6	0	2		1	3		
66	Electricians	30008	3	4	0	1	0	2	0	4	1	3	2	3	0	3	2	3	1	2	0	6	1	5		3	3		
67	Plumbers & Steamfitters	30009	0	3	0	1	3	1	4	0	0	3	0	1	0	4	0	2	2	3	0	7	0	4		1	2		
68	Structural - Steel & Metal	30010	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1		0	0		
69	Concrete Masonry & Plaster	30011	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0		
70	Machinists	30012	0	0	0	0	0	0	0	0	0	2	0	7	0	2	0	1	0	0	1	10	0	2		0	0		
71	General Labor	30013	4	10	0	1	0	14	2	12	0	11	1	13	0	8	0	10	2	8	0	24	2	13		0	17		
72	Totals	30099	53	43	31	8	39	36	36	54	18	30	28	42	32	42	8	31	34	38	37	99	30	43		37	45		

74 # Cost of Coal & Fuel Oil including Transportation

75–76 NOTE: Payroll Costs shown on Line 10 are actual Payroll Costs for Airmen and are not based on civilian pay scales

76 * Includes Detachment "G" - 3904d Radar Bomb Scoring Sq

SOURCE: Lines 1 - 17 Cost Control Reports - AF Forms 320, 322, 320A, & 322A
19 - 72 Real Estate Facilities Monthly Cost Report - AF Forms 329 & 330

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Part II
Comptroller Chart 8
Prepared By:
Director Programs & Costs
Hq ComAC
4 August 1950

COSTS OF MANAGEMENT AND PRESERVATION OF REAL ESTATE FACILITIES

- INSTALLATIONS PROVIDED SERVICES BY THE ARMY, THE NAVY, OR BY ANOTHER MAJOR AF COMMAND -

JUNE 1950

Line	Item (A)	Account Code (B)	Lawson AFB (Army) (C)	Otis AFB (Army) (D)	Pope AFB (Army) (E)	Sherman AFB (Army) (F)	Godman AFB (Army) (G)	Olathe (Naval Air Station) (H)	Floyd Bennett (Naval Air Station) (I)	Dobbins AFB (AMC) (J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)
1	No. of ComAC Personnel Rptd in AI Function		*	**			***		****								
2	Officers, ComAC		3	4	1	0	1	1	1	1							
3	Airmen, ComAC		129	159	43	13	130	19	17	34							
4	Civilians, ComAC		8	113	5	0	17	4	28	2							
6	Total ComAC Personnel		140	276	49	13	148	24	46	37							
8	Payroll Costs - ComAC Personnel																
9	Officers, ComAC		$ 1,109	$ 1,536	$ 334	$ -	$ 498	$ 334	$ 490	$ 470							
10	Airmen, ComAC		15,650	18,241	5,196	1,583	5,362	2,550	1,951	4,967							
11	Civilians, ComAC		2,105	29,906	1,186	-	5,209	1,210	7,393	584							
13	Total Payroll Costs - ComAC Personnel		$ 18,864	$ 49,683	$ 6,716	$ 1,583	$ 11,069	$ 4,094	$ 9,834	$ 6,021							
15	▲ Non-Personnel Costs		$ 48,699	$ 11,251	$ 40,768	$ 3,319	$ 15,317	$ 210	$ 10,243	$ 22,222							
17	Total Costs		$ 67,563	$ 60,934	$ 47,484	$ 4,902	$ 26,386	$ 4,304	$ 20,077	$ 28,243							
22	Services Received by ComAC Activity																
24-25	Utilities Furnished ComAC Activity, 1 July thru 30 June	08201	$ 9,951	$ 75,392	$ 28,033	$ 6,621	$ 13,600	$ 3,182	$ 13,013	$ 15,426							
27-28	Utilities Furnished ComAC Activity, this month	08201	666	6,000	2,169	965	1,033	3,182	572	1,752							
30-32	All Other Real Estate Facilities Services Furnished ComAC Activity, 1 July thru 30 June	08202	136,725	763,183	225,837	76,101	173,516	45,987	75,747	194,645							
34-36	All Other Real Estate Facilities Services Furnished ComAC Activity, this month	08202	16,810	125,927	21,921	31,979	32,196	45,987	10,464	20,229							
38-40	Total Real Estate Facilities Services Furnished ComAC Activity, 1 July thru 30 June	08299	146,676	838,575	253,870	82,722	187,116	49,169	88,760	210,070							
42-43	Total Real Estate Facilities Services Furnished ComAC Activity, this month	08299	17,476	131,927	24,090	32,944	33,229	49,169	11,036	21,981							

SOURCE: Lines 1 - 17 Cost Control Reports - AF Forms 320, 322, 320A, & 322A
19 - 43 Columns (C) thru (G) - Real Estate Facilities Monthly Cost Report, AF Form 329 prepared in this Hqs from Army type reports
Column (H) - Real Estate Facilities Monthly Cost Report, AF Form 329 submitted for Olathe Naval Air Station
Column (I) - Real Estate Facilities Monthly Cost Report, AF Form 329 prepared in this Hqs from Navy type reports
Column (J) - Real Estate Facilities Monthly Cost Report, AF Form 329 submitted for Dobbins AFB

NOTE: Payroll Costs shown on line 10 are actual payroll costs for Airmen and are not based on civilian pay scales. The reporting of personnel and costs in the Air Installations account codes of the Cost Reporting System (Lines 1-13) should be accomplished with reference to paragraph 42b (1) (a) and (b) of ComAC Letter 170-13, 15 Mar 50 and the cross servicing agreement which makes provision for such services.

REMARKS: Columns (C) thru (J) - Parenthesis immediately under name of Installation indicates the agency responsible for accomplishing and/or providing for the ComAC Installation all or part of real estate facilities services.

* Includes Company "B", 912th Engr Avn Bn
** Includes Services Furnished to Dow AFB & Grenier AFB, & Air Installation Activities performed under the responsibility of Camp Edwards.
*** Includes Air Installation Activities performed under the responsibility of Ft. KNOX
**** Includes Air Installation Activities performed under the supervision of the Floyd Bennett Naval Air Station

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Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
4 August 1950

PERCENTAGE DISTRIBUTION OF TOTAL COST OF MANAGEMENT & PRESERVATION OF REAL ESTATE FACILITIES BY BASE AND FUNCTIONAL COMPONENT FOR USAF INSTALLATIONS PROVIDING OWN SERVICES

- FISCAL YEAR 1950 -

SECTION I

BASES (USAF) (A)	(B)	GRAND TOTAL (C)	(D)	Buildings & Other Structures -Cost- (E)	-Per Cent- (F)	Building Equipment -Cost- (G)	-Per Cent- (H)	Grounds -Cost- (I)	-Per Cent- (J)	Roads & Railroads -Cost- (K)	-Per Cent- (L)	Airfield Pavements -Cost- (M)	-Per Cent- (N)	Water Plants & Systems -Cost- (O)	-Per Cent- (P)	(Q)
George (Victorville)		$ 228,499		$ 15,064	6.6 %	$ 7,982	3.4 %	$ 6,020	2.6 %	$ 1,998	0.9 %	$ 269	0.1 %	$ 7,274	3.2 %	
Hamilton		1,698,901		117,982	6.9	44,718	2.6	71,772	4.2	25,661	1.5	3,379	0.2	83,291	4.8	
Langley		2,106,747		200,465	9.5	49,139	2.3	138,128	6.6	30,067	1.4	10,342	0.5	46,887	2.2	
McChord		1,234,087		79,795	6.4	20,688	1.7	64,801	5.2	26,427	2.1	3,120	0.3	12,185	1.0	
McGuire		909,991		86,015	9.4	11,695	1.3	25,996	2.9	18,536	2.0	2,061	0.2	21,462	2.3	
Mitchel		1,972,321		256,745	13.0	35,019	1.8	39,973	2.0	13,992	0.7	2,954	0.2	57,532	2.9	
Larson (Moses Lake)		1,378,094		215,963	15.7	16,612	1.2	24,475	1.8	5,728	0.4	108	0.0	22,360	1.6	
Cecoda		167,487		13,528	8.1	3,278	2.0	2,570	1.7	2,113	1.3	133	0.1	3,671	2.2	
Selfridge		1,517,685		148,485	9.8	31,806	2.1	58,397	3.8	22,993	1.5	794	0.1	45,498	3.0	
Shaw		773,230		99,780	12.9	26,130	3.4	47,842	6.2	8,563	1.1	5,103	0.7	20,322	2.6	
Sewart (Smyrna)		1,083,585		77,428	7.1	18,211	1.7	27,155	2.5	15,487	1.4	1,854	0.2	28,465	2.6	
Stewart		796,357		64,208	8.1	13,006	1.6	40,662	5.1	13,518	1.7	6,308	0.8	25,612	3.2	
Turner		604,356		70,176	11.6	11,094	1.8	26,655	4.4	16,891	2.8	7,556	1.2	19,946	3.3	
Brooks		711,201		75,440	10.6	20,367	2.8	37,878	5.3	15,028	2.1	2,534	0.3	30,602	4.3	
TOTALS		$15,181,471		$1,522,064	10.0 %	$ 309,536	2.0 %	$ 612,044	4.1 %	$ 215,753	1.4 %	$ 46,492	0.3 %	$ 426,325	2.8 %	

SECTION II

BASES (USAF) (A)	(B)	(C)	(D)	Sewer Plants & Systems -Cost- (E)	-Per Cent- (F)	Electric Plants & Systems -Cost- (G)	-Per Cent- (H)	Gas Plants & Systems -Cost- (I)	-Per Cent- (J)	Heating Plants & Systems -Cost- (K)	-Per Cent- (L)	Storage & Dispensing System -Cost- (M)	-Per Cent- (N)	Fire Protection & Acft Crash Rescue -Cost- (O)	-Per Cent- (P)	(Q)
George (Victorville)				$ 3,404	1.5 %	$ 20,220	8.8 %	$ 138	0.1 %	$ 19,104	8.3 %	$ 168	0.1 %	$ 90,425	39.6 %	
Hamilton				26,016	1.6	99,876	5.9	2,257	0.2	161,380	9.5	3,893	0.2	258,757	15.2	
Langley				81,338	2.4	140,692	6.7	520	0.0	378,348	18.0	7,232	0.4	328,425	15.6	
McChord				8,675	0.6	60,574	4.9	-	-	360,204	29.2	2,677	0.2	156,273	12.6	
McGuire				6,293	0.7	42,267	4.6	-	-	135,361	14.9	740	0.1	130,176	14.3	
Mitchel				17,956	0.9	152,829	7.8	1,479	0.0	496,369	25.2	172	0.0	234,012	11.9	
Larson (Moses Lake)				10,685	0.8	51,885	3.8	-	-	296,181	21.5	1,482	0.1	155,477	11.3	
Cecoda				3,279	2.0	18,420	11.0	-	-	30,875	18.4	686	0.4	42,768	25.5	
Selfridge				14,011	0.9	113,386	7.5	197	0.0	334,908	22.1	5,992	0.4	152,757	10.1	
Shaw				14,065	1.8	78,865	10.2	-	-	128,616	16.6	1,994	0.3	143,341	18.5	
Sewart (Smyrna)				20,816	1.9	58,275	5.4	-	-	149,094	13.8	3,798	0.4	218,169	20.1	
Stewart				23,449	2.9	52,868	6.6	279	0.0	149,016	18.7	1,283	0.2	108,742	13.7	
Turner				9,405	1.6	41,346	6.8	880	0.1	82,145	13.6	1,893	0.3	131,070	21.7	
Brooks				18,747	2.6	65,093	9.1	1,306	0.1	54,367	7.6	2,955	0.4	115,518	16.2	
TOTALS				$ 228,159	1.5 %	$ 996,296	6.6 %	$ 6,806	- %	$2,775,959	18.3 %	$ 34,767	0.2 %	$2,264,888	14.9 %	

SECTION III

BASES (USAF) (A)	(B)	(C)	(D)	Off-Post Facilities -Cost- (E)	-Per Cent- (F)	Janitorial & Sanitation Services -Cost- (G)	-Per Cent- (H)	Other Services -Cost- (I)	-Per Cent- (J)	Special Projects -Cost- (K)	-Per Cent- (L)	Undistributed Costs -Cost- (M)	-Per Cent- (N)	(O)	(P)	(Q)
George (Victorville)				$ -	- %	$ 1,895	1.0 %	$ 4,546	2.0 %	$ -	- %	$ 50,006	21.9 %			
Hamilton				30,078	1.8	96,364	5.8	28,025	1.6	413,787	24.4	231,707	13.6			
Langley				4,338	0.2	105,419	4.9	34,522	1.7	189,337	9.0	392,552	18.6			
McChord				107,223	8.7	18,006	1.5	16,204	1.3	109,742	8.9	189,769	15.4			
McGuire				5,597	0.6	23,224	2.6	3,007	0.3	228,761	25.1	164,910	18.1			
Mitchel				40,194	2.0	74,914	3.8	37,805	1.9	166,884	8.5	343,502	17.4			
Larson (Moses Lake)				1,876	0.1	13,731	1.0	7,801	0.5	384,706	27.9	169,086	12.3			
Cecoda				1,040	0.6	1,191	0.7	2,092	1.2	6,206	3.7	35,635	21.3			
Selfridge				3,611	0.2	59,187	3.9	11,778	0.8	255,339	16.8	257,731	17.0			
Shaw				4,926	0.6	20,063	2.6	6,519	0.8	33,772	4.4	133,539	17.3			
Sewart (Smyrna)				18,790	1.7	22,955	2.1	2,235	0.2	246,854	22.8	173,959	16.1			
Stewart				402	0.1	28,766	3.6	13,695	1.7	33,782	4.3	220,550	27.7			
Turner				-	-	5,774	1.5	4,776	0.8	66,343	11.0	105,936	17.5			
Brooks				-	-	18,606	2.6	16,296	2.3	113,084	15.9	127,536	17.9			
TOTALS				$ 218,075	1.5 %	$ 491,097	3.2 %	$ 189,302	1.3 %	$2,248,546	14.8 %	$2,596,560	17.1 %			

SOURCE: "99" Total Accounts, Real Estate Facilities Monthly Cost Reports, AF Forms 329 - RCS: AF-MD-F33A, June 1950

NOTE: For a Graphic Summarization of this Tabulation, see Management Analysis Review, June 1950 - Pages 31 and 33

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Part II
Comptroller Chart 6
Prepared By:
Director Programs & Costs
Hq ConAC
4 August 1950

PERCENTAGE DISTRIBUTION OF TOTAL COST OF MANAGEMENT & PRESERVATION OF REAL ESTATE FACILITIES

BY BASE AND FUNCTIONAL COMPONENT FOR USAFR INSTALLATIONS PROVIDING OWN SERVICES

- FISCAL YEAR 1950 -

SECTION I BASES * (USAFR) (A)	(B)	GRAND TOTAL (C)	(D)	Buildings & Other Structures -Cost- (E)	-Per Cent- (F)	Building Equipment -Cost- (G)	-Per Cent- (H)	Grounds -Cost- (I)	-Per Cent- (J)	Roads & Railroads -Cost- (K)	-Per Cent- (L)	Airfield Pavements -Cost- (M)	-Per Cent- (N)	Water Plants & Systems -Cost- (O)	-Per Cent- (P)	(Q)
Atterbury		$ 337,729		$ 22,361	6.9 %	$ 4,686	1.4 %	$ 3,549	1.0 %	$ 2,341	0.7 %	$ -	- %	$ 11,418	3.4 %	
Birmingham		216,677		4,652	2.1	3,966	1.8	284	0.1	131	0.1	-	-	1,146	0.5	
Greater Pittsburgh		414,983		26,649	6.4	1,933	0.5	10,382	2.5	4,210	1.0	123	-	4,778	1.1	
Boston-Bedford (Hanscom)		341,059		17,846	5.2	2,288	0.7	4,918	1.4	1,170	0.3	20	-	2,606	0.8	
Hensley		395,196		24,564	6.2	2,228	0.6	8,839	2.2	3,406	0.9	34	-	5,364	1.3	
Long Beach		340,752		19,356	5.7	2,959	0.9	10,445	3.1	2,897	0.9	12	-	4,489	1.3	
Memphis		355,083		21,498	6.0	3,797	1.0	9,207	2.6	4,578	1.3	-	-	10,601	3.0	
Miami		187,205		11,368	6.1	7,791	4.2	8,365	4.3	233	0.1	-	-	12,210	6.5	
O'Hare		783,928		62,458	8.0	7,991	1.0	11,583	1.5	7,316	0.9	923	0.1	16,098	2.1	
Portland **		272,036		10,560	3.9	2,501	0.9	5,588	2.1	1,592	0.6	5	-	4,190	1.5	
New Castle (May & June)		64,956		6,044	9.3	585	0.9	639	1.0	-	-	-	-	1,594	2.5	
Wold-Chamberlain		307,124		15,524	5.0	106	-	4,749	1.5	2,206	0.7	496	0.2	5,989	2.0	
Reading (thru April)		207,088		23,651	10.0	954	0.4	2,495	1.0	3,612	1.6	-	-	5,689	2.4	
TOTALS		$4,223,759		$ 267,488	6.3 %	$ 41,758	1.0 %	$ 80,978	1.9 %	$ 33,490	0.8 %	$ 1,618	- %	$ 86,169	2.1 %	

SECTION II BASES * (USAFR) (A)	(B)	(C)	(D)	Sewer Plants & Systems -Cost- (E)	-Per Cent- (F)	Electric Plants & Systems -Cost- (G)	-Per Cent- (H)	Gas Plants & Systems -Cost- (I)	-Per Cent- (J)	Heating Plants & Systems -Cost- (K)	-Per Cent- (L)	Storage & Dispensing System -Cost- (M)	-Per Cent- (N)	Fire Protection & Acft Crash Rescue -Cost- (O)	-Per Cent- (P)	(Q)
Atterbury				$ 4,769	1.4 %	$ 29,415	8.7 %	$ 300	0.1 %	$ 50,928	15.0 %	$ 661	0.2 %	$ 103,938	30.8%	
Birmingham				380	0.2	19,939	9.2	-	-	5,850	2.7	774	0.4	116,597	53.8	
Greater Pittsburgh				2,200	0.5	23,480	5.7	-	-	24,589	5.9	691	0.2	145,938	35.2	
Boston-Bedford (Hanscom)				1,110	0.3	21,702	6.4	-	-	62,288	18.3	625	0.2	105,417	30.9	
Hensley				1,891	0.5	16,174	4.1	834	0.2	11,145	2.8	1,619	0.4	77,196	19.5	
Long Beach				475	0.1	22,061	6.5	348	0.1	14,490	4.3	2,436	0.7	53,587	15.7	
Memphis				216	0.1	15,528	4.4	6	-	29,500	8.3	2,012	0.6	88,329	24.9	
Miami				2,532	1.4	30,721	16.4	-	-	6,403	3.4	288	0.1	7,733	4.0	
O'Hare				4,287	0.6	78,791	10.1	47	-	182,830	23.3	7,298	0.9	131,813	16.8	
Portland **				1,596	0.6	11,842	4.4	1,748	0.6	39,103	14.4	609	0.2	64,091	23.6	
New Castle (May & June)				1,543	2.4	3,781	5.8	-	-	11,692	18.0	23	-	13,562	20.9	
Wold-Chamberlain				432	0.1	21,279	6.9	14	-	30,975	10.1	295	0.1	86,846	28.3	
Reading (thru April)				2,318	1.0	11,245	4.8	-	-	35,077	14.9	71	-	48,953	20.8	
TOTALS				$ 23,749	0.6 %	$ 305,958	7.3 %	$ 3,297	0.1 %	$ 504,668	12.0 %	$ 17,390	0.4 %	$1,043,960	24.7%	

SECTION III BASES * (USAFR) (A)	(B)	(C)	(D)	Off - Post Facilities -Cost- (E)	-Per Cent- (F)	Janitorial & Sanitation Services -Cost- (G)	-Per Cent- (H)	Other Services -Cost- (I)	-Per Cent- (J)	Special Projects -Cost- (K)	-Per Cent- (L)	Undistributed Costs -Cost- (M)	-Per Cent- (N)	(O)	(P)	(Q)
Atterbury				$ 1,139	0.4 %	$ 5,868	1.8 %	$ 9,158	2.7 %	$ 43,240	12.8 %	$ 42,940	12.7 %			
Birmingham				-	-	790	0.4	1,790	0.8	22,785	10.5	37,601	17.4			
Greater Pittsburgh				1,188	0.3	7,290	1.8	922	0.2	81,456	19.6	79,207	19.1			
Boston-Bedford (Hanscom)				177	0.1	8,467	2.5	2,771	0.8	43,606	12.8	66,062	19.4			
Hensley				-	-	3,897	1.0	1,841	0.5	185,919	47.0	40,289	10.2			
Long Beach				498	0.1	8,931	2.6	6,139	1.8	125,401	36.8	66,200	19.4			
Memphis				47	-	6,789	1.9	10,414	2.9	104,412	29.4	48,122	13.6			
Miami				2,615	1.4	14,138	7.6	9,870	5.3	39,025	21.1	33,893	18.1			
O'Hare				278	-	22,125	2.8	6,864	0.9	110,728	14.1	132,525	16.9			
Portland **				-	-	6,060	2.2	8,728	3.2	71,868	26.4	42,136	15.5			
New Castle (May & June)				-	-	2,715	4.2	1,181	1.8	9,704	14.9	11,893	18.3			
Wold-Chamberlain				-	-	14,772	4.8	6,848	2.2	56,652	18.5	60,142	19.6			
Reading (thru April)				-	-	6,344	2.7	5,534	2.4	37,013	15.8	24,250	10.3			
TOTALS				$ 5,942	0.1 %	$ 108,186	2.6 %	$ 71,880	1.7 %	$ 941,829	22.1 %	$685,252	16.2 %			

* Costs of Management & Preservation of Real Estate Facilities under lease-rental contracts not included

** Costs incurred for Portland AFB are for 8 months only - from 1 Nov 1949 to 30 June 1950

SOURCE: "99" Total Accounts, Real Estate Facilities Monthly Cost Reports, AF Forms 329 - RCS: AF-MD-F5&A, June 1950

NOTE: For a Graphic Summarization of this Tabulation, see Management Analysis Review, June 1950 - Pages 31 and 33

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CONTINENTAL AIR COMMAND
AIRCRAFT AND FLYING TIME REPORT

(RCS-FS-A9)

FOR MONTH OF JANUARY 1950

UNCLASSIFIED

FOR
REGULAR AIR FORCE
USAF RESERVE
AIR NATIONAL GUARD

BY
TYPE AIRCRAFT
AND BY
AIR FORCE

SOURCE: AF FORM 110

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PREPARED BY:
HEADQUARTERS
CONTINENTAL AIR COMMAND
OFFICE OF STATISTICAL SERVICES

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CONTINENTAL AIR COMMAND

CONSOLIDATED FLYING TIME - BY TYPE AIRCRAFT

TABLE I

Air Force	B-25	B-26	C-45	C-46	C-47	C-82	F-47	F-51	F-80	F-82	F-84	F-86	T-6	T-7	T-11	Misc.	Total
Regular Air Force																	
Hq ConAC	224		60		469								1			87	841
First	226		416		693			16		517	770	51	579			37	3305
Fourth	116	9	449		690	12		26		252	1001		305			1560	4420
Ninth		253	9		1294			27				691	347			477	3098
Tenth	42		158		382			24	715				352			66	1739
Twelfth	60	294	127		389			72	17			1380	226			110	2675
Fourteenth	186	92	235		1154	1495		159	212		3347		658			1039	8577
TOTAL	854	648	1454		5071	1507		324	944	769	5118	2122	2468			3376	24655
USAF Reserve																	
First				727	666								715	350	796		3254
Fourth		353		1007									443	356	649		2808
Ninth				1206	445								482	380	634		3147
Tenth				2579	672								1020	741	1442		6454
Twelfth		285		636									73	160	619		1773
Fourteenth		508		1026									605	442	1091		3672
TOTAL		1146		7181	1783								3338	2429	5231		21108
Air National Guard																	
First		288			502		1163		64				449		56		2522
Fourth		258			411			766	78				306		12		1831
Ninth		308			746		888	323			59		420		34	35	2813
Tenth		477	7		757			1220	40		181		494		58		3234
Twelfth		188			244			685					219		9		1345
Fourteenth		331			470		420	693	338				305		22		2579
TOTAL		1850	7		3130		2471	3687	520		240		2193		191	35	14324

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REGULAR AIR FORCE
AIRCRAFT
DATA

CONTINENTAL AIR COMMAND

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE II

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Re-clamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	16	6 747	8 469	2 760	26	3 953	1 730			77		5	9	18	12 348
B-29	8	144	5 952	816	144	4 992									
B-45	33	5 798	19 530	2 868	6 704	9 958				394		82	14	109	515 025
Total Bombers	57	12 689	33 951	6 444	6 874	18 903	1 730			471		87	23	127	527 373
CB-25		1 363	832			5	827			2					262
CB-26	1	216	624	576		48									
C-45	80	37 274	22 975	2 359	1 937	17 059	1 620			1 414		209	81	325	57 355
C-47	140	69 161	31 518	6 006	1 256	21 445	2 811			4 634		784	627	996	431 835
C-54	37	10 143	12 969	3 401		9 568				1 450		365	400	40	322 295
C-82	88	30 115	37 290	3 196	1 014	31 496	1 584			1 507		185	189	40	253 201
C-119	22	5 005	7 810	1 030		6 780				743		177	148	21	182 533
Total Cargo	368	153 277	114 018	16 568	4 207	86 401	6 842			9 750		1 720	1 445	1 422	1 247 481
F-51	23	8 554	7 958	1 572		5 182	1 204			107				2	7 694
F-80	96	37 197	35 276	3 114	11 797	17 582	2 783		1	732		11	31	32	254 860
F-82	61	17 157	27 892	7 275		19 145	1 472		1	769		98	50	128	104 118
F-84	240	103 161	79 876	11 009	132	64 965	3 770			5 118		442	127	487	1 789 180
F-86	160	51 617	60 388	13 996	6 282	36 726	3 384		1	2 122		41	12	69	735 093
Total Fighters	580	217 686	211 390	36 966	18 211	143 600	12 613		3	8 848		592	220	718	2 890 945

* Per Aircraft on hand during month.

(Cont'd)

CONTINENTAL AIR COMMAND

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

REGULAR AIR FORCE

TABLE II
(Cont'd)

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
L-4	2	96	368			296	72								
L-5	2	1 201	2 255	960		1 223	72			4					45
L-13	20	9 768	4 992	2 292		1 212	1 488			208		4		3	3 187
H-5	2	936	552	24	120	216	192			21					540
Total Liaison	26	12 001	8 167	3 276	120	2 947	1 824			233		4		3	3 772
RB-26	17	6 524	6 124	1 752		3 272	1 100			182		21	15	60	26 823
RF-80	9	4 164	4 284	548	62	3 338	336			212				28	80 701
Total Recon	26	10 688	10 408	2 300	62	6 610	1 436			394		21	15	88	107 524
T-6	122	68 026	23 862	5 101	478	16 171	2 112			2 468		202	63	1 028	67 313
T-7	4	1 531	1 997	1 054		943									
T-11	1		716	212		504									
T-33	21	8 106	4 688	620	86	3 982				375		12	19	67	123 743
TB-17	1	619	101			64	37			45		8		8	9 150
TB-25	50	26 776	17 896	2 664	204	13 319	1 709		1	720		81	76	156	98 125
TB-26	26	14 965	11 665	1 802	28	6 156	3 679			369		15	10	41	57 754
TF-51	12	5 186	3 742	990		2 752				217					16 048
Total Trainers	237	125 209	64 667	12 443	796	43 891	7 537		1	4 194		318	168	1 300	372 133

* Per Aircraft on hand during month.

(Cont'd)

CONTINENTAL AIR COMMAND

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

REGULAR AIR FORCE

TABLE II
(Cont'd)

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
VB-25	4	2 416	338		154	184				127		25	23	21	19 903
VB-26	5	1 654	3 218	535	14	388	2 281			20					3 060
VC-47	13	7 610	2 113	24	342	1 747				437		56	79	83	35 610
G-15	49	28 752	8 712			5 040	3 672		2	11					
Q-14	10	6 696	744			744									
DC-45	3	1 680	552		240	312				49				11	1 919
PT-13	1		744			744									
YG-18	2	1 752	408				408			15					
YH-5	4	1 608	1 368	792	336	48	192			23					550
ZL-4	1		298	216			82								
ETB-25	1	688	56			56				5					1 126
VB-17	1	664	80			80				87		20	18		14 665
Total Misc	94	53 520	18 631	1 567	1 086	9 343	6 635		2	765		101	120	115	76 833
Grand Total	1 388	585 070	461 232	79 564	31 356	311 695	38 617		6	24 655		2 843	1 991	3 773	5 226 061

* Per Aircraft on hand during month.

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HEADQUARTERS CONTINENTAL AIR COMMAND

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE III

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Re-clamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
C-45	2	1 409	79			79				60	30	4		7	2 225
C-47	5	2 338	614			614				198	50	48	25	29	17 134
Total Cargo	7	3 747	693			693				258		52	25	36	19 359
T-6		384	144			144				1	1				35
TB-25	4	2 836	332			332				148	37	22	24	31	15 920
Total Trainers	4	3 220	476			476				149		22	24	31	15 955
VC-47	5	3 269	451			451				271	54	40	54	44	20 638
VB-25	2	1 150	338		154	184				76	38	16	11	9	11 621
VB-17	1	664	80			80				87	87	20	18		14 665
Total Misc.	8	5 083	869		154	715				434		76	83	53	46 924
Total Hq ConAC	19	12 050	2 038		154	1 884				841		150	132	120	82 238

* Per Aircraft on hand during month.

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FIRST AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE IV

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
CB-25		1 363	832			5	827			2	1				262
C-45	24	12 141	5 907	925	1 248	3 734				416	17	82	28	116	14 549
C-47	17	8 981	3 225	804	144	2 181	96			607	38	123	66	132	57 839
Total Cargo	41	22 485	9 964	1 729	1 392	5 920	923			1 025		205	94	248	72 650
F-51	6	2 429	2 035	144		1 827	64			16	3			1	1 010
F-80		80	536	468		68									
F-82	25	11 468	7 133	1 717		5 416				517	21	58	8	75	66 508
F-84	51	28 395	17 617	3 044	80	13 195	1 298			770	12	25	9	86	268 471
F-86	12	2 680	128			128				51	13		1		17 856
Total Fighters	94	45 052	27 449	5 373	80	20 634	1 362			1 354		83	18	162	353 845
RF-80	1		744			744									
T-6	39	26 507	4 930	1 106	312	3 512				579	14	58		277	15 874
T-7	1		744			744									
T-11	1		716	212		504									
T-33	3	1 272	960	336		624				37	12		1	11	12 917
TB-25	7	6 904	2 328	646	120	669	893			198	17	17	22	54	28 147
TB-26	1		614			614									
Total Trainers	52	34 683	10 292	2 300	432	6 667	893			814		75	23	342	56 938

* Per Aircraft on hand during month.

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FIRST AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE IV
(Cont'd)

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumptio
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
VC-47	3	1 851	381			381				86	29	7	13	16	7 115
VB-25	1	744								21	21	4		7	3 754
ETB-25	1	688	56			56				5	5				1 126
Total Misc	5	3 283	437			437				112		11	13	23	11 995
Total 1st AF	193	105 503	48 886	9 402	1 904	34 402	3 178			3 305		374	148	775	495 428

* Per Aircraft on hand during month.

FOURTH AIR FOURCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE V

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Stor-age	Re-clam-ation & Sal-vage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Com-pliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	1		504	240			264								
B-29	3		2 232	816		1 416									
Total Bombers	4		2 736	1 056		1 416	264								
C-45	20	7 738	6 983	793	565	5 625				449	22	57	10	94	18 254
C-47	23	10 092	4 904	1 637	336	2 931				690	35	96	125	92	61 850
C-54	37	10 143	12 969	3 401		9 568				1 450	47	365	400	40	322 295
C-82	16	10 896	2 520	782	2	1 736				12	1				2 310
CB-26	1	216	624	576		48									
Total Cargo	97	39 085	28 000	7 189	903	19 908				2 601		518	535	226	404 709
F-51	4	1 416	1 560	780		648	132			1					70
F-82	36	5 585	20 287	5 558		13 457	1 272		1	252	7	40	42	53	37 610
F-84	50	21 484	18 284	1 406		15 054	1 824			1 001	19	44	8	95	365 571
Total Fighters	90	28 485	40 131	7 744		29 159	3 228		1	1 254		84	50	148	403 251
L-5		49	551	240		311									
L-13	1	408	216	60		156									
Total Liaison	1	457	767	300		467									

* Per Aircraft on hand during month.

(Cont'd)

FOURTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

REGULAR AIR FORCE

TABLE V
(Cont'd)

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
T-6	18	8 246	3 400	72		3 328				305	19	16	2	142	8 507
T-33	3	1 560	264			264				65	33	3	2	30	21 740
TB-17	1	619	101			64	37			45	45	8		8	9 150
TB-25	22	8 320	8 072	950	84	6 294	744		1	116	5	4	9	25	15 017
TB-26		288	240	122		118				9	9				1 410
TF-51	6	1 894	2 570	670		1 900				25	4				1 685
Total Trainers	50	20 927	14 647	1 814	84	11 968	781		1	565		31	13	205	57 509
Total 4th AF	242	88 954	86 281	18 103	987	62 918	4 273		2	4 420		633	598	579	865 469

* Per Aircraft on hand during month.

NINTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE VI

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	12	4 792	6 392	1 104	26	3 796	1 466			40	3	3	5	8	6 435
B-29	5	144	3 576			3 576									
B-45	32	5 798	19 338	2 868	6 704	9 766				394	11	82	14	109	515 025
Total Bombers	49	10 734	29 306	3 972	6 730	17 138	1 466			434		85	19	117	521 460
C-45	3	768	1 392	312		1 080				9	3			1	325
C-47	33	15 444	7 749	850	292	6 200	407			1 260	40	205	143	295	117 220
Total Cargo	36	16 212	9 141	1 162	292	7 280	407			1 269		205	143	296	117 545
F-51	4	864	2 112	288		1 368	456			27	7				2 282
F-80	5	944	2 832			2 712	120								
F-82		104	472			272	200								
F-84	1		192			192									
F-86	68	18 360	32 637	4 944	4 416	20 637	2 640			691	10	3			262 570
Total Fighters	78	20 272	38 245	5 232	4 416	25 181	3 416			718		3			264 852
L-5		576								4	4				45
L-13	4	2 112	864	864						39	10				523
Total Liaison	4	2 688	864	864						43					568

* Per Aircraft on hand during month.

(Cont'd)

NINTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

REGULAR AIR FORCE

TABLE VI
(Cont'd)

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
RB-26	17	6 524	6 124	1 752		3 272	1 100			182	11	21	15	60	26 823
RF-80	3		2 232			2 088	144								
Total Recon	20	6 524	8 356	1 752		5 360	1 244			182		21	15	60	26 823
T-6	20	9 770	5 123	1 344	48	3 707	24			347	17	27	3	71	9 336
T-33	3	914	816	144		672				40	20				13 568
TB-26	5	2 651	3 181		28	218	2 935			26	3		6	5	5 033
Total Trainers	28	13 335	9 120	1 488	76	4 597	2 959			413		27	9	76	27 937
VC-47	2	1 147	341			341				34	17	4	1	11	3 234
VB-26	5	782	2 938	463	14	180	2 281			5	1				890
Total Misc	7	1 929	3 279	463	14	521	2 281			39		4	1	11	4 124
Total 9th AF	222	71 694	98 311	14 933	11 528	60 077	11 773			3 098		345	187	560	963 309

* Per Aircraft on hand during month.

TENTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE VII

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26		720													
C-45	10	4 794	2 214	227	124	1 863				158	17	29	13	25	7 712
C-47	17	7 330	5 040	120	124	3 404	1 392			350	20	91	59	69	30 696
Total Cargo	27	12 124	7 254	347	248	5 267	1 392			508		120	72	94	38 408
F-51	4	2 280	696	312		384				24	6			1	1 680
F-80	83	34 076	27 861	2 550	9 517	13 875	1 919			715	9	11	31	32	248 865
Total Fighters	87	36 356	28 557	2 862	9 517	14 259	1 919			739		11	31	33	250 545
L-4	1		296			296									
L-5	1		336			264	72								
L-13	2		1 488				1 488								
Total Liaison	4		2 120			560	1 560								

* Per Aircraft on hand during month.

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TENTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE VII
(Cont'd)

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Re-clamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
T-6	15	8 599	2 561	487		2 074				352	24	33	39	131	10 028
T-7	2	1 063	977	946		32									
T-33	3	1 392	840	48		792				66	22	2	5	2	19 895
TB-25	3	1 916	1 604			1 532	72			42	8				6 542
Total Trainers	23	12 970	5 982	1 481		4 429	72			460		35	14	133	36 465
VC-47	1	795								32	32	3	9	6	3 250
ZL-4	1		298	216			82								
Total Misc.	2	795	298	216			82			32		3	9	6	3 250
Total 10th AF	143	62 965	44 211	4 906	9 765	24 515	5 025			1 739		169	126	266	328 668

* Per Aircraft on hand during month.

TWELFTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE VIII

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-29			144		144										
B-45	1		192			192									
Total Bombers	1		336		144	192									
C-45	5	3 475	1 157			1 157				87	15	16	10	22	3 874
C-47	11	6 811	1 952	772		1 180				375	31	74	58	122	38 658
Total Cargo	16	10 286	3 109	772		2 337				462		90	68	144	42 532
F-51	2	237	1 251	48		651	552			20	10				1 305
F-80	8	2 088	3 984	96	2 280	864	744		1	17	2				5 995
F-86	80	30 577	27 623	9 052	1 866	15 961	744		1	1 380	18	38	11	69	454 667
Total Fighters	90	32 902	32 858	9 196	4 146	17 476	2 040		2	1 417		38	11	69	461 967
L-13	5	2 832	888			888				70	14	1			1 055
T-6	8	5 114	742	468	16	258				226	28	12	3	105	6 821
T-33	3	600	192			192				40	40				14 212
TB-25	1	588	252	60		192				30	30	4	3	5	4 905
TB-26	18	10 626	5 838	1 680		4 158				294	13	8	1	35	44 558
TF-51	2	1 284	204			204				52	26				4 187
Total Trainers	32	18 212	7 228	2 208	16	5 004				642		24	7	145	74 683

* Per Aircraft on hand during month.

(Cont'd)

TWELFTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

REGULAR AIR FORCE

TABLE VIII
(Cont'd)

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Stor-age	Ré-clam-ation & Sal-vage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Com-pliance	Maint.	Other Reasons					Night	Weather	Hood	
VC-47	2	548	940	24	342	574				14	7	2	2	6	1 373
VB-25	1	522								30	30	5	12	5	4 528
Q-14	10	6 696	744			744									
DC-45	3	1 680	552		240	312				40	13			11	1 919
Total Misc	16	9 446	2 236	24	582	1 630				84		7	14	22	7 820
Total 12th AF	160	73 678	46 655	12 200	4 888	27 527	2 040		2	2 675		160	100	380	588 657

* Per Aircraft on hand during month.

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FOURTEENTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE IX

REGULAR AIR FORCE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Stor-age	Re-clam-ation & Sal-vage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Com-pliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	3	1 235	1 573	1 416		157				37	9	2	4	10	5 913
C-45	16	6 949	5 243	102		3 521	1 620			235	15	21	20	60	10 416
C-47	34	18 165	8 034	1 823	360	4 955	916			1 154	33	147	151	257	108 438
C-82	72	19 219	34 770	2 414	1 012	29 760	1 584			1 495	20	185	189	40	250 891
C-119	22	5 005	7 810	1 030		6 78[illegible]				743	44	177	148	21	182 533
Total Cargo	144	49 338	55 857	5 369	1 372	44 996	4 120			3 627		530	508	378	552 278
F-51	3	1 328	304			304				19	10				1 347
F-80		9	63			63									
F-84	138	53 282	43 783	6 559	52	36 524	648			3 347	26	373	110	306	1 155 138
Total Fighters	141	54 619	44 150	6 559	52	36 891	648			3 366		373	110	306	1 156 485
L-4	1	96	72				72								
L-5	1	576	1 368	720		648									
L-13	8	4 416	1 536	1 368		168				99	12	3		3	1 609
H-5	2	936	552	24	120	216	192			21	11				540
Total Liaison	12	6 024	3 528	2 112	120	1 032	264			120		3		3	2 149
RF-80	5	4 164	1 308	548	62	506	192			212	30			28	80 701

* Per Aircraft on hand during month.

(Cont'd)

FOURTEENTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

REGULAR AIR FORCE

TABLE IX
(Cont'd)

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
T-6	22	9 406	6 962	1 624	102	3 148	2 088			658	30	56	46	302	16 712
T-7	1	468	276	108		168									
T-33	6	2 368	1 616	92	86	1 438				127	25	7	11	24	41 411
TB-25	13	6 212	5 308	1 008		4 300				186	12	34	18	41	27 594
TB-26	2	1 400	1 792			1 048	744			40	10	7	3	1	6 753
TF-51	4	2 008	968	320		648				140	35				10 176
Total Trainers	48	21 862	16 922	3 152	188	10 750	2 832			1 151		104	78	368	102 646
G-15	49	28 752	8 712			5 040	3 672		2	11					
PT-13	1		744			744									
VB-26		872	280	72		208				15	8				2 170
YG-18	2	1 752	408				408			15	5				
YH-5	4	1 608	1 368	792	336	48	192			23	6				550
Total Misc	56	32 984	11 512	864	336	6 040	4 272		2	64					2 720
Total 14th AF	409	170 226	134 850	20 020	2 130	100 372	12 328		2	8 577		1 012	700	1 093	1 902 892

* Per Aircraft on hand during month

USAF RESERVE
AIRCRAFT
DATA

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CONTINENTAL AIR COMMAND

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE X

RESERVE

Type A/C	No. on Hand As of 31Jan58	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	85	39 538	24 421	10 369	9	12 915	1 128			1 120		155	41	121	144 717
C-47	45	22 766	8 314	3 748		4 566				1 783		322	127	527	174 349
T-6	354	213 747	50 095	7 076	32	37 823	5 164			3 338		398	37	580	94 390
T-7	164	43 382	21 914	3 835	99	16 867	1 113			2 429		359	56	616	96 640
T-11	296	139 685	74 103	17 956	1 168	53 725	1 254			5 231		674	225	1 507	209 223
TB-26	2	689	799	600		79	120			26		7	5	2	3 641
TC-46	280	142 135	63 929	17 585	745	45 117	482			7 181		1 217	772	1 417	1 075 429
Total Trainers	1 036	539 638	210 840	47 052	2 044	153 611	8 133			18 205		2 655	1 095	4 122	1 479 323
Grand Total	1 166	601 942	243 575	61 169	2 053	171 092	9 261			21 108		3 132	1 263	4 770	1 798 309

* Per Aircraft on hand during month.

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FIRST AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XI

RESERVE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
C-47	14	7 410	1 902			1 902				666	51	78	20	234	60 265
T-6	43	26 419	5 573	240		5 333				715	17	58	1	143	19 065
T-7	14	7 015	905	96		809				350	32	41	9	99	14 868
T-11	38	23 399	4 205	1 320	510	2 375				796	22	56	4	219	29 252
TC-46	31	17 271	5 193	2 380		2 813				727	24	106	29	128	110 813
Total Trainers	126	74 104	15 876	4 036	510	11 330				2 588		261	43	589	173 998
Total 1st AF	140	81 514	17 778	4 036	510	13 232				3 254		339	63	823	234 263

* Per Aircraft on hand during month.

FOURTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XII

RESERVE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out Of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	33	15 205	9 346	4 294		5 052				353	11	23	4	24	49 367
T-6	66	37 541	9 533	1 847		6 701	985			443	7	59	4	61	11 586
T-7	19	8 651	5 101	361		4 716	24			356	20	30	3	159	14 276
T-11	44	21 441	9 207	1 368	34	7 805				649	16	83	23	160	26 754
TB-26	1	96	648	600		48									
TC-46	33	17 638	6 914	2 064	408	4 442				1 007	31	181	76	327	151 356
Total Trainers	163	85 367	31 403	6 240	442	23 712	1 009			2 455		353	106	707	203 972
Total 4th AF	196	100 572	40 749	10 534	442	28 764	1 009			2 808		376	110	731	253 339

* Per Aircraft on hand during month.

NINTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XIII

RESERVE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
C-47	16	7 096	4 808	3 380		1 428				445	28	108	39	58	47 176
T-6	48	29 326	8 234	2 391		5 843				482	10	46	3	109	13 044
T-7	17	6 403	4 061	1 970		2 091				380	27	51	14	59	13 909
T-11	49	20 793	14 079	6 604		7 475				634	13	64	18	164	24 684
TC-46	44	24 229	8 627	2 857		5 746	24			1 206	27	196	104	180	169 049
Total Trainers	158	80 751	35 001	13 822		21 155	24			2 702		357	139	512	220 686
Total 9th AF	174	87 847	39 809	17 202		22 583	24			3 147		465	178	570	267 862

* Per Aircraft on hand during month.

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TENTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XIV

RESERVE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
C-47	15	8 260	1 604	368		1 236				672	52	136	68	235	66 908
T-6	120	70 340	19 300	2 262	32	14 102	2 904			1 020	9	154	20	164	30 855
T-7	30	12 906	6 294	1 096	99	5 099				741	29	153	14	186	28 989
T-11	96	41 256	29 088	4 441	576	23 591	480			1 442	15	215	47	556	58 315
TC-46	119	54 403	31 949	7 844	337	23 334	434			2 579	22	471	335	454	396 584
Total Trainers	365	178 905	86 631	15 643	1 044	66 126	3 818			5 782		993	416	1 360	514 743
Total 10th AF	380	187 165	88 235	16 011	1 044	67 362	3 818			6 454		1 129	484	1 595	581 651

* Per Aircraft on hand during month.

TWELFTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XV

RESERVE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	18	9 456	4 656	559		4 097				285	15	29	6	89	19 422
T-6	22	14 029	2 483			2 483				73	3	8	2	14	2 397
T-7	8	2 452	1 628			1 628				160	32	4	2	33	6 106
T-11	24	10 630	8 666	2 339		6 327				619	24	71	48	175	23 827
TC-46	16	8 672	3 232	784		2 448				636	40	93	87	154	96 138
Total Trainers	70	35 783	16 009	3 123		12 886				1 488		176	139	376	128 468
Total 12th AF	88	45 239	20 665	3 682		16 983				1 773		205	145	465	147 890

* Per Aircraft on hand during month.

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FOURTEENTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XVI

RESERVE

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	34	14 877	10 419	5 516	9	3 766	1 128			482	14	103	31	8	75 928
T-6	55	36 092	4 972	336		3 361	1 275			605	11	73	7	89	17 443
T-7	16	5 955	3 925	312		2 524	1 089			442	34	80	14	80	18 492
T-11	45	22 166	8 858	1 884	48	6 152	774			1 091	26	185	85	233	46 391
TB-26	1	593	151			31	120			26	26	7	5	2	3 641
TC-46	37	19 922	8 014	1 656		6 334	24			1 026	27	170	141	174	151 489
Total Trainers	154	84 728	25 920	4 188	48	18 402	3 282			3 190		515	252	578	237 456
Total 14th AF	188	99 605	36 339	9 704	57	22 168	4 410			3 672		618	283	586	313 384

* Per Aircraft on hand during month.

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AIR NATIONAL GUARD
AIRCRAFT
DATA

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CONTINENTAL AIR COMMAND

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XVII

AIR NATIONAL GUARD

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	219	92 333	68 587	29 422	3 216	25 455	10 494	3	2	1 137		110	100	236	173 252
C-45	2	336	1 152	368	192	592				7		5	2	4	317
C-47	148	71 317	37 750	8 717	1 891	23 661	3 481			3 034		610	444	841	281 683
Total Cargo	150	71 645	38 902	9 085	2 083	24 253	3 481			3 041		615	446	845	282 000
F-47	490	223 415	137 558	28 834	17 462	62 660	28 602		1	2 407		137	17	338	248 629
F-51	924	526 789	162 415	34 657	1 527	106 188	20 043	1		3 526		239	54	438	229 877
F-80	117	46 225	40 799	13 855	2 862	16 210	7 872			520		48	5	89	187 449
F-84	88	13 944	24 793	1 896	456	21 169	1 272			240					76 684
Total Fighters	1 619	810 373	365 565	79 242	22 307	206 227	57 789	1	1	6 693		424	76	865	742 639
RF-51	17	7 770	4 878	984		2 502	1 392			53		1		5	3 537
T-6	258	146 244	40 292	10 463	1 416	22 598	5 815			2 193		236	29	659	65 722
T-11	33	12 439	11 585	2 838	520	5 475	2 752		1	191		12	1	44	7 879
TB-26	100	41 171	32 989	13 731	642	14 046	4 570		1	713		58	55	112	106 692
TF-47	14	7 486	2 340	1 296		1 044				53			1	3	6 125
TF-51	27	8 984	11 104	6 912		4 144	48			90		11		17	6 210
TRF-51	6	1 658	2 806	452		2 354				18				1	1 312
Total Trainers	438	217 982	101 116	35 692	2 578	49 661	13 185		2	3 258		317	86	836	193 340

* Per Aircraft on hand during month.

(Cont'd)

CONTINENTAL AIR COMMAND

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XVII
(Cont'd)

AIR NATIONAL GUARD

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
VC-47	4	2 304	672		3	669				96		22	18	24	8 834
VC-53	1	696	48			48				35		5	2	10	4 453
EF-47	1	696	48			48				11		7			1 224
Total **Misc**	6	3 696	768		3	765				142		34	20	34	14 511
Grand Total	2 449	1 203 807	579 816	154 425	30 187	308 863	86 341	4	5	14 324		1 501	728	2 821	1 409 279

* Per Aircraft on hand during month.

FIRST AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XVIII

AIR NATIONAL GUARD

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	36	15 280	9 560	4 436	204	4 320	600	3		229	7	20	17	28	34 489
C-47	28	13 522	7 310	2 260	12	5 038				502	18	104	82	127	47 849
F-47	240	116 658	58 995	14 904	11 938	26 616	5 537		1	1 105	5	56	6	154	115 258
F-80	21	9 566	6 058	1 488	2 406	2 164				64	3	2	1	5	21 210
F-84	1		456		456										
Total Fighters	262	126 224	65 509	16 392	14 800	28 780	5 537		1	1 169		58	7	159	136 468
T-6	49	27 314	7 974	2 196	168	3 546	2 064			449	10	30	11	124	14 483
T-11	9	2 837	3 475	792	328	1 875	480			56	7	8		5	2 051
TB-26	14	3 905	6 271	3 283	66	2 015	907			59	4	4	1	5	9 055
TF-47	12	6 742	1 596	552		1 044				47	4		1	3	5 430
Total Trainers	84	40 798	19 316	6 823	562	8 480	3 451			611		42	13	137	31 019
EF-47	1	696	48			48				11	11	7			1 224
Total 1st AF	411	196 520	101 743	29 911	15 578	46 666	9 588	3	1	2 522		231	119	451	251 049

* Per Aircraft on hand during month,

FOURTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XIX

AIR NATIONAL GUARD

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	20	9 028	5 396	1 936		3 436	24			141	7	34	4	51	22 850
C-47	25	11 152	6 859	1 150		5 202	507			401	17	80	49	141	37 884
F-51	189	107 148	32 724	4 237	72	23 156	5 259	1		721	4	69	2	98	45 841
F-80	22	10 491	5 877	3 045		2 808	24			78	4	1		18	30 065
Total Fighters	211	117 639	38 601	7 282	72	25 964	5 283	1		799		70	2	116	75 906
RF-51	5	2 600	1 120	240		24	856			18	4			4	1 372
T-6	34	18 841	5 735	1 512		2 891	1 332			306	9	27	1	95	8 669
T-11	3	1 026	1 206			462	744		1	12	4	2		5	669
TB-26	18	7 296	6 096	1 967	48	2 727	1 354			117	7	9	2	41	16 448
TF-51	10	2 370	5 070	3 888		1 134	48			27	3			3	2 064
Total Trainers	65	29 533	18 107	7 367	48	7 214	3 478		1	462		38	3	144	27 850
VC-47	1	744								10	10	1			930
Total 4th AF	327	170 696	70 083	17 975	120	41 840	10 148	1	1	1 831		223	58	456	166 792

* Per Aircraft on hand during month,

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NINTH AIR FORCE

TABLE XX

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

AIR NATIONAL GUARD

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	44	14 754	17 982	7 783	2 520	6 935	744			158	4	15	10	26	23 972
C-47	26	12 691	6 197	1 651		3 906	640			674	27	140	121	147	63 140
F-47	150	65 707	45 213	7 733	4 301	28 101	5 078			882	6	49	6	122	89 943
F-51	129	80 037	15 939	2 282		13 537	120			307	2	51	5	33	19 840
F-84	48	7 800	12 336			11 064	1 272			59	2				23 213
Total Fighters	327	153 544	73 488	10 015	4 301	52 702	6 470			1 248		100	11	155	132 996
T-6	45	25 626	5 601	504		4 368	729			420	10	80	4	135	11 645
T-11	6	2 264	2 200	486		1 530	184			34	6	2		12	1 457
TB-26	18	8 651	4 741	1 755		2 417	569			150	8	9	6	30	23 718
TF-47	2	744	744	744						6	3				695
TF-51	1	672	72			72				16	16	4		4	960
Total Trainers	72	37 957	13 358	3 489		8 387	1 482			626		95	10	161	38 475
VC-47	2	1 032	456		3	453				72	36	20	15	15	6 579
VC-53	1	696	48			48				35	35	5	2	10	4 453
Total Misc	3	1 728	504		3	501				107		25	17	25	11 032
Total 9th AF	472	220 674	111 529	22 938	6 824	72 431	9 33[illegible]			2 813		375	169	514	269 615

* Per Aircraft on hand during month.

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TENTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XXI

AIR NATIONAL GUARD

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	80	37 078	22 826	5 547	492	8 405	8 382		2	355	4	31	38	113	53 908
O-45	2	336	1 152	368	192	592				7	4	5	2	4	317
C-47	35	17 155	8 885	1 912	979	5 016	978			743	21	162	97	250	68 045
Total Cargo	37	17 491	10 037	2 280	1 171	5 608	978			750		167	99	254	68 362
F-51	371	207 056	71 416	16 329	1 447	44 330	9 310			1 173	3	47	22	186	75 720
F-80	35	4 720	20 936	7 834		5 446	7 656			40	1	3	3	4	13 027
F-84	39	6 144	12 001	1 896		10 105				181	8				53 471
Total Fighters	445	217 920	104 353	26 059	1 447	59 881	16 966			1 394		50	25	190	142 218
RF-51	11	4 478	3 706	744		2 426	536			26	2	1		1	1 635
T-6	73	44 025	10 671	2 471	1 248	5 721	1 231			494	7	36	5	138	15 679
T-11	10	3 756	3 540	960		1 236	1 344			58	6			16	2 380
TB-26	23	8 695	8 417	3 131	144	3 402	1 740		1	122	5	22	17	21	18 541
TF-51	7	1 452	3 756	2 232		1 524				5	1			3	310
TRF-51	5	1 370	2 350	260		2 090				16	3			1	1 100
Total Trainers	118	59 298	28 734	9 054	1 392	13 973	4 315		1	695		58	22	179	38 010
VC-47	1	528	216			216				14	14	1	3	9	1 325
Total 10th AF	692	336 793	169 872	43 684	4 502	90 509	31 177		3	3 234		308	187	746	305 458

* Per Aircraft on hand during month.

TWELFTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XXII

AIR NATIONAL GUARD

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	[illegible]			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	15	5 760	5 400	4 152		504	744			67	4		7		10 195
C-47	15	7 191	3 897	1 272	216	2 409				244	16	37	31	68	22 236
F-51	155	82 337	33 147	7 118	8	21 433	4 588			641	4	31	10	71	45 376
RF-51	1	692	52			52				9	9				530
T-6	26	13 870	4 789	1 692		3 097				219	9	31	5	92	6 722
T-11	2	408	1 080	600	192	288				9	5			4	384
TB-26	15	6 635	4 525	2 524		2 001				121	8	6	14	9	17 233
TF-51	6	3 480	984	384		600				33	6	4		5	1 896
TRF-51	1	288	456	192		264				2	2				212
Total Trainers	50	24 681	11 834	5 392	192	6 250				384		41	19	110	26 447
Total 12th AF	236	120 661	54 330	17 934	416	30 648	5 332			1 345		109	67	249	104 784

* Per Aircraft on hand during month.

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FOURTEENTH AIR FORCE

CONSOLIDATED AIRCRAFT AND FLYING TIME DATA

TABLE XXIII

AIR NATIONAL GUARD

Type A/C	No. on Hand As of 31Jan50	Hrs in Comm	Total Hrs Out of Comm	Hours Grounded				Storage	Reclamation & Salvage	Total Hrs Flown	Avg Hrs Flown*	Flying Time Breakdown			Fuel Consumption
				Awaiting Parts	T.O. Compliance	Maint.	Other Reasons					Night	Weather	Hood	
B-26	24	10 433	7 423	5 568		1 855				187	8	10	24	18	27 838
C-47	19	9 599	4 602	472	684	2 090	1 356			470	25	87	64	108	42 529
F-47	100	41 050	33 350	6 197	1 223	7 943	17 987			420	4	32	5	62	43 426
F-51	80	50 211	9 189	4 691		3 732	766			684	9	41	15	50	43 100
F-80	39	21 448	7 928	1 488	456	5 792	192			338	9	42	1	62	123 147
Total Fighters	219	112 709	50 467	12 376	1 679	17 467	18 945			1 442		115	21	174	209 675
T-6	31	16 568	5 522	2 088		2 975	459			305	10	32	3	95	8 524
T-11	3	2 148	84			84				22	7		1	2	938
TB-26	12	5 989	2 939	1 071	384	1 484				144	12	8	15	6	21 097
TF-51	3	1 010	1 222	408		814				9	3	3		2	980
Total Trainers	49	25 715	9 767	3 567	384	5 357	459			480		43	19	108	31 539
Total 14th AF	311	158 463	72 259	21 983	2 747	26 769	20 760			2 579		255	128	405	311 581

* Per Aircraft on hand during month.

419.201
1 Dec 1948

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U.S.A.F.
HISTORICAL DIVISION
ARCHIVES BRANCH

2-106A-1

Organizational Concept for the
Continental Air Command
1 Dec 1948

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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EO 11652

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40048

[redacted]

Lt. Col. C.H. Mommen

1 December 1948

DECLASSIFIED
EO 11652

MEMORANDUM

SUBJECT: Organizational Concept for the Continental Air Command

References: a. Hqs. USAF Ltr. 322 (AFOCR 949e), subject: "Establishment of the Continental Air Command and Designation of Air Defense Command and Tactical Air Command as operational Air Commands", dtd 19 Nov 1948.

b. Hqs. USAF Ltr 322 (AFOCR 948e), subject: "Reassignment of the 4th, 33rd, and 56th Fighter Wings, dtd 22 Nov 1948".

c. AF Reg. No. 20___, Organization, Continental Air Command, dtd ______________.

1. Attached hereto, for the information of interested personnel, is copy of Staff Study outlining the concept of organization for the Continental Air Command. This Study, except for pars. 6b(2), which is contingent upon future developments, was approved by the Vice Chief of Staff on 18 Nov 1948. Reference (a), above, established the Continental Air Command, effective 1 Dec 1948.

2. Specific questions, relative to the above subject, may be directed to the Organizational Planning Branch, Organization Division, D/T&R, DCS/O, Ext. 73832).

3. It is anticipated that some minor changes may be made to Tab D (Mission Directive to CAC) prior to publication.

4. This document is classified secret because of information contained in para. 7.

Jr, CAPT USAF
For ALLEN R. SPRINGER
Colonel, USAF
Act. Chief, Organization Division
Directorate of Training and
Requirements

DECLASSIFIED
EO 11652

2-1064-1

[redacted]

AN ORGANIZATION FOR ZI AIR OPERATIONS AND UNIT TRAINING

PROBLEM

1. To prescribe the organization and implementing action necessary to bring into existence an active continental air organization and provide it with means to meet its assigned missions.

FACTS BEARING ON THE PROBLEM

2. The present organization for air operations in the Continental United States is susceptible of substantial improvement. Air Defense Command is charged with a mission it is incapable of accomplishing without relying on Tactical Air Command and Strategic Air Command for furnishing, on a cooperative and coordinative basis, the majority of fighter elements required for employment in Air Defense operations. For maximum efficiency and effectiveness the resources susceptible to employment in air defense of the Continental United States should be under the direct control of the agency charged with the mission of continental air defense. The same condition exists in respect to the mission charged to the Tactical Air Command and the means available to it in carrying out its presently assigned mission

3. The Air Defense Command is now charged with a multitude of functions unrelated to the actual air defense of the United States. These unrelated functions, coupled with the inadequacies of the current Air Defense Command organization for air defense, burdens one command with more functions than the commander thereof is capable of performing effectively and efficiently through the organization he is currently provided.

DISCUSSION

4. Attached as Tab "B" is a graphic portrayal of a continental air organization designed to enhance the organization for air operations and unit training in the Continental United States. The merging of the missions and resources of the current Tactical Air Command and Air Defense Command into a Continental Air Command permits the creation of a realistic organization for continental air defense, cooperation with ground and amphibious operations, and unit training including supervision of Air National Guard and Air Reserve training. One agency within the domestic command structure can be endowed with complete jurisdiction over all resources susceptible to employment in non-strategic air operations, thereby insuring maximum flexibility and effectiveness of the means available for this purpose.

5. The organization shown on TAB "B" involves the following concepts:

a. The present four geographical Air Forces of ADC will be increased to six (adding the 9th and 10th Air Forces as indicated), with boundaries between air forces coinciding with Army boundaries.

b. Present Tactical Air Command and Air Defense Command missions and resources will be merged into and assigned to the Continental Air Command.

c. Headquarters shown as Tactical Air Command and Air Defense Command bear no resemblance to the commands presently known as such. The Tactical Air Command Headquarters and Air Defense Command Headquarters portrayed on Tab "B" are operational headquarters only. These headquarters have no units actually assigned, therefore, they have no responsibility whatever for unit proficiency training, administration or logistics. The headquarters are subordinate to Continental Air Command on a newly created operational command echelon between major command and air force level. The two tactical division headquarters indicated under Tactical Air Command are mobile operational headquarters with no units actually assigned thereto. The headquarters indicated as Eastern and Western Defenses, as well as their subordinate air defense sector headquarters are likewise operational headquarters only with no units actually assigned.

(1) Tactical Air Command Headquarters is charged primarily with the planning function pertaining to air support of ground forces. The two tactical operational air division headquarters assist Tactical Air Command Headquarters in this respect. Secondarily, the two tactical operational air division headquarters will operationally control such forces as may be designated from time to time by Headquarters, Continental Air Command for special exercises as well as joint maneuvers with ground forces.

(a) One of the mobile tactical air division will be based on a tenant status at an installation located in the southeastern part of the United States and the other would be similarly based at an installation in the southwestern part of the United States, both in or near Army-Air Force maneuver areas.

(2) Air Defense Command Headquarters is charged with planning for, rendering advice on, and conducting active air defense operations. The Commanding General, Air Defense Command is responsible for these functions. The means and forces available to Headquarters, Air Defense Command, for the conduct of

active air defense operations shall be as apportioned and designated by the Commanding General, Continental Air Command, for this purpose. The control of the designated means is exercised by the Commanding General, Air Defense Command, through his subordinate Eastern and Western Defense headquarters, and in turn through the Air Defense Sectors. The eight operational air defense sectors are to be located on a tenant status at air defense control centers presently planned for construction in FY 1950.

d. The organization of the Continental Air Command envisioned herein will materially enhance the ability of the Commanding General thereof to provide greater stimulus to the Air Reserve program. He is in effect relieved of operational responsibility through the assignment to his command of two operational headquarters (ADC and TAC) to handle these matters therefore, he is provided more time to devote to the Reserve program and unit training. Further, he will be provided eventually with two additional Air Force Headquarters. This will afford some relief from the burden now on the existing four Air Forces and permit the Air Force commanders to devote more attention to the civilian component and unit training aspects of the Continental Air Command mission. The combining of present Air Defense Command and Tactical Air Command resources into Continental Air Command, together with the reassignment of three fighter wings from Strategic Air Command, provides maximum opportunity for increased participation by regular Air Force tactical units in the civilian components program.

e. Headquarters, Continental Air Command; Headquarters, Air Defense Command; and Headquarters, Tactical Air Command, will eventually be located in the central part of the United States with Headquarters, Air Defense Command and Headquarters, Tactical Air Command being located no further than fifteen miles away from Headquarters, Continental Air Command.

f. The unit training function during mobilization will be the responsibility of Continental Air Command so that there is inherent within the overall organization the adaptability required to permit expansion and unit training while operationally effective forces are being employed simultaneously in a defensive operational effort.

5. Funds are not presently available, nor have they been budgeted for FY 1950 to completely accomplish the foregoing organization. The cost within Phase I can be accomplished within current troop space authorizations and within funds available in the 1949 Budget. Within Phase II it must be reprogrammed in the 1950 Budget. It is necessary, therefore, that implementing action be taken as follows:

a. PHASE I

(1) ACTIVATE CONTINENTAL AIR COMMAND. Concurrent therewith:

(a) Assign all current ADC and TAC units and resources to CAC.

(b) Reassign 4th, 33rd and 56th Fighter Wings; Otis Field (Camp Edwards), and Selfridge AFB's from TAC to CAC.

(c) Redesignate ADC and TAC as "Operational Air Command Headquarters" and assign to CAC.

(d) Publish AF Regulation outlining mission of CAC.

(2) CHARGE CG, CAC, WITH ACCOMPLISHING THE FOLLOWING BY 1 July 1949.

(a) In consonance with the following, realign to 6 Air Force areas (AF boundaries to be coincident with Army boundaries, Tab E).

1. By progressive action, move all non-operational functions out of TAC and concurrently effect a corresponding withdrawal of personnel.

2. Move 12th Air Force Headquarters from March AFB to Brooks AFB.

3. Transfer 14th Air Force activities and functions in the 4th Army Area to the 12th Air Force as the 12th Air Force becomes established.

4. Move 14th Air Force to Langley AFB as soon as adequate space becomes available. (9th AF, with station at Greenville AFB, concurrently assumes 14th AF functions and activities in the 3rd Army Area.)

5. Have 14th AF, after situated at Langley AFB, gradually assume 1st AF functions and activities in the 2nd Army Area. Concurrently have 10th AF assume present 1st AF functions and activities in the 5th Army Area.

6. At the proper time, request this Headquarters to activate the Tactical Air Division Headquarters at March AFB and one at Greenville AFB.

b. PHASE II

(That portion of the plan, which for the most part, must be programmed for and which will require adjustments so that it can be accomplished within the FY 1950 budget)

(1) PROVIDE IN THE [illegible] PROGRAM FOR THE FOLLOWING:

(a) Six operational Air Defense Sector headquarters (to be phased in coincident with the construction of control centers planned for FY 1950).

(b) The Eastern Air Defense Headquarters and the Western Air Defense Headquarters (to be phased in during the 4th quarter of FY 1950).

(2) MOVE HQ CAC, HQ ADC AND HQ TAC TO A CENTRAL LOCATION IN THE CENTER OF THE U.S.

7. Current programs for the utilization of air bases and current fighter group assignments and deployments have been determined with due consideration to training requirements and the need for economy in the development of facilities. These considerations are important. In preparation for a war which will entail air operations in the defense of the United States, however, it is imperative that a third consideration, the operational requirement, be introduced as a major factor influencing the utilization of bases and the assignment and deployment of fighter groups. This consideration should be paramount and should be met immediately in Phase I.

a. At present, four regular fighter groups are assigned to Air Defense Command as the air defense force "in being". (Of these, three are "Operational" and one, the 78th, is being organized). It is planned that this force will be augmented, upon mobilization, by certain fighter groups of the National Guard. It is further planned that all other fighter groups in the United States: i.e. five currently assigned to Strategic Air Command, four currently assigned to Tactical Air Command and the remaining National Guard groups, will participate, at least on a part-time basis, in the air defense of the United States, prior to their deployment overseas. It is particularly noteworthy, in this respect, that of the five fighter groups assigned to Strategic Air Command, and the four assigned to Tactical Air Command, one is planned currently to go overseas on D-Day, one on D plus 60, and three after D plus 10 months, while four will remain in the United States. The sole operational mission of all of these units prior to going overseas will be air defense. Thus, current plans provide adequately, consistent with the peacetime strength of the Air Force, for United States air defense.

b. In any future war it is logical that air defense measures will occur before tactical air operations in conjunction with amphibious or ground forces. The adequacy of air defense plans must be judged from a capability to meet D-Day enemy action, when D-Day coincides with M-Day. It follows that the peacetime deployment of regular fighter units must be such as to permit immediate air defense measures on D-Day. The critical period extends from D-Day until the National Guard is mobilized, equipped, and deployed for operations, estimated at from five to twenty days. During this time regular units must bear the full air defense burden.

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c. An undesirable feature concerning the current assignment of fighter groups relates to the training of regular fighter groups for the functions to be performed in wartime. It is particularly significant in this regard that, within current war plans, twelve of the thirteen fighter groups now deployed in the U.S. will perform an air defense function prior to deployment overseas, and that after overseas deployment all fighter groups will continue to perform an air defense function or a Ground Force cooperation function entailing air defense. Escort missions, on the other hand, will be performed only occasionally, and then only if the security of airbases, against air attack, is reasonably assured. Yet five of the thirteen U. S. fighter groups are assigned to a command which is concerned with the training of fighters for strategic escort only.

d. Consideration of the foregoing makes it apparent that regular fighter groups should be redeployed to permit immediate air defense of vital areas and should be reassigned, in sufficient numbers for this purpose, to the Continental Air Command. Furthermore, it is apparent that this redeployment and reassignment, rather than reducing the USAF capability for the execution of war plans will tend, instead, to improve that capability.

e. The selection of specific units and specific airfields to meet initial air defense requirements must be based on an analysis of current unit assignments to air bases. This analysis, in Tab "C" hereto, reveals deficiencies which can be met by the transfer of the 4th, 33rd, and 56th Fighter Groups to the Continental Air Command, the reassignment of Otis Field, Camp Edwards, and Selfridge Air Force Base to Continental Air Command, the selection and ultimate development of a suitable fighter base in the Minneapolis-Duluth area, and the selection and/or development of a fighter base in the Utica-Syracuse area.

CONCLUSIONS

8. That the organization illustrated in Tab "B" will permit efficient control and maximum use of those resources in the Continental United States which are susceptible for use in, and which can be made available for unit training; the defense of the Continental United States against air attack; and/or in cooperation with ground and sea forces employed in defense of the Continental United States against surface attack.

9. That the organization is adaptable, in time of emergency, to concurrent expansion, concentrated training and extensive operations without major reorganization.

10. That the requirements for regular USAF fighter units located to meet air defense D-Day needs necessitate the immediate assignment of the 4th, 33rd, and 56th Fighter Groups, Otis Field, Camp Edwards, and Selfridge AFB to the Continental Air Command, with the selection or

development of suitable fighter bases in the Minneapolis-Duluth and Utica-Syracuse areas.

11. That the cost for implementing Phase I (Tab A) is nominal and can be supported within the current budget.

12. That the cost for implementing Phase II (Tab B) is such that the USAF Budget and USAF Programs must be adjusted to permit implementation during FY 1950.

RECOMMENDATIONS

1. That the foregoing organization and assignment of areas for air operations and unit training in the Continental United States be approved for implementation in two phases, as indicated.

2. That the abbreviation CAC be approved for Continental Air Command to differentiate from the abbreviation CAirC now used for Caribbean Air Command.

3. That the Deputy Chief of Staff, Operations be charged with the dissemination of necessary implementing action to the Air Staff and be designated the Air Staff agency charged with monitoring the implementing action.

TABS

A-Phase I (Immediate) Organization
B-Ultimate Organization
C-Analysis of deficiencies in
  present fighter deployment(Omitted)
D-Mission Directive to CAC
E-Army Areas (Omitted)
F-Workload(Omitted)

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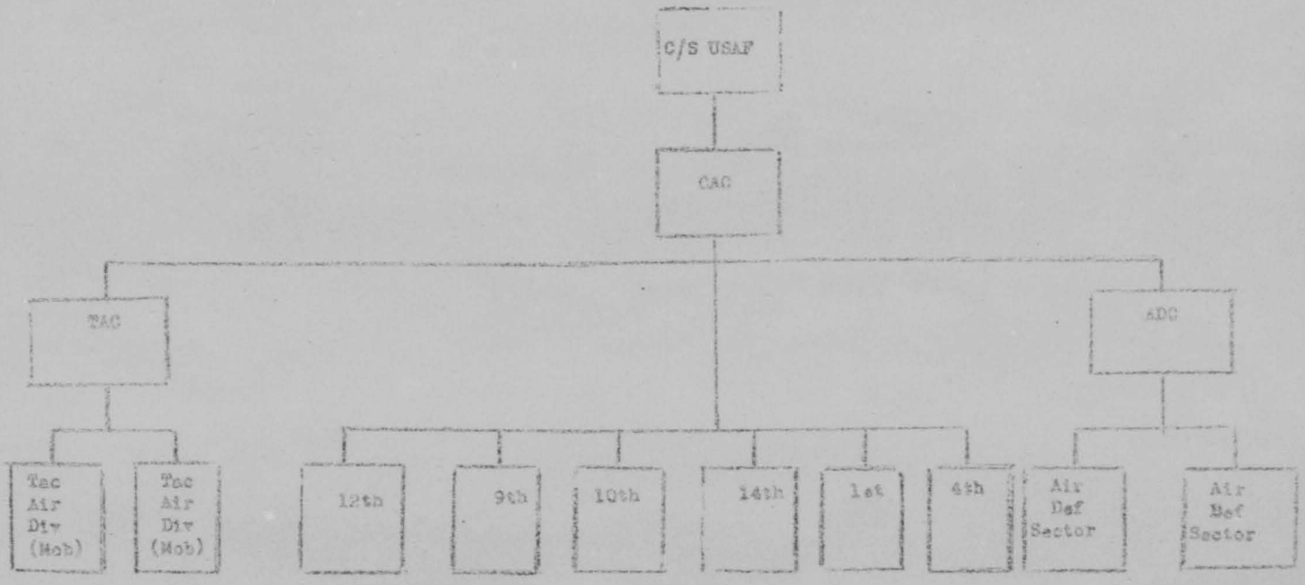
PHASE I (IMMEDIATE) ORGANIZATION FOR ZI AIR OPERATIONS AND UNIT TRAINING


C/S USAF
CAC
TAC
ADC
Tac Air Div (Mob)
Tac Air Div (Mob)
12th
9th
10th
14th
1st
4th
Air Def Sector
Air Def Sector

TAB A

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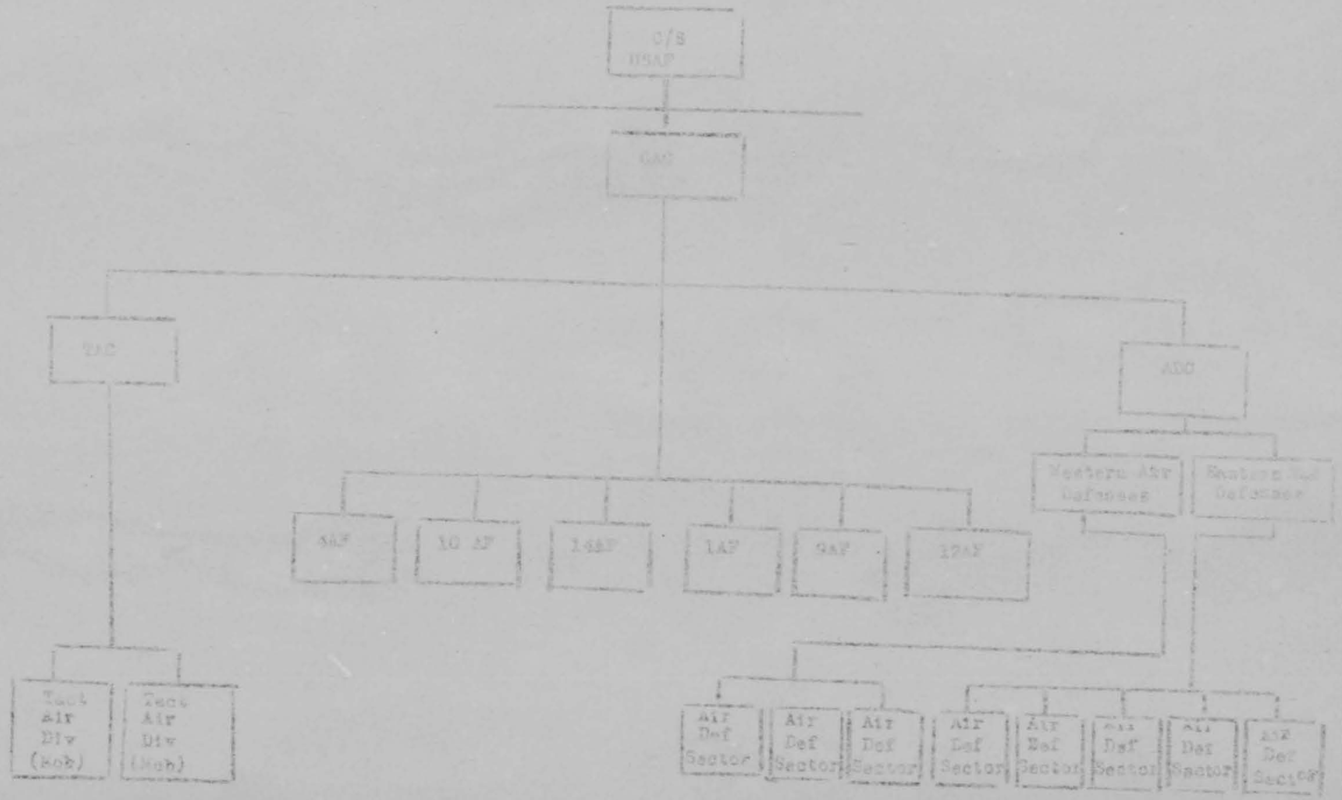
ULTIMATE ORGANIZATION FOR ZI AIR OPERATIONS AND UNIT TRAINING


C/S
USAF
CAC
TAC
ADC
Western Air Defenses
Eastern Air Defenses
4AF
10 AF
14AF
1AF
9AF
12AF
Tact Air Div (Mob)
Tact Air Div (Mob)
Air Def Sector
Air Def Sector
Air Def Sector
Air Def Sector
Air Def Sector
Air Def Sector
Air Def Sector
Air Def Sector

TAB 1

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CORRECTED COPY

AF REGULATION)
NO. 20-)*

DEPARTMENT OF THE AIR FORCE
HQ UNITED STATES AIR FORCE
WASHINGTON, D. C.

ORGANIZATION

Continental Air Command

(AF Reg 20-19, 10 Oct 48; AF Reg 20-19A, 19 Dec 47; AF Reg 20-13, 19 Dec 47; and AF Reg 20-13A, 3 Feb 48, are hereby rescinded.)

1. Missions. The Continental Air Command is organized primarily to:

a. Provide for the active air defense of the United States, and operational training therefor.

b. Provide for U. S. Air Force cooperation with ground and amphibious forces in the United States, and operational training therefor.

c. Organize, administer, equip, train, and prepare for combat in accordance with directives, policies, and schedules issued by Headquarters, USAF, such units of the USAF as may be designated, assigned, or attached to the Continental Air Command.

d. Discharge, within the continental United States, the field responsibilities of the Chief of Staff, USAF, with respect to:

(1) The Air National Guard and the Air National Guard of the U. S.

(2) Such units and individuals of the U. S. Air Force Reserve as may be assigned to the Continental Air Command and all unassigned individuals of the U. S. Air Force Reserve.

(3) The Air Reserve Officers Training Corps.

(4) The Air Scouts of the Boy Scouts of America.

e. Prepare for mobilization, mobilize, and thereafter dispose such units and individuals of the U. S. Air Force Reserve as may be designated,

*This Regulation has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.

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f. Take the necessary action in connection with training, to supervise preparation for mobilization of the Air National Guard of the U. S.; and to mobilize and thereafter dispose units and individuals of the Air National Guard of the U. S. in the Federal Service, in accordance with directive, policies, and plans issued by Headquarters, USAF.

3. Organization. In order to carry out its missions, the Continental Air Command is provided a Headquarters (Continental Air Command), and numbered Air Forces, to which all units, installations and facilities of the Continental Air Command will be assigned, an Air Defense Command, and a Tactical Air Command. The Headquarters, Air Defense Command, and the Headquarters, Tactical Air Command, will act as operational Command headquarters for their respective tactical functions, within the framework of the Continental Air Command, and will also act as the staff of the Commanding General, Continental Air Command, in respect to their respective tactical functions. The numbered Air Forces will discharge such administrative, training, and logistic support functions as may be directed for units of the National Guard of the U. S. and Organized Reserve, and for such USAF units as may be assigned or attached.

4. Responsibilities

a. The Commanding General, Continental Air Command, will exercise command jurisdiction over all units assigned or attached to the Continental Air Command. He will be directly responsible to the Chief of Staff, USAF, for the following specific functions:

(1) Active air defense of the United States, which he will exercise through the Commanding General, Air Defense Command, whose responsibilities are set forth in paragraph 4b, which follows.

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(7) Air Force cooperation with ground and/or amphibious forces in the continental United States, which he will exercise through the Commanding General, Tactical Air Command, whose responsibilities are set forth in paragraph 3c, which follows.

(8) Discharge of the field responsibilities of the Chief of Staff, USAF, within the continental United States, with respect to the following functions, which he will execute through numbered Air Forces assigned:

(a) Supervising, training, and determining qualifications for Federal recognition of all units and individuals of the Air National Guard of the United States.

(b) Activating, organizing, maintaining, administering, and training such units and individuals of the U. S. Air Force Reserve as may be assigned or attached to the Continental Air Command, and of such units and individuals of the Organized Reserve Corps as may be assigned or attached to the USAF for these purposes and are further assigned or attached to the Continental Air Command, and the administration of unassigned personnel of the U. S. Air Force Reserve.

(c) Activating, organizing, maintaining, administering, and training units and individuals of the Air Reserve Officers' Training Corps.

(d) Conducting U. S. Air Force participation in the Air Scout Program.

(e) Acting as the field agency of the USAF for the mobilisation, preparation for movement, and disposition of all units of the Air National Guard of the U. S. in the Federal Service, and the U. S. Air Force Reserve.

(f) Preparing for overseas movement such units as may be directed, including those of the Air National Guard of the U. S. in the Federal Service.

(g) Formulating plans for, and coordinating the efforts of all USAF commands and activities in domestic emergencies (including disaster relief), and direct USAF operations in connection with such emergencies. (Each USAF unit, irrespective of major air command to which assigned, will participate in the planning for and conduct of emergency and disaster relief operations, at the request of a Continental Air Command Air Force Commander.)

(h) Constituting a single USAF contact for providing information and liaison with Army commanders, Naval district commandants, sea frontier commanders, and heads of civilian agencies. (This will not be construed as prohibiting contacts required by the specific functional responsibilities of other United States Air Force major commands.)

(3) Conducting such continental administrative functions as may be directed from time to time. These include:

1. General USAF liaison and other prescribed functions at water ports of embarkation.
2. Custody and disposition of USAF prisoners apprehended and turned over to the USAF by other authorities.
3. Processing of personnel enroute to and returning from overseas through water ports of embarkation.
4. Operation of USAF Special Aviation Cadet and Officer Candidate School Procurement Program.
5. Procurement and maintenance of records of former members of the Army Air Forces and the USAF, as directed.
6. Administration of the USAF extension course program.
7. Administration of the USAF program for return of World War II dead.
8. Providing USAF representation in local Armed Forces Disciplinary Control Boards in each of the six Army commands.

(4) Determination of the proper apportionment of the effort of assigned or attached units between the several missions of the Command.

(5) Timely allocations of a proper portion of the effort of units assigned or attached, or otherwise made available, to the Continental Air Command, to the operational command of the Air Defense Command and the Tactical Air Command, respectively.

(6) Peacetime deployment of elements of the active air defense system of the United States in preparation for the conduct of immediate active air defense against surprise attack.

(7) Coordination of the activities of the Air Defense Command, Tactical Air Command, and numbered Air Forces for the most effective accomplishment of the missions assigned the Continental Air Command.

(8) Performing such other functions as may be directed by the Chief of Staff, USAF, from time to time.

b. The Commanding General, Air Defense Command, is responsible for the following specific functions:

(1) Continuous planning in preparation for the conduct of active air defense of the United States.

(2) Conducting the active air defense of the continental United States with the means made available by the Commanding General, Continental Air Command.

(3) Preparing for the employment of such units of the Army and Navy as may be made available for direct defense of the United States against air attack.

(4) Preparing and conducting USAF operational participation in civilian defense in connection with air attack of the continental United States.

(5) Recommending policies, plans, doctrine, organization, systems, material, tactics, techniques, and procedures applicable to the air defense of the United States.

(6) Conducting systematic training of available forces in active air defense.

(7) Carrying out joint air defense training and joint air defense exercises and maneuvers, in accordance with approved plans, by utilization of such units of other elements of the National Military Establishment as may be made available.

(8) Recommending to the Commanding General, Continental Air Command, the allocation and deployment of available force in preparation for, and the conduct of, the active air defense of the United States.

(9) Establishing and maintaining liaison with Naval Sea Frontier commanders in joint matters pertaining to the air defense of the continental United States.

c. The Commanding General, Tactical Air Command, is responsible for the following specific functions:

(1) Continuous planning in preparation for the conduct of air operations in cooperation with ground and/or amphibious forces in defense of the United States.

(2) Conducting tactical air operations in the continental United States with the means made available by the Commanding General, Continental Air Command.

(3) Being prepared to provide cadres of personnel experienced in tactical air support type operations, for the timely formation of Tactical Air Command and/or Air Force headquarters for overseas deployment, as required.

(4) Maintaining continuous liaison with the Army Field Forces for the development of USAF policies, plans, doctrine, organization, systems, materiel, tactics, techniques, and procedures applicable to air operations in cooperation with ground and/or amphibious forces, and submitting recommendations with respect to these matters.

(5) Cooperating with Army Ground Forces in airborne and airlift training of Army troops, with the means made available by the Commanding General, Continental Air Command.

(6) Conducting systematic training of available forces in tactical air operations.

(7) Carrying out joint training in tactical air operations and joint tactical air exercises and maneuvers, in accordance with approved plans, by utilization of such units of other elements of the National Military Establishment as may be made available.

(8) Recommending to the Commanding General, Continental Air Command, the allocation and deployment of available force in preparation for, and the conduct of, air operations in cooperation with ground and amphibious forces.

d. Each Commanding General of a numbered Air Force assigned to the Continental Air Command will perform such command, administrative, training, and logistic support functions, within his assigned geographic area, as may be directed from time to time by the Commanding General, Continental Air Command. Initially, these responsibilities will include the functions enumerated in paragraph 3a (3), supra, as well as the logistic support of the Headquarters, Continental Air Command, and elements of the Air Defense Command and Tactical Air Command not assigned to a numbered Air Force.

4. Direct Communication. Direct communication between the Commanding General, Continental Air Command, and the commanding generals of other major air commands on matters pertaining to the mission of the Continental Air Command is authorized. The Commanding General, Continental Air Command may delegate this authority to the Commanding General, Air Defense Command, the Commanding General, Tactical Air Command, or the Commanding General's of numbered Air Forces assigned to Continental Air Command, as he desires.

5. Conflicting Directives. All previous directives, regulations, and orders in conflict with this Regulation are superseded.

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16 Nov 1949

DIVISION
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Conac Regulation #21-1, Command and Staff Organization
16 Nov 1949

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ConAC REGULATION)
21-1)

HEADQUARTERS CONTINENTAL AIR COMMAND
Mitchel Air Force Base, N.Y., 16 November 1949

CONTINENTAL AIR COMMAND

Command and Staff Organization

	Paragraph
Introduction.	1
Command	2
Purposes, Functions and Doctrine.	3
Duties and Interrelationships of Staff Officers .	4
Staff Organization.	5
Commanding Officer, Hq & Hq Sq, ConAC	6
Staff Procedure	7

1. Introduction. a. The purpose of this Regulation is to establish a common basic staff structure and to clarify doctrine in regard to command and staff organization throughout the Continental Air Command and to increase the efficiency of the command through uniformity of staff organization.

b. The staff structure herein is based on that in effect in Headquarters United States Air Force. The doctrine derives from the large body of Air Force and Army Regulations, directives, and command and staff procedures developed in recent years. The differences and occasional contradictions found in these sources of doctrine require compromise in matters of staff organization and terminology if approximate uniformity is to be achieved.

c. Continental Air Command air force commanders will conform to the doctrines and principles expressed herein; and will organize their headquarters using the same basic staff structure and the titles and duties of the deputies and directors, except that the office of Deputy for Tactical Air Operations will exist only in the Continental Air Command Headquarters. Subdivision of directorates into divisions, branches, sections, and units is left to the discretion of air force commanders.

2. Command. a. Command is the authority which an individual in the military service lawfully exercises by virtue of grade or assignment. Command is the right and power to decide. A commander is responsible, within the scope of his authority, for all that his subordinates do or fail to do. Responsibility and authority are commensurate. Command gives great power to a commander, especially in situations of unusual danger or responsibility. This power must be exercised with wisdom and justice. Commanders must not injure their subordinates by tyrannical or capricious conduct. Command in a military enterprise is inseparably interwoven with its mission, operations, and organization.

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*This Regulation supersedes ConAC Regulation 21-1, 7 February 1949, as amended.

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b. The exercise of command is a complicated function and process. In present-day military organization it entails the correlation and coordination of many and various individuals, units, services, operations, and activities. The interests and operations involved are at time divergent or conflicting. Command of air forces, and even of combat wings, groups, and bases, demands of the commander and staff a wide and detailed knowledge of air operations and of Air Force, Army and Navy administrative and technical services, personnel and materiel; the consideration of innumerable factors; the exercise of sound judgment; and the strength of character and will to carry difficult decisions into effect.

3. Purposes, Functions and Doctrine.

a. The purposes of a staff are:

(1) To assist the commander in carrying out his responsibilities of command.

(2) To assist the combat and service units to carry out their tasks.

b. The general functions of a military staff include:

(1) Collection, compilation, analysis and interpretation of information and data of all kinds.

(2) Formulation of policies for the commander's approval which will serve as guidance for the organization as a whole.

(3) Preparation of detailed and alternate plans for the accomplishment of both broad missions and minor tasks.

(4) Interpretation of the commander's basic decisions and policies into plans, directives, and orders.

(5) Making incidental or subordinate decisions based on policies, plans, and decisions of the commander, when authorized by the commander to make decisions in his name.

(6) Transmission of instructions, orders, and timely information to subordinate and other units and services.

(7) Supervision and evaluation of effectiveness in the execution of policies, plans, and orders by the command as a whole and by subordinate units.

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(8) Furnishing technical advice to the commander.

(9) Coordination and reconciliation of divergent or conflicting requirements, interests, or actions by services and subordinate units.

(10) Continuing contracts with staffs of subordinate units, coordinate and higher commands, and nonmilitary authorities and activities.

(11) Maintenance of records and preparation of reports.

(12) Development of standing operating procedures.

c. The work of an air organization is done chiefly by its combat and service elements. The staff mission should be limited to coordinating and controlling the operations of the combat and service elements and directing them toward a common goal.

d. Continental Air Command staffs are organized in accordance with the same basic theories and principles as are the staffs of other Air Force or Army units. Staff organization must be based on the entire organic structure of the unit to which the staff belongs. The difference between the organization and operations of dissimilar military forces, as regards both combat and service elements, accounts for the apparent differences in their staffs. Fundamentally these staffs are quite similar. The salient features of the Army staff structure from which the Air Force staffs have developed are:

(1) A general staff group. The comparable group in the Continental Air Command, as prescribed herein, includes the four Deputies (Personnel, Operations, Materiel, and Tactical Air Operations), the Comptroller, the Inspector General, the Air Surgeon, the Air Adjutant General, and the Public Information Officer. Within the staff structure, the administrative function of each is termed an "Office."

(2) A special staff group. The corresponding group in the Continental Air Command includes the directors and other staff officers under the immediate supervision of the deputies. (See paragraph 5, below.)

(3) Assistants and Aides-de-Camp. Perform duties as their respective commanders may direct.

e. The Continental Air Command includes three operational elements: for air defense, the Eastern and Western Air Defense Forces; and for tactical air operations, the Tactical Air Command. The Continental Air Command Deputy for Tactical Air Operations is the Commanding General, Tactical Air Command. These duties as staff officer and as commander do not conflict; they are separate and distinct. (See Air Force Regulation 23-1.)

4. Duties and Interrelationships of Staff Officers. More specifically, the duties and interrelationships of the different staff officers include:

a. Deputies.

(1) The nine staff offices in the "Deputy Group" are so organized as to supervise collectively all of the activities, operations and problems of command, though each office is concerned primarily with a different broad aspect thereof. The "Deputy Group" contributes largely to the formulation of the Commanding General's basic policies and decisions, and is chiefly responsible for supervising their execution. In view of the wide responsibility and authority of each deputy acting for the Commanding General, it is imperative that they agree on, and insure thorough coordination of, all directives and orders issued by them pursuant to the Commanding General's basic policies, plans, and decisions. This applies in administrative and service matters, as well as in combat and training matters.

(2) The deputies have two distinct functions:

(a) The deputies formulate basic policies and plans for approval of the commander, and after approval issue directives and instructions in furtherance thereof.

(b) Each deputy, in his field of responsibility, supervises and coordinates the execution of those policies and plans. Success and ease in the exercise of this latter function depends on the professional competence and personality of both the deputies and the directors. The deputies are responsible for the initiation and supervision of action required for the proper discharge of their responsibilities and for the policies and administrative coordination of the directors. They effect their coordination through observation, office visits, field visits, and informal discussion. Their tasks become easier as all gain experience and indoctrination in the various specialized activities of the command and in the operation of staff organization. (See paragraph 4b(2), below.)

(3) The deputies exchange freely and as a matter of routine all information of common interest. The general scope of staff responsibility of each office of the deputy group is shown in paragraph 5.

b. Directors.

(1) The directors, individually and collectively, direct the execution of the plans and programs of the command by the subordinate units and services. The directors develop detailed plans and programs, formulate directives and orders to subordinate units and services for approval by the deputies, and follow up to insure effective execution.

(2) The directorates are grouped under the deputies in accordance with their primary duties. Direct communication is encouraged between all deputies and directors regardless of grouping.

(3) The 47th Article of War requires that the commanding general or other convening authority will at all times communicate directly with his staff judge advocate in matters relating to the administration of military justice, including the reference of charges for trial and subsequent review. The Article further provides that the staff judge advocate of any command is authorized to communicate directly with the staff judge advocate of a superior or subordinate command or with the Judge Advocate General, United States Air Force. No agency or indirect channel may be interposed between the commanding general of a command and the staff judge advocate of the command, nor is the staff judge advocate required to follow command channels in communicating with the persons mentioned above. The commanding general or convening authority may not delegate his responsibility in matters of military justice to a subordinate.

(4) Under the provisions of Air Force Regulation 165-3, the inclusion of the air chaplain within the Office of Deputy Chief of Staff, Personnel, or its equivalent, will not be interpreted as authorization for that deputy to determine independently the policies pertaining to chaplain administration without proper coordination with the air chaplain, nor does it impose any limitation upon the air chaplain as consultant to the commanding general/commanding officer on all matters pertaining to the duties and functions of chaplains within the command. Professional communications

between Air Force chaplains may be exchanged freely without recourse to military channels. Such communications as well as any correspondence which is obviously intended for a chaplain will be privileged against disclosure or military inspection.

(5) Although each directorate is responsible to only one of the deputies, the directors communicate and carry out their routine staff duties directly with each other and with all deputies in accordance with all their various interests and responsibilities. This calls for team work of the highest order and for breadth of view in order that each director's actions shall be reconciled with those of other directors whose specialized skills and responsibilities in their respective functions are comparable to his own. It calls for complete coordination of detailed plans, programs, directives, and orders, in order to prevent the demoralizing effect on subordinate units and services of ambiguous, conflicting, or contradictory instructions from higher authority. It requires good faith and friendly collaboration between all the directors under the monitorship of the deputies. Directors maintain direct contact with their counterparts in higher, lower, and coordinate headquarters on technical matters peculiar to their responsibilities. Each director has access to the Commanding General or Vice Commander and may be called on frequently by them for specialized, detailed or expert opinion; however, basic conflicts or disagreements among directors will first be submitted to the deputy or deputies concerned for decision or resolution. It is an essential feature of this concept of staff organization that deputies will provide reconciliation and make decisions in matters pertaining to the directorates.

(6) The general functions of the directorates in the headquarters of the Continental Air Command are shown in paragraph 5, below. The subdivision of directorates into divisions, branches and sections varies with changes in the nature and importance of the activities of the field commands.

c. The confidant and principal assistant to the Commanding General is the Vice Commander. He also supervises the entire staff. His responsibilities and labors are not decreased by reason of the increased initiative and authority characteristic of the deputies. He has the responsibility of concentrating the thoughts and energies of many individuals upon the achievement of common basic objectives.

d. As subordinate units become more specialized and as staffs decrease in size, from high to lower echelons of organization, it becomes necessary to assign two or more functions of a higher staff to a single subdivision of a lower headquarters; therefore, the offices of Vice Commander, the deputy group, and the directorates are prescribed only for the headquarters of the Continental Air Command air forces. The directorates of the latter will be organized into divisions, branches and units as the air force commanders may direct. The basic staff structure of subordinate combat units, bases, and other organizations is continually under study. No change in present staff organization of those organizations is prescribed herein. Tables of organization and other existing directives pertaining to table-of-organization units and to combat wings remain in effect until changes are directed.

e. Organization of Eastern Air Defense Force and Western Air Defense Force will be as prescribed in a separate directive.

f. The organizations of a military enterprise is like a living organism. It grows, changes, and adapts itself to its environment and tasks. Changes may be expected in the details of the organization of units and staffs of the Continental Air Command. Progress will be faster and smoother when basic concepts and methods of staff operations and organization are standardized.

5. Staff Organization. The basic staff organization, functions, and titles of deputies, directors, and chiefs of offices, with abbreviations therefor, are shown below:

a. Commanding General (CG)

Responsible for carrying out the missions assigned the Continental Air Command by the Chief of Staff, United States Air Force.

b. Vice Commander (VC)

Develops policy of the organization as a whole and supervises and directs the activities of entire staff. Acts for the Commanding General on delegated matters.

(1) Assistant for Reserve Forces (ARF)

Acts as consultant to the Commanding General and staff and as executive on matters pertaining to USAF Reserve Forces. Monitors, evaluates, and advises on the implementation of approved plans and policies pertaining to the USAF Reserve Forces. Is not an action agency. Each office on the staff is responsible for providing for the requirements of the USAF Reserve Forces programs, in those matters of its primary interest, to the same extent as for the requirements of the Regular USAF.

(2) Assistant to the Vice Commander (AVC)

Is administrative executive for the Vice Commander; supervises the carrying out of projects as directed; supervises the activities of the Manpower Evaluation Board; acts as Secretary of the Staff; is Headquarters Continental Air Command Space Control Officer; acts for the Vice Commander on matters as directed.

(3) The Manpower Evaluation Board (MEB)

Performs manpower utilization surveys to determine the adequacy of manpower authorizations, as to both numbers and job descriptions. Evaluates effectiveness of personnel presently assigned, as to both numbers and capabilities. In connection with manpower utilization, surveys, reviews and evaluates organizational structure and allocation of functions thereunder to determine organizational effectiveness to accomplish assigned missions. Reviews mechanics established for obtaining coordination within headquarters and procedures to insure compliance with announced policies and published directives. Determines need for and evaluates procedures to accomplish the establishing of projects and the control and evaluation thereof. Reviews administrative methods, procedures, and standing operating procedures to determine effectiveness. Makes recommendations which will lead toward reduction in personnel requirements or improvements in accomplishments.

c. Air Adjutant General (AAG)

Assistant Air Adjutant General (AAAG)

Acts as administrative officer for the headquarters. Reviews correspondence and messages for staff coordination and conformity with command policy. Routes and maintains suspense on correspondence and messages. Supervises postal activities; office of record and central files; reference library; distribution center for publications; reproduction and forms control; records administration program including USAF Reserve records; maintenance of headquarters policy file; command and unit histories; custody of classified material; top secret control officer.

(1) Director of Publications (Dir Pub)

Advises and assists the Air Adjutant General on all matters of policy and procedures pertaining to publications, reproduction, and the control of printing.

(a) Reproduction Division

Reproduces all command blank forms and publications. Compiles requirements reports and prepares all command publications for mailing.

(b) Editorial Division

Prepares and issues general and special orders. Edits, coordinates, and prepares for reproduction all command standard administrative publications. Continuously reviews command publications.

(c) Library Division

Maintains reference material for Continental Air Command staff. Provides research services. Requisitions reference material.

(2) Director of Administration (Dir Admin)

Advises and assists the Air Adjutant General on all matters of policy and procedures pertaining to military correspondence, mail and records services, control of classified material, and records administration.

(a) Classified Division

Receives, processes, maintains suspense, and dispatches all classified material. Accounts for registered documents. Maintains special files on Top Secret and Atomic Energy material. Provides classified courier service.

(b) Mail and Records Division

Receives, processes, maintains suspense, and dispatches all unclassified material. Operates headquarters messenger service. Maintains central files. Is responsible for command and headquarters records administration program.

(c) Correspondence Division

Receives and authenticates correspondence and messages. Prepares correspondence for mailing and filing. Formulates policy pertaining to preparation of correspondence and messages.

(3) Director of Historical Services (Dir Hist)

Prepares annual command history and annual report of command activities; renders consultative and research services on history of tactical aviation and air defense and on historical matters pertaining to the Continental Air Command and its component organizations; administers and monitors field historical program; maintains historical archives of the command; prepares special historical monographs and operational studies.

d. Air Surgeon (A Surg)

Plans, administers, and supervises the command medical service including the dental service and veterinary program. Determines requirements for and recommends reassignments of medical service personnel. Supervises duties and training of medical service personnel. Reviews physical examinations for conformity to standards and qualifies same for general service and flying duty, granting waivers when required and justified. Formulates medical administrative procedures; compiles and consolidates medical statistics. Evaluates types of medical installations and recommends to the Surgeon General, USAF, increases or decreases in bed status based on military personnel serviced. Monitors aviation medicine and veterinary medicine programs. Represents the command as advisor on Character Guidance Council. Sits as a member of the Command Central Flying Evaluation Board.

(1) Administrative Division

Advises the Commanding General, Continental Air Command, and Surgeon General, USAF, on all administrative matters. Determines the professional and technical standards for and monitors the procurement, classification, assignment and separation of all professional and medical technical personnel. Advises and, through liaison, implements the USAF Reserve program for personnel in the medical profession and allied specialties. Receives, processes, and evaluates sick and wounded report cards, statistical health reports; and edits, corrects, and consolidates medical records and reports.

(2) Dental Division

Advises the Commanding General, Continental Air Command, and The Surgeon General, USAF, concerning dental matters of the command. Analyzes, corrects, and evaluates dental professional reports. Determines the requirements of the Continental Air Command for dental service and dental personnel.

(3) Professional Services Division

Supervises implementation of policies relating to the professional care of the sick and injured in command medical installations. Edits and prepares for publication all command medical bulletins. Reviews flying evaluation board reports and disposition boards on flying personnel. Processes all physical examinations.

(4) Aviation Medicine Division

Supervises policies for and provides medical and technical instruction on the development and implementation of the physiological training program for all rated personnel. Monitors program for utilization by flying personnel of protective equipment, protective clothing, etc. Supervises activities to maintain the highest possible standards of health, safety, and proficiency of flying personnel.

(5) Preventive Medicine Division

Monitors a program to minimize the incidence of preventable diseases, including acute communicable diseases and venereal diseases. Supervises a program relative to sanitation; advises on insect and rodent control, field sanitation, etc. Plans and supervises the mess sanitation program and in addition monitors a program in food hygiene matters, nutritional standards, and food inspection. Conducts all matters pertaining to the veterinary program.

e. Inspector General (IG)

Assistant to the Inspector General (AIG)

Informs the Commanding General as to the state of the command in respect to efficient and economical performance of the mission thereof and as to the maintenance of discipline and security. Monitors completed action on correspondence and inspection reports from the Air Inspector and Air Provost Marshal which reflect the status of the command. Conducts special investigations as required.

(1) Air Inspector (AI)

Inquires into and reports upon all matters affecting the tactical, technical, logistical, administrative, and flying safety activities of the command and the efficiency, economy, and adequacy thereof.

(a) Tactical Inspection Division

Conducts or participates in inspections, operational readiness tests, special surveys, and investigations pertaining to operations, training, and tactical matters as directed. Reviews and processes correspondence and inspection reports on these matters and insures that adequate and appropriate action is recommended.

(b) Technical and Logistical Inspection Division

Conducts or participates in inspections, operational readiness tests, special surveys, and investigations pertaining to technical and logistical matters as directed. Reviews and processes correspondence and inspection reports on these matters and insures that adequate and appropriate action is recommended.

(c) Administrative Inspection Division

Conducts or participates in inspections, operational readiness tests, special surveys, and investigations pertaining to administrative matters as directed. Reviews and processes correspondence and inspection reports on these matters and insures that adequate and appropriate action is recommended. Investigates and processes complaints.

(d) Flying Safety Division

Establishes and maintains an aggressive flying safety program for the command. Is responsible for the supervision, direction, and coordination of all flying safety activities within the command.

(2) Air Provost Marshal (APM)

Plans, directs and supervises the activities of the Air Provost Marshal office; under the direction of the Inspector General, Continental Air Command, exercises staff supervision and inspection responsibility over matters pertaining to the enforcement of security and maintenance of military discipline; renders periodic reports to the Commanding General on the status of discipline and security within this command, and makes recommendations for corrective action.

(a) Air Police Division

Exercises staff supervision and inspection of matters pertaining to the organization, operation, and training of Air Police units to determine their effectiveness and efficiency; formulates plans and policies for maintaining law and order, enforcement of rules and regulations, and the suppression of crime, including inquiries into commission of crimes and immoral practices; prepares for the effective and proper functioning of the USAF Absentee Apprehension Program; evaluates the quality of discipline, causes of failure in maintaining discipline among command personnel, and submits appropriate comments and recommendations; reviews all matters coming within the purview of the Armed Forces Disciplinary Control Boards; coordinates with civilian law enforcement agencies and with other services of the military establishment on law enforcement and disciplinary matters. Prepares directives pertaining to the confinement and rehabilitation of prisoners; clarifies and interprets existing policies and directives pertaining to the corrections activity; disseminates instructions received from higher headquarters to subordinate commands; initiates and prepares staff policies and procedures for all correction matters and the conduct of rehabilitation and training of prisoners; reviews existing rehabilitation programs to insure adequacy of operations; inspects confinement facilities to insure compliance with directives pertaining to confinement and rehabilitation of prisoners and, when warranted, makes recommendations for changes and improvement in the operation and administration of guardhouses and stockades.

(b) Security Division

Establishes such enforcement procedures as are necessary to safeguard and maintain adequate security of classified military information, material, equipment, and projects under the control and jurisdiction of the command; supervises the operation of a personnel identification system; participates in the establishment and operation of a system for determining the loyalty and character fitness of military and civilian personnel within the command; enforces special measures for the security of Atomic Energy information; supervises a training and education program for the safeguarding of military information; exercises staff supervision over installations and activities coming within the jurisdiction of the command as may be necessary to insure compliance with all applicable security policies and regulations.

f. Public Information Officer (PIO)

Assistant Public Information Officer (APIO)

Advises and submits recommendations to the Commanding General concerning public relations matters and the effect on public opinion of the operations and activities of the Continental Air Command. Maintains direct liaison with public relations representatives of higher authority, appropriate officers and officials of other components of the Armed Forces, and officials of other governmental agencies in matters dealing with public relations pertinent to the Continental Air Command. Promulgates public relations plans and policies of Headquarters Continental Air Command, and Headquarters USAF, to lower echelons for promoting and assisting in public relations activities. Acts as Foreign Liaison Officer and Protocol Officer for the command in direct liaison with Foreign Liaison Branch, Directorate of Intelligence, USAF.

(1) Media Division

Prepares and publishes informational material for the guidance of public information officers of subordinate echelons on matters relative to policy, security, future operations, and basic operational statistics. Obtains and compiles basic material for publication and maintains records covering such material and statistics. Supervises the gathering and processing of information for dissemination by appropriate media, including newspapers, wire services, feature services, photo services, radio shows, radio networks, magazines, and industrial or institutional house organs. Maintains direct contact (subject to higher echelon approval) with all appropriate national media. Prepares drafts of speeches for special occasions.

(2) Field Liaison Division

Maintains liaison with field units and personnel. Processes inquiries and requests from public information officers of subordinate echelons. Formulates plans and policies for field public information officers. Prepares the Public Information Letter.

(3) Special Events and Administrative Division

Arranges programs of speeches, open houses, tours, displays, exhibits, demonstrations, and similar activities. Supervises administrative procedures and practices of the Public Information Office. Assists in staging award ceremonies, arranging for proper media coverage, and providing for care of persons decorated and their families. Provides the Commanding General, Continental Air Command, with a Daily Clip Sheet giving information and media reaction to new developments; maintains complete subject files of pertinent news clippings.

g. Comptroller (Compr)

Assistant Comptroller (A Compr)

Assembles, evaluates, and presents to the Commanding General, Continental Air Command, management information on all operations, programs, and projected plans. Provides the Commanding General and the chiefs of major staff sections with necessary data to support the accomplishment of command objectives in the most efficient and economical manner within available resources. Evaluates the relationship of accomplishment to command objectives, recommending such actions as are appropriate. Performs technical reporting, budgeting, and finance functions.

(1) Director of Programs and Costs (Dir Prog)

Analyzes command operations to determine if the components are consistent with each other; reflects the most efficient and economical use of resources to conform with authorized objectives. Provides special analytical services for the Commanding General and staff as required. Initiates, guides, and evaluates military management studies in the command and recommends the use of improved methods and systems developed as a result thereof. Correlates and establishes basic measurement standards for computing the requirements of command operations and budget estimates, and for the evaluation of achievement. Evaluates achievement within the command in terms of basic measurement standards. Develops, maintains, and supervises the operation of the cost systems within the command. Presents information derived from analysis in a readily accessible and usable form.

(a) Mission Progress Division

Supervises the development of program analysis activities within the command. Initiates, perfects, and establishes policies, procedures, and methods for the appraisal of command programs. Analyzes in conjunction with other staff activities the internal consistency of command program components; the availability of adequate resources; and the conformance with established objectives. Develops and maintains graphic presentations which portray the current situation against the projected plan for all major objectivesof the command programs. Conducts management studies and analyses of command activities to measure program progress in order to focus attention on undesirable trends. Develops and maintains basic measurement standards for evaluating mission or program accomplishment. Supervises and conducts the technical aspects of training within the command which may be required to accomplish the above phases of management analysis.

(b) Installation Accounting Division

Supervises the system of Cost Accounting for Management and Preservation of Real Estate Facilities within the command. Establishes procedures, methods and controls which will insure compliance by all concerned with instructions covering the Cost Accounting for Management and Preservation of Real Estate. Processes cost accounting reports, including the receipt, review, and examination of each report for correct preparation. Maintains cost information on the various aspects of real estate estimates; appraising administration and operations, developing standards, and other purposes which may require historical and factual cost data of this nature. Accomplishes audits and procedural examination of units as required by the system of Cost Accounting for Management and Preservation of Real Estate Facilities. Supervises and conducts the technical aspects of training of personnel within the command which may be required for the operation of the system of Cost Accounting for Management and Preservation of Real Estate Facilities. Analyzes the methods and procedures used in this cost accounting system and recommends improvements to the system when properly justified.

(c) Cost Analysis Division

Supervises cost analysis activities within the command. Prepares studies of operating costs which measure management ability, evaluate economy, reflect efficiency, forecast results, or develop cost standards. Prepares analyses which reflect the degree of efficient and economical management of resources as measured by their monetary cost. Prepares comparative analyses which relate operating costs to work performance, applying therein statistical methods, to develop standards of costs and performance. Supervises and conducts training of personnel in cost analysis activities. Analyzes the methods used for measuring work performance and prepares recommendations for improvements when properly justified.

(d) Cost Control Division

Supervises the USAF cost control system within the command. Establishes procedures, methods, and controls which will insure compliance by all concerned with instructions covering the USAF cost control system. Processes cost control reports including the receipt, review, and examination of each report for correct preparation. Prepares cost control reports as may be required. Maintains operating cost information in proper file as may be required for determining trends, justification of estimates, appraising administration and operations, development of standards, and other purposes requiring historical and factual cost data of this nature. Supervises and conducts the technical aspects of training within the command which may be required for the operation of the cost control system. Accomplishes field procedure examinations of units as required by the USAF cost control system. Analyzes the methods and procedures used in collecting information through the cost control system and recommends improvements when properly justified.

(2) Director of Statistical Services (Dir Stat)

Supervises the operation of the comptroller reporting system of the command and conducts such field liaison as required to insure uniform, accurate, and timely reporting. Maintains and operates the strength accounting systems for military, civilian, and USAF Reserve Forces personnel in accordance with appropriate regulations and directives. Supervises and controls the collection and submission of all approved special and recurring reports; receives and checks all such reports for mathematical accuracy, internal consistency, and adequacy. Prepares and issues technical instructions necessary to secure special and recurring reports required by the command and higher headquarters. Prepares for command staff activities and higher headquarters such special and recurring reports and studies as may be required. Operates the reports control procedure within the command. Establishes and maintains an official repository of selected statistical information for staff reference purposes. Provides a central drafting and graphic presentation service for local staff activities.

(a) Administrative Division

Requisitions, maintains, and issues all supplies, including tabulating equipment supplies, and provides for proper supply records and discipline in accordance with current directives. Establishes and maintains the proper military and civilian personnel records system on attendance and efficiency relating to the assigned military and civilian personnel. Arranges for and supervises the operation of custodial services for the machine room. Establishes and maintains the central files and distribution facilities. Arranges for and operates the mail service. Arranges for and supervises the operation of security procedures in accordance with current directives.

(b) Analysis and Presentation Division

Devises and maintains a system of graphic presentations on selected subjects as required by the staff. Conducts special statistical studies of selected types of statistical data for the use of the Commanding General and the various staff agencies of Continental Air Command. Provides drafting and graphic presentation service for Headquarters Continental Air Command.

(c) Reports Control Division

Examines for approval or disapproval proposed reports and report revisions and continually reviews reports previously approved to insure that all reports and reporting systems adhere to standards which: prevent or minimize unnecessary or duplicating reports; insure that instructions, forms, and procedures for reporting are clear and complete; insure that required reports provide data adequate for the purpose intended; insure that all necessary reporting is accomplished by the simplest means and with a minimum expenditure of effort. Maintains files of directives and related material of all reports for which the office of Statistical Services exercises reports control jurisdiction. Establishes, maintains, and operates a system for controlling all Statistical Service reports to insure adherence to established reporting schedules. Publishes and maintains a directory of recurring reports. Investigates and institutes corrective action on reports control violations.

(d) Machine Processing Division

Determines the requirements for and allocates tabulating equipment for the Statistical Services system, Continental Air Command. Maintains and operates tabulating and teletype equipment assigned to Statistical Services, Headquarters Continental Air Command. Establishes and maintains status card files on all military personnel assigned to Headquarters and Headquarters Squadron, Continental Air Command. Establishes and maintains locator card files on USAFR and USAF personnel assigned to Continental Air Command. Performs machine functions relating to special type locator files. Maintains on current basis technical manuals received from Headquarters USAF pertaining to operations of electrical accounting equipment and prepares supplemental procedures and wiring diagrams needed for command use. Prepares written procedures to supplement information on reporting and machine utilization for use of air forces.

(e) Control and Audit Division

Collects and audits all special and recurring Statistical Services reports. Audits, assembles, and issues Statistical Services reports, rosters and audit lists and related data. Conducts or supervises reporting and procedural surveys to develop standard procedures and forms for the recording and collection of basic source data necessary for reporting and processing statistical data. Interprets and implements directives and manuals from higher headquarters relating to Statistical Services reporting. Drafts directives and manuals relating to command Statistical Services reports.

(3) Director of Budget (Dir Bud)

Develops the budget estimates for Continental Air Command and prepares justifications in support thereof. Controls utilization of available financial resources in accordance with the command program and recommends current adjustments within fund limitations as required by changing conditions. Performs a continuing analysis of fund status; controls the allocation of funds and makes appropriate recommendations on requests for funds submitted by lower echelons. Advises the Commanding General and staff on legislative authority for proposed expenditures. Exercises technical supervision over all budget and fiscal functions performed under the jurisdiction of the command.

Exercises technical supervision over fund allotment accounting records and procedures utilized within the command. Prepares such special and recurring budget and fiscal type reports as are required by local staff agencies and higher echelons.

(a) Budget Requirements and Analysis Division

Utilizes estimating factors, work measurement units, standards of performance, and similar items in pricing any proposed program or operation. Develops the annual budget estimates of the command and prepares justification in support thereof. Issues call for installation annual program and fund requests with local staff agencies; prepares command annual financial plan. Assists in support of the annual budget estimates of the command before the Air Force Budget Advisory Committee. Develops and recommends necessary changes in the budget structure and fund accounts. Performs a continuing analysis of fund status within the command and each air force. Determines by analysis that fiscal accounting records reflect firm and necessary obligations and commitments. Prepares such special budget type reports as are required by local staff agencies and higher echelons. Provides special budget and fund analytical services for the Commanding General and staff as required; and presents information derived from analysis in a readily accessible and usable form.

(b) Budget Operations Division

Controls the utilization of available financial resources in accordance with the command program and recommends current adjustments within fund limitations as required by changing conditions during the current fiscal year. Controls the allocation of funds for approved operations; reviews, analyzes, and makes appropriate recommendations on requests for funds submitted by lower echelons. Advises the Commanding General and staff on legislative authority for proposed expenditures. Exercises technical supervision over the budget and fiscal operations under the jurisdiction of the command. Develops quarterly, supplemental, and special requests for current fiscal year funds for submission to higher echelons and prepares justification in support thereof. •Determines the proper funds to be charged and the sufficiency thereof in advance of the implementation of any proposed program or operation.

(c) Accounting Division

Exercises technical supervision over fund allotment accounting records and procedures utilized within the command. Prepares and issues advice of sub-allocation documents to subordinate air forces. Maintains the official appropriated fund accounting records of the command for current fiscal year and two prior fiscal years. Receives, reviews, consolidates and prepares such recurring fiscal type reports as are received by the command and are required by higher echelons. Supervises reimbursement and collection transactions to insure proper reimbursement of Air Force appropriations. Maintains necessary records and submits required related reports. Reconciles expenditures with summary of expenditures furnished by the Accounting Division, Army Finance Center. Establishes and maintains all required appropriated fund accounting records to reflect the current status of all appropriated funds made available for the operation of Headquarters Continental Air Command. Determines the proper funds to be charged and the sufficiency thereof, in advance of the incurring of obligations against funds made available for the operation of Headquarters Continental Air Command. Prepares and submits required reports on status of all funds made available for the operation of Headquarters Continental Air Command. Maintains current status of travel funds available to each "TDY Control Officer" within Continental Air Command Headquarters. Certifies as to availability of funds for civilian personnel payrolls, USAF Reserve active and inactive duty pay, travel orders, overtime pay of civilians, and local procurement of Headquarters Continental Air Command and Headquarters Eastern Air Defense Force.

(4) Director of Audits (Dir Aud)

Supervises the audits of nonappropriated funds in the command. Audits fund allotment accounting records pertaining to Air Force appropriated funds in the command.

(a) Administrative Division

Responsible for preparation of correspondence and reports of audits. Maintains workload charts, suspense follow-up on delinquent audits, correspondence register and all files.

(b) Analysis, Research and Development Division

Analyzes financial statements and reports of audit and evaluates results of analyses. Develops accounting procedures for nonappropriated funds. Develops plans and programs for conducting analyses and audit of accounting records and reports. Performs field trips to audit and analyze accounting records and reports pertaining to appropriated fund suballocations, allotments, and obligations.

(c) Review and Audit Division

Reviews reports of audit of nonappropriated funds and statements of corrective action taken on audit reports. Reviews for final action proceedings of boards of officers pertaining to nonappropriated funds.

(5) Director of Finance (Dir Fin)

Advises the Commanding General and staff on matters pertaining to the receipt and disbursement of funds and the accounting incident thereto. Exercises the technical supervision and administration of the disbursement, collection, and accounting for all appropriated funds. Reviews reports of surveys and reports of boards of officers in connection with property or disbursing matters originating within the command and makes recommendations as appropriate to the scope of command authority. Makes recommendations in connection with requests for waiver of property accountability.

(a) Administrative Division

Exercises general supervision over civilian and enlisted personnel assigned to the directorate for duty. Prepares and/or reviews all recurring and nonrecurring reports required of, or received in the directorate. Is responsible for the proper administrative processing of correspondence.

(b) Receipts and Disbursements Division

Exercises the technical supervision and administration of disbursement, collection and accounting for all appropriated funds. Processes for all command disbursing officers applications for assignment of disbursing symbol numbers, appointment of deputies and cashiers, and all requests for official surety bonds. Reviews and makes recommendations in connection with unpaid claims of vendors for nonpersonnel services furnished; claims for travel allowances; and remission of indebtedness submitted by enlisted personnel.

(c) Property Review and Clearance Division

Reviews reports of surveys and reports of boards of officers in connection with property accounts originating within the command, and makes recommendations as appropriate to the scope of command authority. Makes recommendations in connection with requests for waiver of property accountability. Initiates corrective action on the deficiencies reported in audits performed by regional offices of the auditor general.

h. Deputy for Personnel (DP)

Assistant Deputy for Personnel (ADP)

Develops plans, policies and administrative arrangements in respect to personnel procurement, processing, distribution, classification, separation, and management; maintains policy direction and administrative coordination of legal, and religious affairs; administers ground safety; is responsible for general administration not otherwise assigned.

Administrative Division

Receives, routes, and dispatches correspondence and messages including classified documents. Reviews correspondence prior to dispatch to insure proper preparation in compliance with existing directives. Procures and issues office supplies and equipment; maintains reference file of numbered publications, Security Alert Plan, and control records of TDY funds allocated DP; furnishes stenographic assistance to ADP when called for and performs any other administrative tasks not elsewhere assigned.

Ground Safety Division

Maintains and provides safety engineering consultation service; institutes appropriate corrective action in event of upward ground accident trends, unsatisfactory ground accident frequencies, hazardous conditions, or inadequate ground safety programs; recommends plans, policies and procedures for all ground safety activities within the command; procures and distributes posters, films, technical data and other safety educational and promotional materials; assembles, analyzes, summarizes and disseminates data concerning the ground accident experience and costs of subordinate commands and installations and prepares summaries of ground accident experience and reports of progress of ground safety activities required by higher authority.

(1) Air Chaplain (ACH)

Initiates action, reviews coordination, development, supervision and execution of all matters, policies, plans, objectives, and procedures as applies to chaplains and chaplain activities pertinent to the Air Force Chaplain Program. Advisor to the Commanding General on all matters pertaining to the religious life, morale, morals, and character guidance within the command and moral and spiritual welfare of Air Force personnel and dependents. Supervises casualty assistance, USAF Reserve chaplains' activities, liaison with civil religious and social service activities, humanitarian services, and ecclesiastical supply and equipment.

(a) Administrative Division

Implements Air Force Chaplain Program; recommends assignment and reassignment of air chaplains and welfare specialists; provides technical information; supervises Jewish activities; advises on personnel requirements for air chaplains and welfare specialists; maintains liaison with civil religious and social service activities.

(b) Professional Service Division

Supervises preaching missions, character guidance, prisoner rehabilitation, historical and statistical activities, audio-visual aids, humanitarian services, ecclesiastical supplies and equipment, air chaplain professional reports, Catholic activities, and casualty assistance.

(c) Projects and Requirements Division

Supervises training of air chaplains, USAF Reserve chaplains, and welfare specialists; monitors auxiliary chaplains, public information and cultural activities; supervises Protestant activities.

(2) Air Judge Advocate (AJA)

Is responsible for administration of military justice and legal matters; recommends or supervises selection, assignment, training, and indoctrination of professional legal personnel on active duty and in Judge Advocate General's Department Reserve.

(a) Administrative Division

Makes initial distribution of all incoming papers and material, maintains law library, journals, and publications; processes records of summary, special, and general courts-martial and courts of inquiry; maintains office files and prepares recurring reports; maintains a roster of Regular USAF and USAF Reserve officers who are qualified judge advocates.

(b) Military Justice Division

Renders opinions on jurisdictional, substantive, and procedural questions arising from the operations of courts-martial; prepares admonitions and reprimands; maintains liaison with subordinate commands with respect to matters affecting the exercise of disciplinary control.

(c) Military Affairs Division

Interprets laws, regulations, and policies affecting the operations and activities of the Continental Air Command; renders legal opinions; advises with regard to proposed new regulations; considers matters pertaining to taxation, social security and bonding; reviews proceedings of boards of officers; litigates in civilian courts when directed to do so by the Department of the Air Force.

(d) Legal Assistance Division

Renders legal advice and assistance to military personnel and their dependents concerning legal problems; maintains liaison with local bar organizations and legal aid societies; maintains supervision over the legal assistance program in the Continental Air Command.

(e) Reserve Division

Administers Air Force Regulation 45-24, establishing the Judge Advocate General's Department Reserve in the United States Air Force Reserve; reviews professional qualifications of all applicants, reviews requests for assignment and recommends orders of assignment in the Judge Advocate General's Department Reserve of the USAF Reserve to eligible applicants; considers requests for waivers for USAF Reserve appointments and AFROTC.

(f) Training Division

Supervises the training and indoctrination of Regular USAF and USAF Reserve officers attached prior to permanent station assignment; supervises training of mobilization assignees; prepares training schedules, and assigns training material; supervises the procurement, preparation, and administration of extension courses in collaboration with the Air University.

(3) WAF Staff Director (WAF)

Advises on all matters pertaining to WAF activities.

(4) Director of Personnel Planning and Management (Dir PPM)

Represents Deputy for Personnel in joint planning of this headquarters; develops and prepares personnel plans and studies; surveys and analyzes personnel management practices and procedures; monitors military classification procedures; monitors officer and airmen career program.

(a) Planning Division

Represents Deputy for Personnel in joint planning efforts of the headquarters; initiates and prepares plans and actions relating to personnel functions in the event of and subsequent to mobilization, insures dissemination within office of Deputy for Personnel of information concerning operational and logistical planning; accomplishes projects and studies as directed.

(b) Classification and Utilization Division

Monitors utilization, classification, processing, and accounting of personnel by skills; develops standing operating procedures for maintenance of basic personnel records; has custody of Headquarters Continental Air Command organizational and command copies of DA AGO Form 66; supervises officers and airmen career programs; maintains Officer Effectiveness Reports.

(5) Director of Military Personnel (Dir Mil Pers)

Advises and assists the Deputy for Personnel on all matters of policy and procedures pertaining to Regular USAF and USAF Reserve military personnel, and in the formulation and implementation of such policies and procedures as directed by the Deputy for Personnel.

(a) Officers Division

Assists and advises the Director of Military Personnel in formulation and execution of all policies and procedures pertaining to Regular USAF and USAF Reserve officer personnel. Directs the execution and implementation of administrative details and procedures pertaining to Regular USAF and USAF Reserve officers, including appointments (in USAFR), assignment, reassignment, transfer, replacement, promotion, demotion, separation, recall to active duty (USAFR), mobilization (USAFR), retirement, pay, awards and decorations, discipline, leaves of absence, career development, school selections, uniform, quartering and billeting, prisoners of war, own personnel in enemy custody, deceased personnel and next of kin, overseas and domestic projects.

(b) Airmen's Division

Assists and advises the Director of Military Personnel on all matters of policies and procedures pertaining to Regular USAF and USAF Reserve airmen. Directs the execution and implementation of administrative details and procedures pertaining to Regular USAF and USAF Reserve airmen, including: requisitioning, allocation of quotas, assignment, reassignment, transfer, replacement, promotion, demotion, separation, recall to active duty (USAFR), retirement, pay, awards and decorations, discipline, leaves of absence, career development, school selections, uniform, quartering and billeting, prisoners of war, own personnel in enemy custody, deceased personnel and next of kin, overseas and domestic projects, line of duty investigations; AFORD, and processing and assembly station administration.

(6) Director of Military Personnel Procurement (Dir MPP)

Directs and coordinates officer and airmen procurement activities; represents USAF in matters pertaining to selective service.

(a) Officer Procurement Division

Directs and coordinates procurement of aviation cadets and officer candidates by traveling officer procurement teams; supervises aviation cadet and officer candidate examining boards on all USAF installations; supervises and monitors activities of Air Force Officer Screening Boards; processes applications for pilot training in officer grade, including Air Force ROTC graduates; maintains liaison with six armies of ZI on matters pertaining to officer procurement.

(b) Airmen Procurement Division

Supervises and coordinates enlistment and reenlistment for command installations and maintains recruiting of civilians for ZI and overseas; placement, training, and employee relations programs; operations of local Civil Service Boards of Examiners; suggestions, awards, and other incentive programs.

(8) Director of Personnel Services (Dir PS)

Formulates and develops policy and procedure pertaining to welfare of military personnel and supervises execution of following activities:

(a) Special Services Division

Monitors athletics, to include an organized sports program; recreation, to include an amateur show program; Army and Air Force Motion Picture Service activities; administration of service clubs; arts and crafts program; Air Force bands; and maintains liaison with American Red Cross, AFA, and USO.

(b) Nonappropriated and Sundry Funds Division

Monitors administration of nonappropriated funds; officers' and noncommissioned officers' clubs; custody of Continental Air Command Welfare Fund; and Air Force Aid Society.

(c) Information and Education Division

Monitors all phases of Information and Education activities to include counselling and advisement; conducts voluntary fund raising campaigns; and supervises Personal Affairs program.

(d) Library Division

Supervises establishment and administration of libraries.

(9) Director of Air Force ROTC (Dir AFROTC)

Prepares plans, programs, and policies with regard to the Air Force ROTC and for USAF participation in the Explorer program. Monitors the execution of these programs.

(a) Training and Research Division

Plans and implements all courses of instruction given at institutions and camps of the Air Force ROTC, to include the preparation of manuscripts, lesson outlines, the selection of references, preparation of examinations for each subject, and the selection of training aids and devices.

(b) Requirements Division

Plans and implements the requirements of the institutional and camp phases of the Air Force ROTC program and established basic requirements for funding, personnel, and general logistical data. Develops requirements for manuals, slides, and other items peculiar to the training requirement.

i. Deputy for Operations (DO)

Assistant Deputy for Operations (ADO)

Supervises organization, training, and preparation for combat of units and combat crews of the USAF and USAFR; training of the Air National Guard; establishment of requirements in support of command missions; planning and preparation for and conduct of mobilization requirements, movement, air defense, and tactical support operations; planning, preparations, and operations in connection with domestic emergencies; determination of proper apportionment of resources between the several missions of the command, including timely allocation of resources to the operational commands; coordination of over-all command programs; air intelligence; communications requirements, operations, services, procedures and facilities; termination and establishment of requirements for performance of command missions; armament operations, training, plans and requirements; establishes requirements for and locations of physical facilities required to accomplish assigned mission.

(1) Director of Operations and Training (Dir O&T)

Formulates doctrine, standards, and directives pertaining to operations and training of assigned and attached Regular USAF units, and for units of the USAF Reserve and Air National Guard; requirements, requisitions and allocation of stations, training areas and ranges. Prepares plans for USAF participation in domestic emergencies. Determines requirements for training aids and determines allocation. Determines budget requirements for and monitors allocation of Air Combat Maneuver Funds. Maintains contact with governmental or civilian agencies in aeronautical or operations matters. Determines basis of aircraft allocation; establishes requirements for operations and training in the fields of photography and armament, and defensive doctrine applicable to special weapons, including atomic, biological and chemical; makes analysis of operational trends and current program achievements. Processes Operational Readiness Test Reports.

(a) Operations Division

Supervises activities in connection with domestic emergencies; liaison with other military and civilian agencies on matters pertaining to operations; aircraft allocations throughout the command; issuance of procedures, directives, and regulations on matters pertaining to operations; maintenance of information concerning commitments of aircraft and units to maneuvers, demonstrations, air shows, etc. Determines requirements for flight facility installation, including GCA, radio aids to navigation, weather service, etc. Monitors the provision of members and alternate members for airspace subcommittees; flight information service pertaining to hazards and restrictions; administrative procedures relative to operations division; preparation of operation studies assigned. Reviews and approves plans for air combat maneuvers, operations orders, and necessary supervision to insure operational efficiency in connection therewith. Initiates necessary corrective action upon receipt of notice of operations deficiencies.

(b) Training Division

Supervises and evaluates the training of units and individuals of the Regular USAF and USAF Reserve Forces assigned or attached to the command. Supervises preparation, dissemination and implementation of training programs, standards, directives, and tactical doctrines and techniques. Monitors the development, procurement, distribution and utilization of training aids and allied equipment. Determines requirements for and utilization of training areas and gunnery and bombing ranges. Supervises establishment of uniform training reports within the command, the analysis and evaluation of reports received from subordinate echelons, and the maintenance of training charts to reflect the training status of units of the command. Processes Operational Readiness Test Reports. Initiates budget estimates for and monitors allocation of Air Combat Maneuver Funds.

(c) Armament Division

Supervises all armament operations and training activities to include chemical, biological, and radiological warfare, aircraft weapons, conventional munitions, and related equipment. Determines, recommends and coordinates armament materiel and personnel requirements. Prepares and coordinates the armament phases with other agencies of the Armed Forces on matters pertaining to armament development. Acts as coordinating agency for the staff on armament operations and training activities, and on matters pertaining to armament personnel and units engaged in these activities. Supervises the Special Munitions Branch, the Weapons Branch, and the Photographic Branch.

(2) Director of Plans, Organization and Requirements (Dir PO&R)

Coordinates and correlates over-all Continental Air Command operational planning programs. Prepares broad operational, capability, organizational, defense, war, mobilization and psychological warfare plans in coordination with the Commanding General's, Eastern Air Defense Force and Western Air Defense Force, and Deputy for Tactical Air Operations for the accomplishment of the missions and tasks of the command. Prepares, coordinates, evaluates and reviews requirements and programming data to support the missions and responsibilities of the command. Prepares, coordinates, and directs all unit organizations and troop space allocations for the command.

(a) Plans Division

Develops, coordinates, and revises defense, war, mobilization, psychological warfare, and other operational plans to support the command missions and responsibilities; develops the war plans of the Eastern and Western Air Defense Forces; reviews and correlates the war plans of the Tactical Air Command; prepares, coordinates, and reviews plans for accomplishing the mobilization of the Air National Guard, USAF Reserve personnel, and units assigned or attached to the Continental Air Command. Initiates plans for, reviews and correlates plans and programming data pertaining to the organization and reorganization, the activation and inactivation, and the movement and assignment of units and forces of the command. Plans the conduct of psychological warfare within the United States.

(b) Organization Division

Prepares and coordinates organization structures for new units of the Regular USAF, Air National Guard, and the USAF Reserve. Allocates troop space authorizations for all units of the Continental Air Command. Directs and supervises preparation and coordination of activation, inactivation, organization, reorganization, and movement of all units of the command. Maintains a comprehensive file on all units to insure that up-to-date, pertinent information is available to Headquarters United States Air Force, Headquarters Continental Air Command staff, and air forces of the Continental Air Command.

(c) Mission Requirements Division

Prepares, coordinates, evaluates, and reviews operational requirements and programming data to support the operational missions and responsibilities of the Continental Air Command; prepares, coordinates and reviews military requirements and characteristics in respect to aircraft and associated equipment within the limits of command responsibility. Represents the Continental Air Command headquarters on Mock-Up and Engineering (689) Boards; coordinates, synchronizes, and standardizes the systems requirements and systems integration of the Eastern and Western Air Defense Forces. Coordinates and reviews the requirements of the United States Army and United States Navy and other governmental agencies as they affect the Continental Air Command air defense mission in order to assist in development of correlated joint operational systems requirements for air defense; reviews and coordinates in respect to operation requirements the over-all integration of the civilian agencies that participate in air defense (CAA, FCC, CARW, ODCP and the Ground Observer System); reviews and evaluates tests, training exercises and maneuvers involving Continental Air Command units in order to establish operational missions requirements essential to the improvement of their combat efficiency. Collects, devises, reviews and adjusts, assembles, publishes, and distributes planning assumptions and planning factors concerning time, space, materiel, and personnel requirements, in collaboration with the appropriate staff agencies.

(3) Director of Communications and Electronics (Dir Comm)

Advises the staff concerning technical matters relating to communications and electronics, including policy and plans for employment of communications and electronics equipment, personnel and units of the USAF and the USAFR to carry out the mission of the command; matters pertaining to communications and electronics training of the Air National Guard; policies and programs to insure maximum coordination, integration, and effectiveness of communications and electronics both within the command and in coordination with military and civil organizations.

(a) Plans and Policy Division

Formulates policies and monitors revision of communications and electronics policies. Prepares technical training material for units and individuals. Recommends changes in existing T/O&E's to provide adequate communication and electronics personnel and equipment. Determines requirements for communications and/or electronics projects.

(b) Electronics Systems Division

Acts as technical advisor on plans, requirements, and employment of all electronic activities, including ground and airborne electronic and electronic countermeasures involving their defensive and tactical aspects. Assists in the formulation of policy and the preparation of plans to give assurance of maximum coordination, integration and effectiveness of electronics activities both within the command and in cooperation with other military and civil organizations.

(c) Communications Systems Division

Acts as technical advisor on plans, requirements, and employment of all communications activities, including wire, radio communications, communications center, operations procedures control and cryptography. Maintains maximum coordination, integration, and effectiveness of communications activities both within the command and in cooperation with other military and civil organizations. Initiates and reviews budget estimates and monitors allocation of communication funds. Allocates call signs and frequencies for the command. Exercises operational and technical supervision of the command communications squadron.

(4) Director of Intelligence (Dir Int)

Advises the commander and staff on all matters pertaining to air intelligence; continuously appraises offensive capabilities of foreign air forces and weapons in relation to the strategic vulnerability of the United States; continuously appraises economic, political, and scientific war potential of major foreign powers; recommends policies and plans for organization, training, and mobilization of USAF Reserve intelligence personnel; prepares policies and procedures in matters pertaining to the criteria for safeguarding military information.

(a) Intelligence Requirements Division

Ascertains command requirements for intelligence information and collects same from the Department of the Air Force, adjacent and subordinate commands; maintains an intelligence library as a repository for all intelligence information received in Continental Air Command headquarters; renders library service, including research, for the staff, adjacent and subordinate commands; recommends policies and procedures in matters pertaining to the criteria for the safeguarding of military information; maintains a two-way flow of intelligence information pertinent to the mission of Continental Air Command; arranges for the publication, preparation, assembly, production, and distribution of intelligence information, reports, books, estimates, accession lists, etc.

(b) Photo Intelligence Division

Maintains photo intelligence library of target and air objective folders and target chart material; collects related data to supplement photo intelligence material on file; maintains map library; supervises supply and distribution of aeronautical charts, maps, and publications for briefing and planning within the Continental Air Command headquarters and subordinate units; maintains liaison with other Government and civilian map agencies to insure adequate supply of up-to-date maps.

(c) Intelligence Doctrine Division

Formulates policies and plans for intelligence training in the USAF Reserve and Air Force ROTC in coordination with the responsible deputies. Supervises establishing and training of VART units (Intelligence); makes policies and plans for intelligence training in the Air National Guard and Regular USAF units, and monitors intelligence training progress. Recommends intelligence training standards and training directives.

(d) Intelligence Estimates Division

Produces continuing air intelligence estimates necessary for accomplishment of the command mission, including: studies of air order of battle, offensive doctrines and tactics, effectiveness of offensive weapons, and basis for offensive operations of all foreign countries; studies of the offensive capabilities of alien air forces and air weapons in relation to the strategic vulnerability of the United States; foreign economic and political developments as they affect the security of the United States; studies of the subversive potential within the United States.

j. Deputy for Materiel (DM)

Assistant Deputy for Materiel (ADM)

Supervises and coordinates logistics plans, policies, and requirements relating to: Installations, transfer and joint use; common utilization of facilities and functions with the Army and Navy; maintenance, supply, and services pertaining to the Air Force and other armed services.

(1) Director of Materiel Planning (Dir Mat P)

Formulates long range materiel plans designed to facilitate supply, maintenance, transportation, and construction operations. Studies and prepares plans to supplement special projects as directed by the Deputy for Materiel. Analyzes cost reports pertinent to Deputy for Materiel functions and recommends action necessary to effect more efficient operations.

(2) Director of Maintenance, Supply and Services (Dir MS&S)

Initiates action, reviews, coordinates, develops, and supervises the execution of all matters, policies, plans, objectives and procedures falling within the fields of maintenance, supply, and services pertinent to or affecting the command, except maintenance of fixed installations.

(a) Maintenance Division

Directs and monitors all matters pertaining to maintenance of Air Force and other armed services equipment, including the initiation, action, review, coordination, development, supervision, and execution of all matters, policies, plans, objectives, and procedures within the field of maintenance. Formulates and establishes policies and procedures governing maintenance and issues such command directives as are required to implement these policies and procedures. Evaluates personnel requirements of maintenance activities and initiates and coordinates plans and provisions for personnel necessary to meet these requirements. Coordinates with Supply Division on requirements for equipment and spare parts required for maintenance; coordinates with staff and outside agencies on matters pertaining to aircraft accidents, procurement of new aircraft and equipment, and the transfer, modification, storage, reclamation, repair, and reconditioning of assigned aircraft and equipment. Analyzes reports affecting the safety, combat effectiveness, design feature, and operation of equipment as pertains to maintenance and submits recommendations for corrective instructions. Reviews research and development projects to insure compliance with established policies and adherence to technical standards; maintains such records of status of aircraft and equipment as required by the Deputy for Materiel. Exercises staff supervision in connection with foregoing responsibilities and takes follow-up action on all unsatisfactory conditions noted. Maintains technical order files for offices of Deputy for Materiel.

(b) Supply Division

Directs and monitors all matters pertaining to supply of Air Force and other armed services equipment, including initiation, action, review, coordination, development, supervision and execution of all matters, policies, plans, objectives, and procedures with respect to requirements, distribution, scheduling, receipt, storage, issue, corrosion control, packing and crating, stock levels, stock control and balances; the establishment of quantitative and qualitative requirements with respect to changes to tables of equipment and allowances. Formulates and establishes policies and procedures governing supply and prepares such command directives as are required to implement these policies and procedures; evaluates personnel requirements of supply activities and initiates and coordinates plans to provide personnel to meet requirements. Prepares the armament phase of all plans. Maintains aircraft accountable records and location data for command aircraft; arranges for ferry crews for aircraft being transferred; maintains records of AOCP and status of major items of equipment as reflects trends in supply and equipping of units and bases; submits periodic reports to Air Materiel Command on requirements for petroleum; recommends changes to tables of equipment and allowances; maintains cost control register pertaining to credit allowances of expendable materiel; takes staff action on requests for equipment in excess of authorizations; exercises staff supervision over supply activities, and takes follow-up action on unsatisfactory conditions noted.

(c) Services Division

Initiates action, reviews, coordinates, develops, and supervises the execution of matters, policies, plans, objectives, and procedures within the field of supply services pertinent to or affecting the command. Performs staff contacts with the Army and Air Force Exchange Service; provides staff supervision over command exchanges, commissary stores and subsistence, food service, salvage and reclamation, laundry, and purchasing and contracting services; makes recommendations on requisitions for equipment required by command activities for above services; reviews for propriety and legal sufficiency all awards and formal contractual instruments entered into by command activities; exercises staff supervision over Continental Air Command service activities and takes follow-up action on all unsatisfactory conditions noted.

(d) Transportation Division

Performs the functions of control and movement. Directs and monitors commercial transportation and motor pool operation by executing the plans, policies, and procedures prescribed by the Chief of Staff, USAF; provides technical advice and assistance in transportation matters; establishes additional transportation plans, policies, and procedures as required for accomplishment of the assigned mission of the command; supervises transportation activities, and determines and coordinates transportation requirements for all Continental Air Command installations via commercial and military highway, rail, water, and air means; recommends appointment, transfer, or reassignment of command transportation officers; establishes and monitors quotas for technical training of transportation personnel, including monitoring of the Air Force ROTC transportation curriculum. Determines rate estimates and prepares other transportation control data required for efficient operation.

(e) Field Advisory Group

Reviews proposed maintenance and supply procedures for adequacy of coordination and propriety of substance; analyzes, develops, and recommends maintenance and supply procedures; reviews the needs of field maintenance and supply activities with regard to organization methods and procedures and prepares recommendations covering the action proposed as a result thereof; formulates property accounting policies and procedures, subject to directives of higher authority, regarding the establishment thereof at all echelons of supply; acts as a coordinating agency regarding maintenance and supply procedures; collaborates with the divisions within the directorate of Maintenance, Supply and Services on the preparation of recommended changes to Air Force Supply Manual 67-1 and other similar directives, and maintains staff contact with Headquarters United States Air Force, Air Materiel Command and other Air Force commands on matters of policy and procedure in connection with the Air Force supply system.

(3) Director of Installations (Dir Instl)

Prepares plans, programs, policies, and procedures governing Installations activities; develops facilities requirements and Engineer troop requirements of Continental Air Command; performs technical supervision of repairs and utilities, including those pertaining to crash and structural fire protection and prevention; performs technical reviews and processes requests for acquisition and disposal of real estate and related facilities; compiles and maintains appropriate data on all airfield facilities of military significance; establishes basis of budget estimates to determine air installations office funds and personnel requirements.

(a) Installations Policy Division

Reviews, develops, interprets, and coordinates on policy and procedures affecting Installations activities and maintains Installations policy file. Monitors programs for privately constructed and owned dependent housing; makes special field investigations and attendant reports relating to unusual installations problems; prepares studies concerning current research and development projects on new materials or advanced methods of construction; reviews civilian and military personnel T/O&E's and T/DA's pertaining to Installations.

Maintains liaison with appropriate elements of Headquarters USAF; Air Materiel Command; Office, Chief of Engineers and other agencies concerning research and development projects of interest to the Continental Air Command.

(b) Plans Division

Develops engineer and installation type requirements for the command, including Regular USAF and USAF Reserve establishments and advises on ANG components; reviews for technical correctness all matters pertaining to assignment, utilization, and determination of requirements for retention of real estate facilities; compiles and maintains appropriate data files on all airfield facilities of military significance; prepares programs, plans, budget estimates, and construction estimates on new construction; maintains, develops, and prepares master plans of Continental Air Command installations; develops Engineer portion of command plans for mobilization troop programs, including training and employment of Engineer Aviation units.

(c) Operations Division

Initiates action for the acquisition and disposal of real estate facilities; performs over-all technical supervision of repairs and utilities, including those pertaining to crash and structural fire protection; makes technical review of R&U budget estimates and requests to determine Installations office personnel and fund requirements; performs technical review of all R&U projects; provides consulting Engineer services, when required, to Continental Air Command air forces and Air National Guard upon request; reviews R&U operating reports and consolidates those requiring transmission to Headquarters USAF.

k. Deputy for Tactical Air Operations (DTAO)

Exercises staff responsibility in regard to the missions, tasks and responsibilities of the Tactical Air Command. (See Air Force Regulation 23-1.)

Director of Plans
Director of Operations
Director of Requirements
Director of Communications

6. Commanding Officer, Hq & Hq Sq, ConAC. The Commanding Officer, Headquarters and Headquarters Squadron, Continental Air Command, is directly responsible to the Vice Commander for the accomplishment of the following duties:

> Commands airmen on duty with Headquarters Continental Air Command; provides logistical and administrative support for assigned personnel; supervises maintenance of aircraft, scheduling all flights originating in Headquarters Continental Air Command; operates flying training program for Headquarters Continental Air Command personnel; and provides custodial services for Headquarters Continental Air Command. Assumes responsibility for such other duties as the Vice Commander may direct.

7. Staff Procedure. Staff procedures are not materially changed by the changes prescribed herein pertaining to staff structure and titles. Existing directives remain in force and future changes will be promulgated through established types of directives.
(DP 322)

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

CHARLES T. MYERS
Major General, USAF
Vice Commander

OFFICIAL:

VEMurphy
V. E. MURPHY
Lt Col, USAF
Asst Air Adj Gen

1 Attachment:
Organization Chart

DISTRIBUTION:
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419.201-3
28 March 1949

RETURN TO:
Director
Research Studies Institute
Attn: Archives Branch
Maxwell AFB Alabama

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LETTER FROM NINTH AIR FORCE TO CONAC, SUB: ORGANIZATION - CONTINENTAL AIR COMMAND, 28 MARCH 1949

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SUBJECT: Organization – Continental Air Command

TO: Commanding General, Continental Air Command, Mitchel Air Force Base, New York

1. During the brief period of time the Ninth Air Force has been functioning as a Continental Air Force, under the new organization, incidents have occurred which indicate at the numbered Air Force level that a study may be desirable to consider a further reorganization in order to simplify operations.

2. Continental Air Command activities in the numbered Air Force Areas are not unified under a single command with resulting confusion on the part of the Army and Navy as to who to contact, the numbered Air Force, the Air Defense Command or the Tactical Air Command.

3. One of the basic fundamental principles of organization is Unity of Command. The lack of unity of command in Air Force activities in the numbered Air Force areas in the Continental United States is emphasized when compared to Army and Navy activities, where responsibilities are centralized in the Army Area and Naval District Commanders.

4. In the interest of simplicity of operations, economic utilization of funds and personnel, it is recommended that a study be made to determine the desirability of:

a. Inactivation of the Air Defense Command Headquarters and Tactical Air Command Headquarters and combine the functions and responsibilities of these two organizations in the Headquarters Continental Air Command.

b. Elimination of the Eastern and Western Air Defense Divisions' Headquarters and charge the numbered Air Forces with the responsibilities that are to be assigned to these headquarters.

c. Designation of the numbered Air Forces as the responsible agency for all Continental Air Command activities in the Air Force area including air defense.

322 - Organ ConAC

WILLIAM D. OLD
Major General, USAF
Commanding

(5)

O/O

CONFIDENTIAL

Organization - Continental Air Command
DO (28 Mar 49) 1st Ind -5 APR 1949

HQ CONTINENTAL AIR COMMAND, Mitchel Air Force Base, New York

TO: Commanding General, Ninth Air Force, Langley Air Force Base, Virginia

1. This headquarters appreciates your concern as to the workability of the present organization of the Continental Air Command. We are none the less making every effort to operate under the conditions imposed by the current organization because we feel that to do otherwise would be "fighting the problem." The framers of this organization did so with full realization that it was a departure from commonly-accepted practices and that its functioning might prove difficult; however, it was hoped that the ends to be attained would justify the means.

2. This command is constantly studying our organization with a view of correcting deficiencies as they are found. We believe that we might in time evolve a very satisfactory method of operation which is entirely in keeping with the principles which influenced the adoption of our current organization. Nevertheless, if after a proper period of trial our organization proves to be basically unsound, we will undertake, of course, remedial action. Your comments in basic letter, therefore, are well taken and are appreciated.

3. Your current problem will, I believe, be somewhat simplified by a letter that will issue in a few days.

H. M. TURNER
Major General, USAF
Vice Commander

4 Apr '49
JES/202

CG
VC
CS
A Insp
PIO
AG
Comp
Aud
Chap
JA
Pers
Surg
WAC
Welf
DO
Air D
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Int
Ops
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A Mat
Engr
Ord
QM
Trans
DCE
Comm
Elect
Rad
Others

NOTE: *The handling of classified correspondence in this headquarters is governed by ADC Staff Memo 80-18 and AR 380-5.*

ADC FORM Hq-AG 9
17 May 1948

6

Adjutant General's Classified File Copy

Register No. 37765
Date 5 APR 1949
By

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Chart - Command + Administrative channels for Field Exercises

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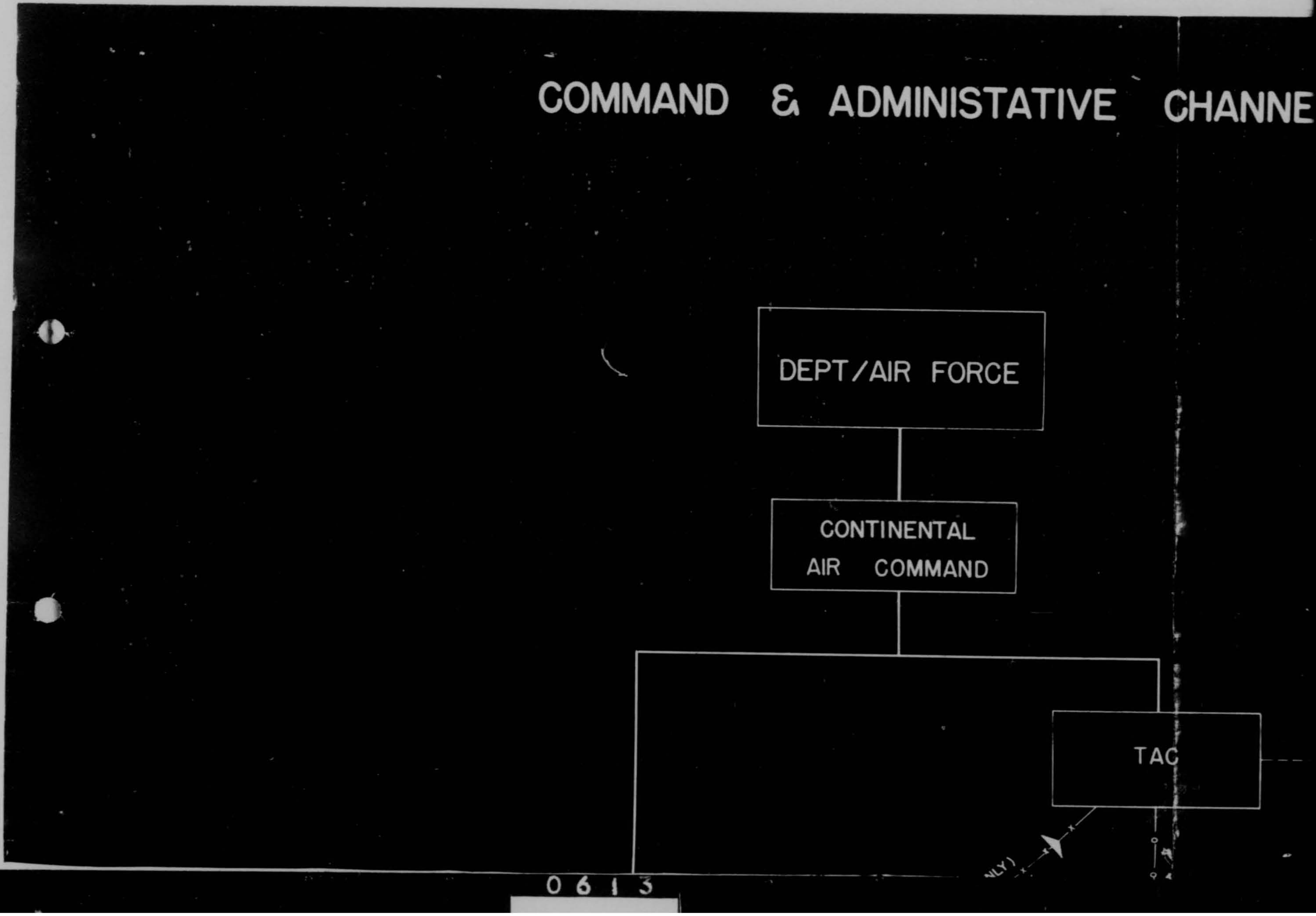
COMMAND & ADMINISTATIVE CHANNE
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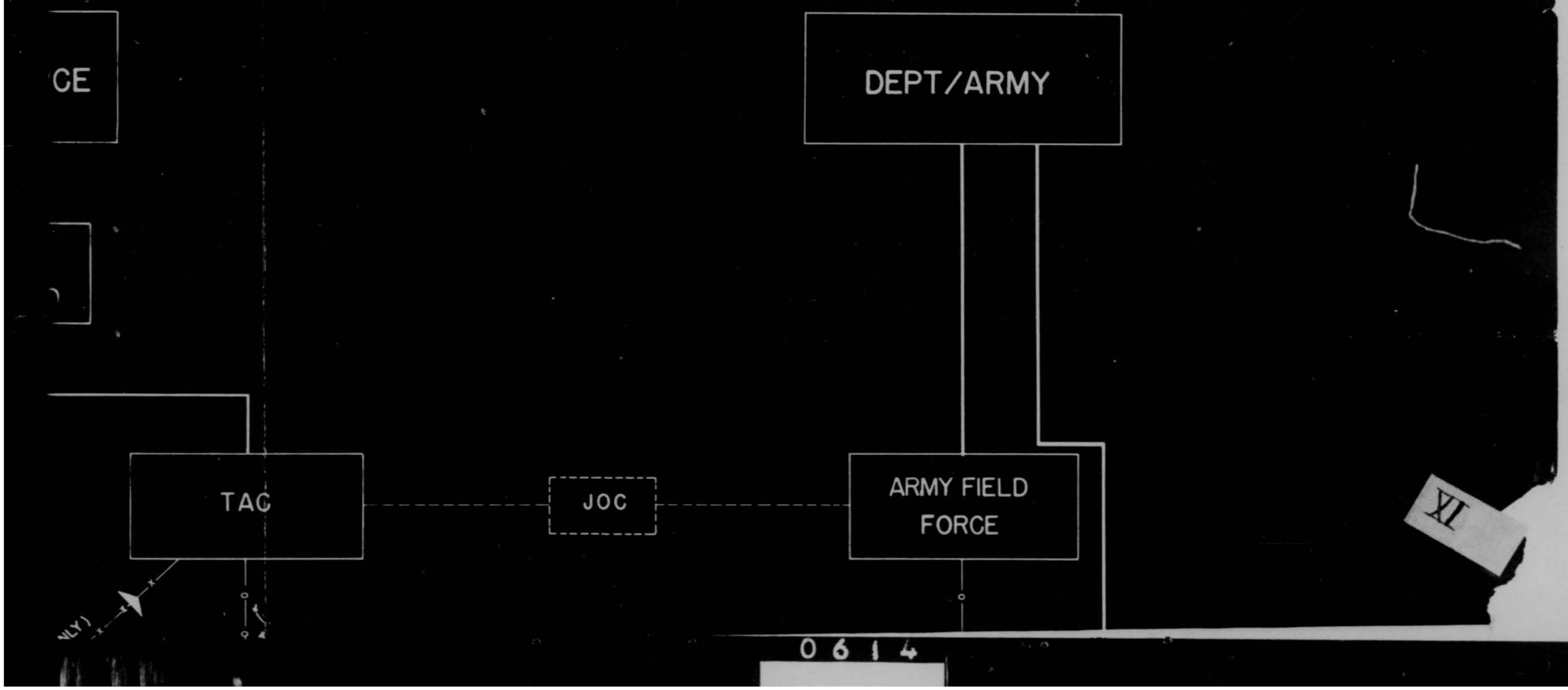
TATIVE CHANNELS FOR FIELD EXERCISES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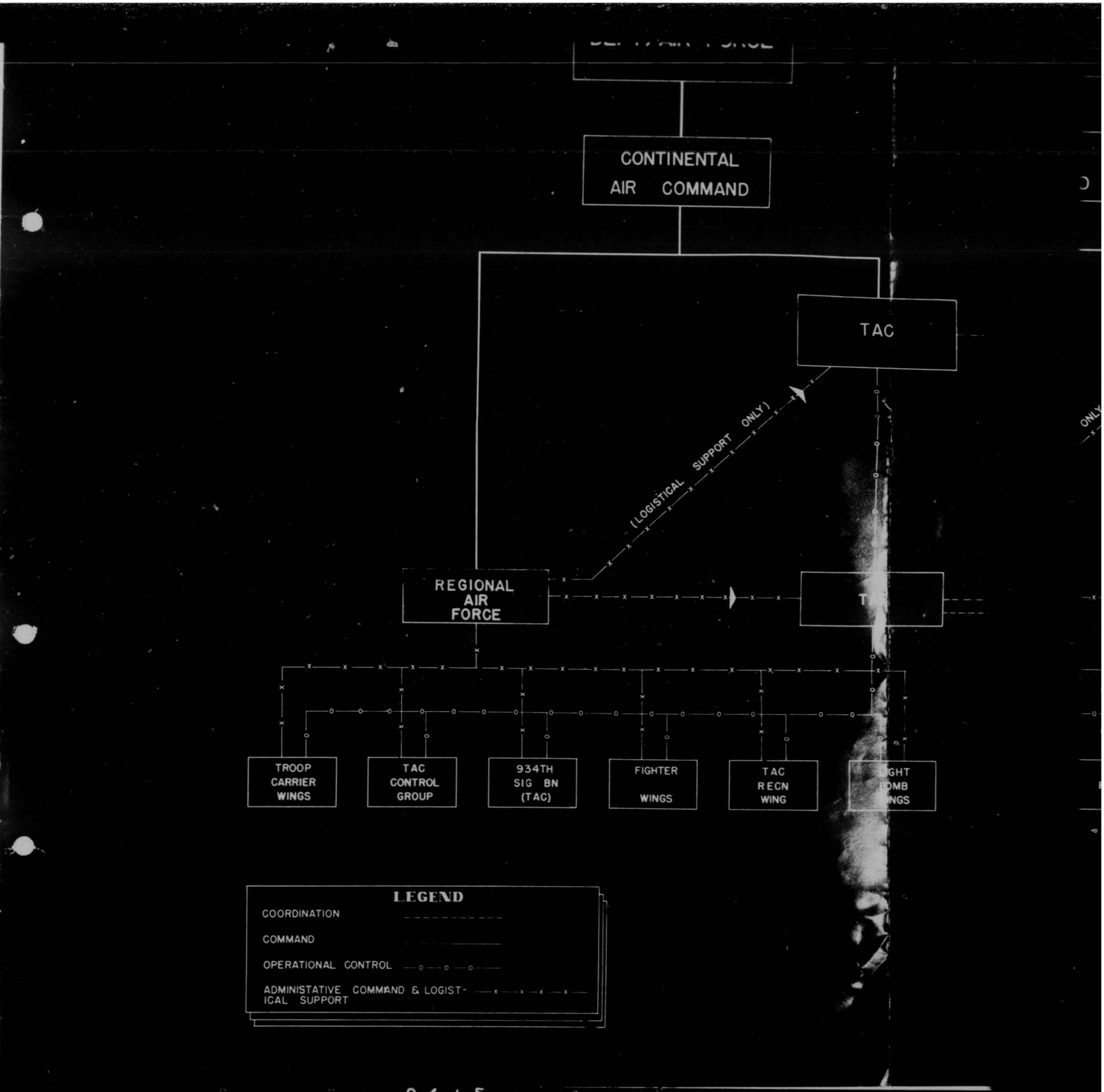
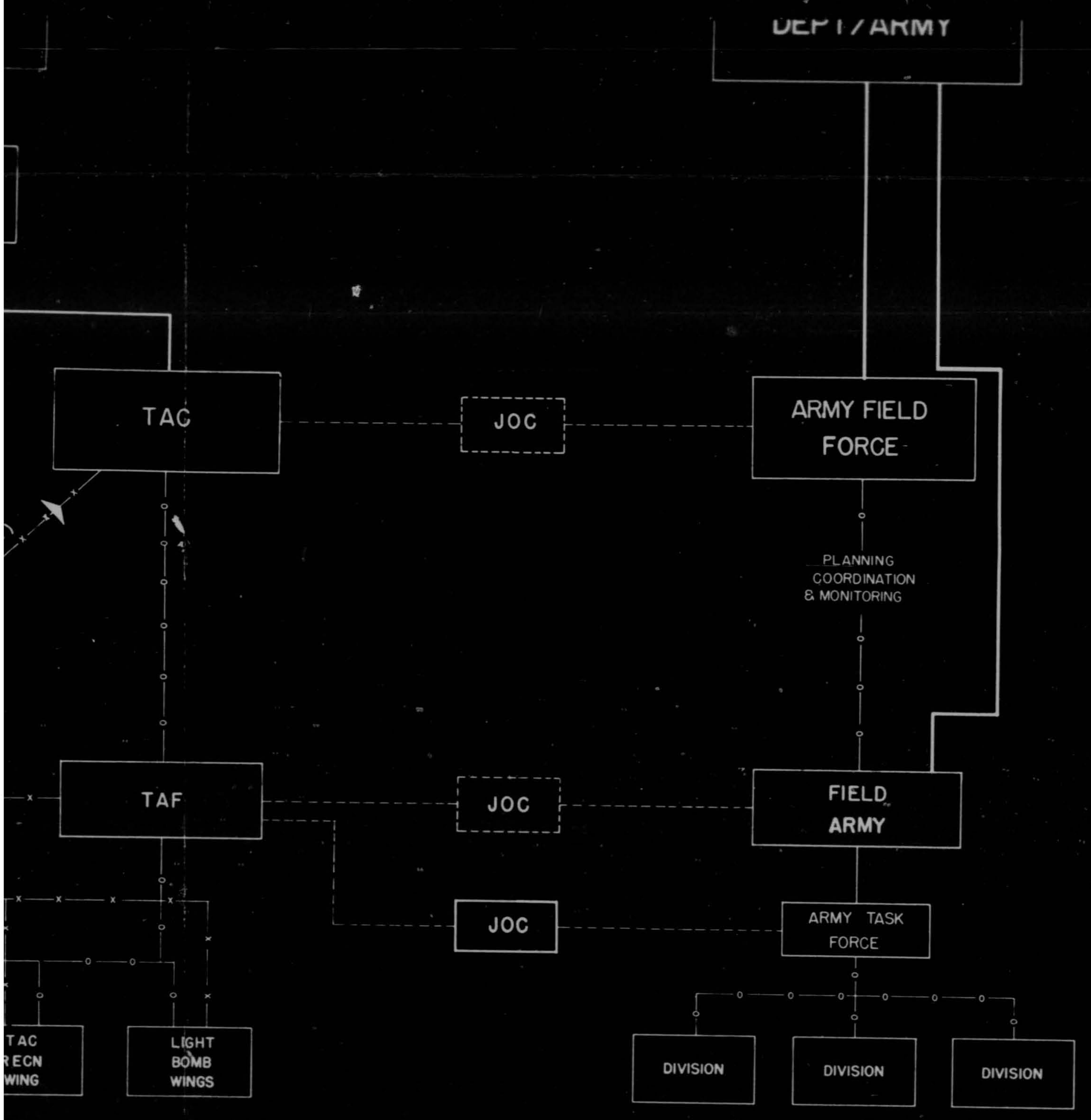

CONTINENTAL AIR COMMAND
TAC
(LOGISTICAL SUPPORT ONLY)
REGIONAL AIR FORCE
TROOP CARRIER WINGS
TAC CONTROL GROUP
934TH SIG BN (TAC)
FIGHTER WINGS
TAC RECN WING
LIGHT BOMB WINGS
LEGEND
COORDINATION
COMMAND
OPERATIONAL CONTROL
ADMINISTATIVE COMMAND & LOGISTICAL SUPPORT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COORDINATION
& MONITORING
TAF
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RECN
WING
LIGHT
BOMB
WINGS
DIVISION
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XI

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6 May 1947

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Basic Staff Organization

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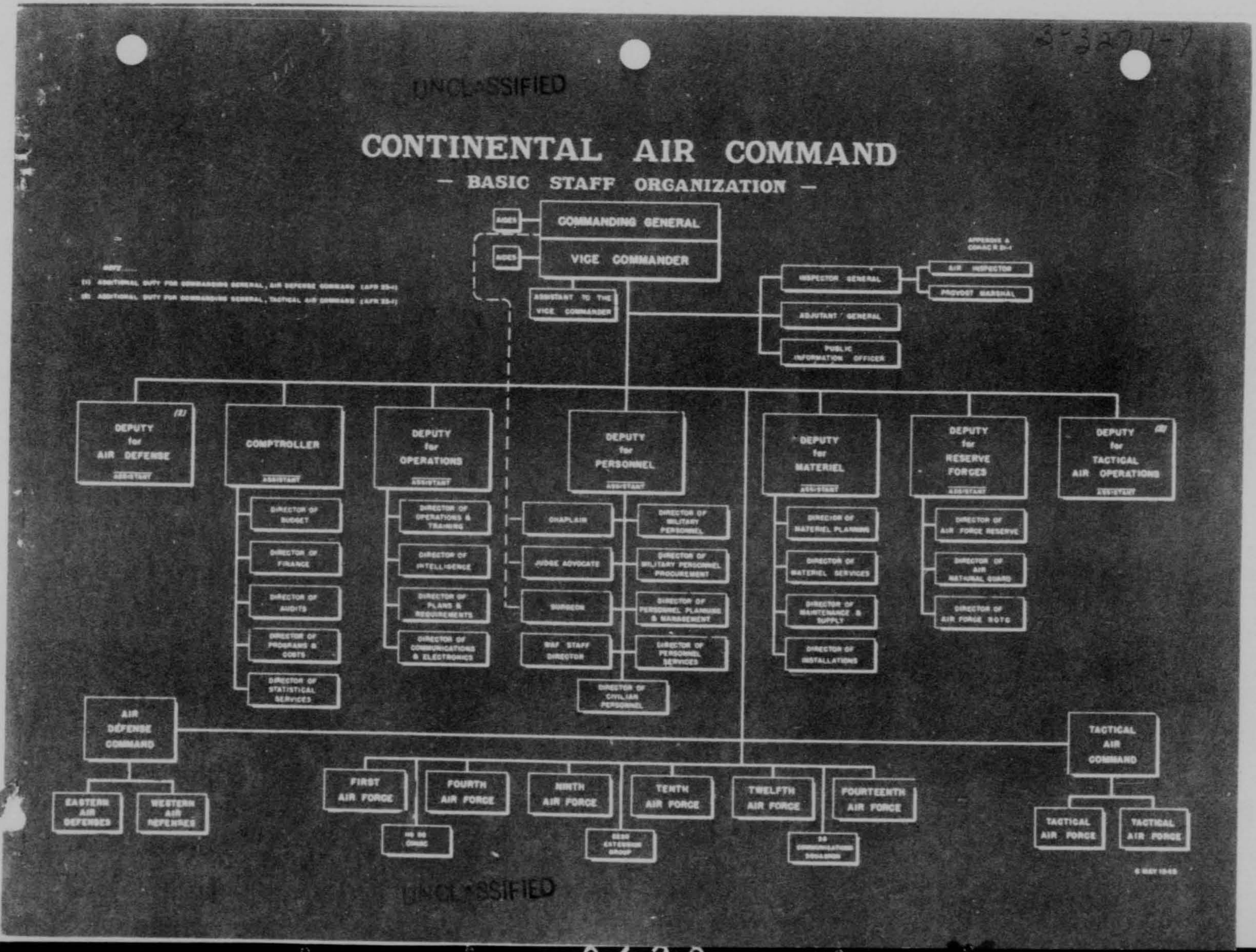

CONTINENTAL AIR COMMAND

— BASIC STAFF ORGANIZATION —

NOTE —

(1) ADDITIONAL DUTY FOR COMMANDING GENERAL, AIR DEFENSE COMMAND (AFR 23-1)

(2) ADDITIONAL DUTY FOR COMMANDING GENERAL, TACTICAL AIR COMMAND (AFR 23-1)

6 MAY 1949

AIDES
COMMANDING GENERAL
AIDES
VICE COMMANDER
ASSISTANT TO THE VICE COMMANDER
APPENDIX A CONAC R 20-1
INSPECTOR GENERAL
AIR INSPECTOR
PROVOST MARSHAL
ADJUTANT GENERAL
PUBLIC INFORMATION OFFICER
(1) DEPUTY for AIR DEFENSE
ASSISTANT
COMPTROLLER
ASSISTANT
DIRECTOR OF BUDGET
DIRECTOR OF FINANCE
DIRECTOR OF AUDITS
DIRECTOR OF PROGRAMS & COSTS
DIRECTOR OF STATISTICAL SERVICES
DEPUTY for OPERATIONS
ASSISTANT
DIRECTOR OF OPERATIONS & TRAINING
DIRECTOR OF INTELLIGENCE
DIRECTOR OF PLANS & REQUIREMENTS
DIRECTOR OF COMMUNICATIONS & ELECTRONICS
DEPUTY for PERSONNEL
ASSISTANT
CHAPLAIN
JUDGE ADVOCATE
SURGEON
WAF STAFF DIRECTOR
DIRECTOR OF MILITARY PERSONNEL
DIRECTOR OF MILITARY PERSONNEL PROCUREMENT
DIRECTOR OF PERSONNEL PLANNING & MANAGEMENT
DIRECTOR OF PERSONNEL SERVICES
DIRECTOR OF CIVILIAN PERSONNEL
DEPUTY for MATERIEL
ASSISTANT
DIRECTOR OF MATERIEL PLANNING
DIRECTOR OF MATERIEL SERVICES
DIRECTOR OF MAINTENANCE & SUPPLY
DIRECTOR OF INSTALLATIONS
DEPUTY for RESERVE FORCES
ASSISTANT
DIRECTOR OF AIR FORCE RESERVE
DIRECTOR OF AIR NATIONAL GUARD
DIRECTOR OF AIR FORCE ROTC
(2) DEPUTY for TACTICAL AIR OPERATIONS
ASSISTANT
AIR DEFENSE COMMAND
EASTERN AIR DEFENSES
WESTERN AIR DEFENSES
FIRST AIR FORCE
HQ SQ CONAC
FOURTH AIR FORCE
NINTH AIR FORCE
EXTENSION GROUP
TENTH AIR FORCE
TWELFTH AIR FORCE
COMMUNICATIONS SQUADRON
FOURTEENTH AIR FORCE
TACTICAL AIR COMMAND
TACTICAL AIR FORCE
TACTICAL AIR FORCE

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419.241
31 Oct 1949

Continental Air Command
Personnel Strength Rpt.
Oct 31, 1949

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Continental Air Command
Personnel Strength Rpt.
Oct. 31, 1949

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CONTINENTAL AIR COMMAND

PERSONNEL STRENGTH REPORT

RCS—FS—P17

AS OF

OCT 31 1949

SOURCE: AF FORM 127
AF FORM 134
AF—SC—P4

PREPARED BY:
OFFICE OF STATISTICAL SERVICES
HQ CONAC

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FOREWARD

1. The Strength data herein represents the number of authorized and assigned military and civilian personnel in the Continental Air Command as of 31 October 1949.

2. The authorized and assigned figures represent the following variables combined;

   a. Sex

   b. Race

   c. Departmental Status

3. The authorization shown herein are T/O and T/DA figures reflected separately.

4. The unallotted authorization reported represent that portion of allotment for T/DA Units from Headquarters USAF not reallotted to any agency of the command.

5. Although Air National Guard and ROTC Instructors do compose part of the Authorized and Assigned complement of the Headquarters & Headquarters Sq. of each Air Force, in this report the instructors are shown separately and are not included in the strength shown for each Air Force Headquarters.

6. Data for Pipeline Personnel is included in Tables I and II only. Strength reflected in Tables III represent Permanent Party Personnel.

7. ROTC Instructors authorizations for 31 October 1949 are not reported by air force. The spaces for ROTC Instructors were held in abeyance at Hq. ConAC. 553 Officers and 553 Airmen spaces are shown as reserved on page 2.

8. Student authorizations shown on page 2 are spaces reserved for student detachments of Hospital Squadrons. Distribution of grades for these spaces have not been allotted to the respective Hospital Squadrons as of 31 October 1949.

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Functional Category and Air Force

TABLE I

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
ConAC Grand Total													
Permanent Party	3 222	4 856	7 663	20 607	25 633	46 148	23 829	30 489	53 811	8 938	7 862	63 156	61 673
Pipeline			999			11 311			12 310				12 310
FIRST AIR FORCE - TOTALS													
Permanent Party	511	541	1 378	3 800	4 742	10 357	4 311	5 283	11 735	2 060	1 874	11 65	13 609
Pipeline			174			2 548			2 722				2 722
FOURTH AIR FORCE - TOTALS													
Permanent Party	761	501	1 409	5 153	4 161	9 408	5 914	4 662	10 817	1 390	1 261	11 966	12 077
Pipeline			482			6 070			6 552				6 552
NINTH AIR FORCE - TOTALS													
Permanent Party	422	459	950	2 107	3 178	5 711	2 529	3 637	6 661	1 139	1 085	7 305	7 746
Pipeline			146			1 060			1 206				1 206
TENTH AIR FORCE - TOTALS													
Permanent Party	200	589	920	1 339	3 914	5 504	1 539	4 503	6 424	1 626	1 394	7 668	7 818
Pipeline			55			375			430				430
TWELFTH AIR FORCE - TOTALS													
Permanent Party	218	362	774	1 630	2 107	4 085	1 848	2 460	4 859	473	443	4 790	5 302
Pipeline			75			265			340				340
FOURTEENTH AIR FORCE - TOTALS													
Permanent Party	1 083	619	1 762	6 361	3 958	10 000	7 444	4 577	11 762	1 459	1 350	13 480	13 112
Pipeline			67			993			1 060				1 060

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Functional Category and Air Force

Table I

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
ConAC TOTALS (Cont'd)													
ConAC HQ. & HQ. SQ.		327	349		663	738		990	1 087	350	346	1 340	1 433
2220th Extension Group		29	19		89	75		118	94	96	72	214	166
28th Comm Sq	9		10	186		180	195		190			195	190
ADC HQ. & HQ. SQ.		1	1		1	1		2	2		5	2	7
26th Air Division	18		8	31		15	49		23			49	23
TAC HQ. & HQ. SQ.		70	60		43	45		113	105	34	32	147	137
EASTERN AIR DEFENSE FORCE		34	23		27	29		61	52	8		69	52
Reserved ROTC Spaces		553			553			1 106				1 106	
Pipeline Student Unallotted Authorizations		153						153				153	
Unallotted Authorizations		618			2 197			2 815		203		3 018	

CONTINENTAL AIR COMMAND

Summary of Pipeline Personnel

By Air Force

Table II

AIR FORCE	FILLERS	DET. OF PATIENTS	RETURNEES FROM O/S	OVERSEAS REPLACEMENTS	STUDENT	TOTAL
1st AF						
Officers	74	14	43	43		174
Enlisted	1 639	73	281	555		2 548
4th AF						
Officers	108	49	20	267	38	482
Enlisted	1 096	209	278	4 487		6 070
9th AF						
Officers	24	77			45	146
Enlisted	826	234				1 060
10th AF						
Officers	9	28			18	55
Enlisted	110	265				375
12th AF						
Officers		37	3	2	33	75
Enlisted		228	21	16		265
14th AF						
Officers	28	19			20	67
Enlisted	885	108				993
ConAC Grand Tot.						
Officers	243	224	66	312	154	999
Enlisted	4 556	1 117	580	5 058		11 311

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CONTINENTAL AIR COMMAND

SUMMARY OF AUTHORIZED & ASSIGNED PERSONNEL

BY TYPE ORGANIZATION AND BY AIR FORCE

TABLE III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED			AUTHORIZED			AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O	ASGD	T/O E	NON T/O	ASGD				
Hq. ConAC MITCHEL		327	349		663	738		990	1 087	350	346	1 340	1 433
Hq. ADC MITCHEL		1	1			1		1	2		5	1	7
Hq. TAC LANGLEY		70	60		43	45		113	105	34	32	147	137
2220th Extension Gp Ft.Benj		29	19		89	75		118	94	96	72	214	166
Eastern ADF-Mitchel		34	23		27	29		61	52	8		69	52
AIR FORCE HEADQUARTERS													
First Air Force-Mitchel		150	151		475	707		625	858	166	108	791	966
Fourth Air Force-Hamilton		170	159		350	384		520	543	102	100	622	643
Ninth Air Force-Langley		168	165		542	610		710	775	157	144	867	919
Tenth Air Force-Ft Benj Harr		141	140		342	325		483	465	178	116	661	581
Twelfth Air Force-Brooks		152	180		382	592		534	772	95	94	629	866
Fourteenth Air Force-Robins		173	195		371	610		544	805	131	117	675	922
ROTC INSTRUCTORS													
First Air Force			73			68			141				141
Fourth Air Fprce			85			73			158				158
Ninth Air Force			106			130			236				236
Tenth Air Force			142			136			278				278
Twelfth Air Force			83			74			157				157
Fourteenth Air Force			72			72			144				144
AIR NATIONAL GUARD INSTRUCTORS													
First Air Force		36	32		76	71		112	103			112	103
Fourth Air Force		30	32		78	73		108	105			108	105
Ninth Air Force		34	27		72	70		106	97			106	97
Tenth Air Force		53	51		115	101		168	152			168	152
Twelfth Air Force		18	13		31	31		49	44			49	44
Fourteenth Air Force		20	18		42	46		62	64			62	64

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIR RESERVE TRAINING CENTERS													
First Air Force - Totals		98	77		833	887		931	964	351	261	1 282	1 225
2230th-Floyd Bennett		35	35		330	407		365	442	140	121	505	563
2233rd-Mitchel		28	11		168	132		196	143	60		256	143
2234th-Hanscom		35	31		335	348		370	379	151	140	521	519
Fourth Air Force - Totals		108	102		1 191	1 235		1 299	1 337	303	251	1 602	1 588
2343rd-Portland		39	34		423	443		462	477	114	85	576	562
2346th-Hamilton		25	22		184	172		209	194	60	55	269	249
2347th-Long Beach		44	46		584	620		628	666	129	111	757	777
Ninth Air Force - Totals		133	100		1 437	1 410		1 570	1 510	338	305	1 908	1 815
2236th-Godman		35	28		274	303		309	331	110	108	419	439
2237th-Reading, Pa		35	23		389	375		424	398	110	87	534	485
2239th-Greater Pittsburg		35	26		488	422		523	448	110	103	633	551
2240th-Cleveland		28	23		286	310		314	333	8	7	322	340
Tenth Air Force - Totals		238	189		2 141	2 243		2 379	2 432	912	761	3 291	3 193
2242nd-Selfridge		28	22		223	218		251	240	72	66	323	306
2465th-Wold-Chamberlain		35	23		328	332		363	355	110	84	473	439
2466th-Atterbury		38	37		390	485		428	522	143	86	571	608
2469th-Scott		28	20		223	226		251	246	60	52	311	298
2471st-O'Hare		46	44		402	431		448	475	357	344	805	819
2472nd-Fairfax		35	26		352	329		387	355	110	91	497	446
2473rd-Offutt		28	17		223	222		251	239	60	38	311	277

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIR RESERVE TNG CTRS (Cont'd)													
Twelfth Air Force - Totals		63	53		606	695		669	748	170	145	839	893
2592nd-Tinker		28	25		253	301		281	326	60	53	341	379
2596th-Hensley		35	28		353	394		388	422	110	92	498	514
Fourteenth Air Force-Totals		140	117		1 590	1 435		1 730	1 552	440	377	2 170	1 929
2584th-Memphis		34	30		398	356		432	286	110	107	542	493
2585th-Miami		34	35		380	320		414	355	110	101	524	456
2587th-Birmingham		34	25		392	350		426	375	110	103	536	478
2589th-Marietta		38	27		420	409		458	436	110	66	568	502
Fighter Wings													
First Air Force - Totals	257	31	420	2 170	606	2 557	2 527	637	2 977	408	377	3 572	3 354
33rd Ftr Wg-Otis-Total	193	16	260	1 254	362	1 452	1 447	378	1 711	212	198	2 037	1 909
33rd Ftr Wg- Hq & Hq Sq	26	1	33	50	15	148	76	16	181	212	198	304	379
33rd Ftr Gp Hq	11		14	25		25	36		39			36	39
58th Ftr Sq (Jet)	30		46	114		93	144		139			144	139
59th Ftr Sq (Jet)	30		47	114		83	144		130			144	130
60th Ftr Sq (Jet)	30		46	114		88	144		134			144	134
33rd Maint & Supply Gp Hq	4		5	10	12	19	14	12	24			26	24
33rd Maint Sq	9		7	121	59	117	130	59	124			189	124
33rd Supply Sq	7	3	8	85	15	113	92	18	121			110	121
33rd Motor Vehicle Sq	4		5	127	44	126	131	44	131			175	131
33rd Comm Sq	4		4	52	3	46	56	3	50			59	50
33rd Air Base Gp Hq	9	9	19	60	104	156	69	113	175			182	175
33rd Air Police Sq	3		2	70	10	69	73	10	71			83	71
33rd Food Service Sq	4		3	102		95	106		98			106	98
33rd Installations Sq	4		5	70	72	99	74	72	104			146	104

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont'd)													
First Air Force (Cont'd)													
33rd Base Service Sq	2		2	64	16	69	66	16	71			82	71
33rd Finance Disb Unit	2		3	9		15	11		18			11	18
33rd Medical Gp	.14	3	11	67	12	90	81	15	101			96	101
52nd Ftr Wg-McGuire-Total	164	15	160	916	244	1 106	1 080	259	1 266	196	179	1 535	1 445
52nd Ftr Wg- Hq & Hq Sq	26	2	14	50	6	68	76	8	82	196	179	280	261
52nd Ftr Gp Hq	12		14	25		29	37		43			37	43
2nd Ftr Sq (Wea.)	23		32	97		93	130		125			130	125
5th Ftr Sq (Wea.)	33		34	97		100	130		134			130	134
52nd Maint & Supply Gp Hq	4	1	7	10	14	21	14	15	28			29	28
52nd Maint Sq	8	2	8	87	32	99	95	34	107			129	107
52nd Supply Sq	6	1	9	62		83	68	1	92			69	92
52nd Motor Vehicle Sq	3	1	4	89	57	152	92	58	156			150	156
52nd Air Base Gp Hq	9	7	21	60	59	153	69	66	174			135	174
52nd Comm Sq	4		1	39	3	36	43	3	37			46	37
52nd Air Police Sq	2		2	48	10	49	50	10	51			60	51
52nd Food Service Sq	3		3	72	12	69	75	12	72			87	72
52nd Installations Sq	3	1	5	59	51	82	62	52	87			114	87
52nd Base Service Sq	2		2	45		40	47		42			47	42
52nd Finance Disb Unit	2		1	9		5	11		6			11	6
52nd Medical Gp	14		3	67		27	81		30			81	30
Fourth Air Force - Totals	390	88	485	2 267	1 329	3 475	2 657	1 417	3 960	681	610	4 755	4 570
78th Ftr Wg-Hamilton-Total	193	62	282	1 254	1 057	2 128	1 447	1 119	2 410	528	470	3 094	2 880
78th Ftr Wg- Hq & Hq Sq	26	5	30	50	33	94	76	38	124	528	470	642	594
78th Ftr Gp Hq	11		9	25		22	36		31			36	31

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont'd)													
Fourth Air Force (Cont'd)													
82nd Ftr Sq (Jet)	30		45	114		99	144		144			144	144
83rd Ftr Sq (Jet)	30		44	114		98	144		142			144	142
84th Ftr Sq (Jet)	30		46	114		96	144		142			144	142
78th Maint & Supply Gp Hq	4	3	5	10	40	55	14	43	60			57	60
78th Maint Sq	9	2	12	121	125	147	130	127	159			257	159
78th Supply Sq	7	5	o	85	109	161	92	114	172			206	172
78th Motor Vehicle Sq	4		4	127	84	220	131	84	224			215	224
78th Air Base Gp Hq	9	20	24	60	396	487	69	416	511			485	511
78th Comm Sq	4		3	52	10	52	56	10	55			66	55
78th Air Police Sq	3	1	3	70	60	115	73	61	118			134	118
78th Food Service Sq	4	1	2	102	96	193	106	97	195			203	195
78th Installations Sq	4	1	5	70	59	135	74	60	140			134	140
78th Base Service Sq	2		2	64		23	66		25			66	25
78th Finance Disb Unit	2	2	4	9	21	28	11	23	32			34	32
78th Medical Gp	14	22	36	67	24	100	81	46	133			127	136
325th Ftr Wg-Moses-Total	197	26	203	1 013	272	1 347	1 210	298	1 550	153	140	1 661	1 690
325th Ftr Wg- Hq & Hq Sq	26	3	22	50	15	73	76	18	95	153	140	247	235
325th Ftr Gp	12		11	25		24	37		35			37	35
317th Ftr Sq (Wea.)	33		34	97		84	130		118			130	118
318th Ftr Sq McChord (Wea)	33		31	97		91	130		122			130	122
319th Ftr Sq (Wea)	33		34	97		89	130		123			130	123
325th Maint & Supply Gp Hq	4	2	4	10	17	29	14	19	33			33	33
325th Maint Sq	8		7	87	39	102	95	39	109			134	109
325th Supply Sq	6	6	9	62	51	136	68	57	145			125	145
325th Motor Vehicle Sq	3		2	89	19	110	92	19	112			111	112

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont'd)													
Fourth Air Force (Cont'd)													
325th Air Base Gp Hq	9	9	17	60	26	124	69	35	141			104	141
325th Comm Sq	4		2	39	17	53	43	17	55			60	55
325th Air Police Sq	2		4	48	22	91	50	22	95			72	95
325th Food Service Sq	3		2	72	30	90	75	30	92			105	92
325th Installations Sq	3		4	59	33	116	62	33	120			95	120
325th Base Service Sq	2		1	45		41	47		42			47	42
325th Finance Disb Unit	2		2	9	3	12	11	3	14			14	14
325th Medical Gp	14	6	17	67		82	81	6	99			87	99
Ninth Air Force - Totals	193	56	288	1 236	651	2 245	1 429	707	2 533	644	601	2 780	3 134
4th Ftr Wg-Langley-Total	193	56	288	1 236	651	2 245	1 429	707	2 533	644	601	2 780	3 134
4th Ftr Wg-Hq & Hq Sq	26	10	44	50	25	82	76	35	126	644	601	755	727
4th Ftr Gp Hq	11		13	25		28	36		41			36	41
334th Ftr Sq (Jet)	30		35	108		107	138		142			138	142
335th Ftr Sq (Jet)	30		35	108		111	138		146			138	146
336th Ftr Sq (Jet)	30		36	108		114	138		150			138	150
4th Maint & Supply Gp Hq	4	1	5	10	27	43	14	28	48			42	48
4th Maint Sq	9	3	12	121	114	234	130	117	246			247	246
4th Supply Sq	7	3	10	85	15	174	92	18	184			110	184
4th Motor Vehicle Sq	4	1	6	127	45	241	131	46	247			177	247
4th Air Base Gp Hq	9	18	37	60	235	317	69	253	354			322	354
4th Comm Sq	4	1	2	52		62	56	1	64			57	64
4th Air Police Sq	3		4	70	40	148	73	40	152			113	152
4th Food Service Sq	4	2	7	102	80	199	106	82	206			188	206
4th Installations Sq	4	4	6	70	62	210	74	66	216			140	216
4th Base Service Sq	2		2	64		43	66		45			66	45

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	Non T/O					
FIGHTER WINGS (Cont'd)													
Ninth Air Force (Cont'd)													
4th Finance Disb Unit	2		3	9		17	11		20			11	20
4th Medical Gp	14	13	31	67	8	115	81	21	146			102	146
Tenth Air Force - Totals	193	26	238	1 223	244	1 580	1 416	270	1 818	248	242	1 934	2 060
56th Ftr Wg-Selfridge-Tot	193	26	238	1 223	244	1 580	1 416	270	1 818	248	242	1 934	2 060
56th Ftr Wing Hq & Hq Sq	26	6	41	50		68	76	6	109	248	242	330	351
56th Ftr Gp	11		15	25		20	36		35			36	35
61st Ftr Jet Sq	30		32	105		107	135		139			135	139
62nd Ftr Jet Sq	30		37	105		110	135		147			135	147
63rd Ftr Jet Sq	30		32	105		102	135		134			135	134
56th Maint & Supply Gp Hq	4	1	5	8	9	22	12	10	27			22	27
56th Maint Sq	9		8	121	14	128	130	14	136			144	136
56th Supply Sq	7	2	7	83	76	164	90	78	171			168	171
56th Motor Vehicle Sq	4	1	6	127	26	152	131	27	158			158	158
56th Air Base Gp Hq	9	9	23	60	33	169	69	42	192			111	192
56th Comm Sq	4		2	52	13	65	56	13	67			69	67
56th Installations Sq	4		4	70	49	137	74	49	141			123	141
56th Base Service Sq	2		3	64		41	66		44			66	44
56th Food Service Sq	4		4	102	24	118	106	24	122			130	122
56th Finance Disb Unit	2		1	9		15	11		16			11	16
56th Air Police Sq	3		3	70		97	73		100			73	100
56th Medical Gp	14	7	15	67		65	81	7	80			88	80
Twelfth Air Force - Totals	184		203	1 208		1 018	1 392		1 221	5	4	1 397	1 225
81st Ftr Wg-Kirtland-Tot	184		203	1 208		1 018	1 392		1 221	5	4	1 397	1 225
81st Ftr Wg-Hq & Hq Sq	26		28	50		59	76		87	5	4	81	91

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont'd)													
Twelfth Air Force (Cont'd)													
81st Ftr Gp	11		9	25		23	36		32			36	32
91st Ftr Sq (Jet)	30		37	108		74	138		111			138	111
92nd Ftr Sq (Jet)	30		38	108		78	138		116			138	116
93rd Ftr Sq (Jet)	30		40	108		75	138		115			138	115
81st Maint & Supply Gp Hq	4		5	10		10	14		15			14	15
81st Maint Sq	9		9	121		101	130		110			130	110
81st Supply Sq	7		6	85		86	92		92			92	92
81st Motor Vehicle Sq	4		4	127		129	131		133			131	133
81st Air Base Gp Hq	9		12	60		71	69		83			69	83
81st Comm Sq	4		3	52		45	56		48			56	48
81st Installations Sq	4		4	70		57	74		61			74	61
81st Base Service Sq	2		1	64		41	66		42			66	42
81st Food Service Sq	4		3	102		92	106		95			106	95
81st Finance Disb Unit	2			9		8	11		8			11	8
81st Air Police Sq	3		2	70		39	73		41			73	41
81st Medical Gp	5		2	39		30	44		32			44	32
Fourteenth Air Force-Totals	386	47	493	2 508	368	2 518	2 894	415	3 011	446	439	3 755	3 450
20th Ftr Wg-Shaw-Total	193	22	241	1 254	197	1 394	1 447	219	1 635	219	220	1 885	1 855
20th Ftr Wg - Hq & Hq Sq	26	22	36	50	197	53	76	219	89	219	220	514	309
20th Ftr Gp	11		15	25		22	36		37			36	37
55th Ftr Jet Sq	30		30	114		110	144		140			144	140
77th Ftr Jet Sq	30		34	114		105	144		139			144	139
79th Ftr Jet Sq	30		48	114		101	144		149			144	149
20th Maint & Supply Gp Hq	4		5	10		16	14		21			14	21
20th Maint Sq	9		9	121		106	130		115			130	115

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont'd)													
Fourteenth Air Force (Cont'd)													
20th Supply Sq	7		10	85		152	92		162			92	162
20th Motor Vehicle Sq	4		4	127		144	131		148			131	148
20th Air Base Gp Hq	9		22	60		155	69		177			69	177
20th Comm Sq	4		3	52		45	56		48			56	48
20th Installations Sq	4		4	70		82	74		86			74	86
20th Base Service Sq	2		2	64		101	66		103			66	103
20th Food Service Sq	4		2	102		68	106		70			106	70
20th Finance Disb Unit	2		1	9		9	11		10			11	10
20th Air Police Sq	3		2	70		62	73		64			73	64
20th Medical Gp	14		14	67		63	81		77			81	77
31st Ftr Wg-Turner-Total	193	25	252	1 254	171	1 124	1 447	196	1 370	227	219	1 870	1 595
31st Ftr Wing Hq & Hq Sq	26	25	28	50	171	45	76	196	73	227	219	499	292
31st Ftr Gp	11		11	25		16	36		27			36	27
307th Ftr Jet Sq	30		43	114		101	144		144			144	144
308th Ftr Jet Sq	30		42	114		95	144		137			144	137
309th Ftr Jet Sq	30		42	114		96	144		138			144	138
31st Maint & Supply Gp Hq	4		6	10		10	14		16			14	16
31st Maint Sq	9		7	121		74	130		81			130	81
31st Supply Sq	7		9	85		103	92		112			92	112
31st Motor Vehicle Sq	4		5	127		98	131		103			131	103
31st Air Base Gp Hq	9		24	60		104	69		128			69	128
31st Comm Sq	4		2	52		40	56		42			56	42
31st Base Service Sq	2		1	64		36	66		37			66	37
31st Food Service Sq	4		4	102		63	106		67			106	67
31st Air Police Sq	3		3	70		64	73		67			73	67

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

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Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont'd)													
FOURTEENTH AIR FORCE (Cont'd)													
31st Finance Disb Unit	2		2	9		9	11		11			11	11
31st Installations Sq	4		7	70		88	74		95			74	95
31st Medical Gp	14		16	67		82	81		98			81	98
Troop Carrier Wings													
Fourth Air Force - Totals	231	41	314	1 321	352	1 762	1 552	393	2 076	277	279	2 222	2 355
62nd TC Wg-McChord-Total	231	41	314	1 321	352	1 762	1 552	393	2 076	277	279	2 222	2 355
62nd TC H Wing Hq & Hq Sq	26	6	29	50	20	73	76	26	102	277	279	379	381
62nd TC H Gp	13		11	28		31	41		42			41	42
4th TC H Sq	43		63	142		130	185		193			185	193
7th TC H Sq	43		61	142		129	185		190			185	190
8th TC H Sq	43		62	142		150	185		212			185	212
62nd Maint & Supply Gp Hq	4	2	5	10	10	18	14	12	23			26	23
62nd Maint Sq	9	3	8	159	43	157	168	46	165			214	165
62nd Supply Sq	7	3	10	77	56	137	84	59	147			143	147
62nd Motor Vehicle Sq	4	1	4	124	51	189	128	52	193			180	193
62nd Air Base Gp	8	18	27	55	113	230	63	131	257			194	257
62nd Air Police Sq	3		3	70	23	110	73	23	113			96	113
62nd Food Service Sq	4		2	115	14	109	119	14	111			133	111
62nd Comm Sq	4		2	52	3	57	56	3	59			59	59
62nd Installations Sq	4	2	6	79	15	152	83	17	158			100	158
62nd Finance Disb Unit	2		1	9	4	18	11	4	19			15	19
62nd Medical Gp	14	6	20	67		72	81	6	92			87	92

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ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
TROOP CARRIER WINGS (Cont'd)													
Fourteenth Air Force -Totals	477	22	425	1 898	173	1 545	2 375	195	1 970	208	191	2 778	2 161
314th TC Wing-Smyrna-Tot	477	22	425	1 898	173	1 545	2 375	195	1 970	208	191	2 778	2 161
314th TC Med Wing Hq&Hq Sq	26	22	34	50	173	53	76	195	87	208	191	479	278
314th TC Med Gp	13		12	28		25	41		37			41	37
50th TC Med Sq	75		78	160		150	235		228			235	228
61st TC Med Sq	75		1	160		1	235		2			235	2
62nd TC Med Sq	43		50	138		33	181		83			181	83
314th Maint & Supply Gp Hq	4		6	10		12	14		18			14	18
314th Maint Sq	9		7	164		117	173		124			173	124
314th Supply Sq	7		12	77		99	84		111			84	111
314th Motor Vehicle Sq	4		3	121		84	125		87			125	87
314th Air Base Gp	8		21	55		139	63		160			63	160
314th Air Police Sq	3		2	70		45	73		47			73	47
314th Base Service Sq	2		1	64		75	66		76			66	76
314th Food Service Sq	4		3	115		62	119		65			119	65
314th Comm Sq	4		3	52		41	56		44			56	44
314th Installations Sq	4		7	76		94	80		101			80	101
314th Finance Disb Unit	2		2	9		13	11		15			11	15
314th Medical Gp	20		11	77		106	97		117			97	117
316th TC H Gp	13		14	28		27	41		41			41	41
36th TC H Sq	43		42	142		115	185		157			185	157
37th TC H Sq	43		42	142		123	185		165			185	165
75th TC Med Sq	75		74	160		131	235		205			235	205
BOMB LIGHT SQUADRONS													
Ninth Air Force - Totals	110		65	386		384	496		449			496	449
84th BL Jet Sq	55		30	193		192	248		222			248	222

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Summary of Authorized and Assigned Personnel

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Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
BOMB LIGHT GROUP (Cont'd)													
Ninth Air Force (Cont'd)													
85th FL Jet Sq	55		35	193		192	248		227			248	227
TAC Recon Groups													
Ninth Air Force - Totals	78		53	175		188	243		241			243	241
363rd RCT-Langley-Total	78		53	175		188	243		241			243	241
363rd RCT Gp Hq	14		18	23		24	37		42			37	42
162nd TAC Recon Photo (N)	64		35	152		164	216		199			216	199
AIR BASE GROUPS													
First Air Force - Totals		173	175		2 002	1 977		2 175	2 152	1 052	1 050	3 227	3 202
2226th AB Gp-Slocum-Total		35	28		343	315		378	343	18	18	396	361
2226th AB Gp Hq & Hq Sq		8	5		45	34		53	39	18	18	71	57
2226th Base Service Sq		23	20		242	233		265	253			265	253
2226th Assembly & Proc Sq		4	3		56	48		60	51			60	51
2500th AB Gp-Mitchel-Tot		97	111		1 212	1 152		1 309	1 263	734	734	2 043	1 997
2500th AB Gp Hq & Hq Sq		10	9		33	1		43	10	734	734	777	744
2500th Base Service Sq		33	47		571	542		604	589			604	589
2500th Maint Supply Sq		14	18		477	466		491	484			491	484
2500th Medical Sq		40	37		131	143		171	180			171	180
4400th AB Gp-Stewart-Tot		41	36		447	510		488	546	300	298	788	844
4400th AB Gp Hq & Hq Sq		25	22		160	190		185	212	300	298	485	510
4401st Maint & Supply Sq		7	7		152	196		159	203			159	203
4402nd Air Installations Sq		2	3		108	93		110	96			110	96
4403rd Medical Sq		7	4		27	31		34	35			34	35

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ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIR BASE GROUPS (Cont'd)													
TENTH AIR FORCE - TOTALS		80	54		544	630		614	684	214	201	828	885
2463rd AB Gp-Ft Ben Harr-Tot		80	54		544	630		614	684	214	201	828	885
2463rd AB Hq & Hq Sq		80	28		544	127		614	155	214	201	828	356
2463rd Maint & Supply Sq			6			222			228				228
2463rd Air Police Sq			3			56			59				59
2463rd Opns Sq			5			35			40				40
2463rd Air Installations Sq			3			82			85				85
2463rd Food Service Sq			1			49			50				50
2463rd Medical Sq			8			59			67				67
TWELFTH AIR FORCE - TOTALS		46	50		377	523		423	573	194	192	617	765
2595th AB Gp-Brooks-Total		46	50		377	523		423	573	194	192	617	765
2595th AB Gp Hq& Hq Sq		16	19		51	81		67	100	194	192	261	292
2595th Maint & Supply Sq		11	12		139	202		150	214			150	214
2595th Base Service Sq		8	8		148	190		156	198			156	198
2595th Opns Sq		7	6		25	32		32	38			32	38
2595th Medical Sq		4	5		14	18		18	23			18	23
FOURTEENTH AIR FORCE - TOTALS		93	60		810	477		903	537	50	49	953	586
2583rd AB Gp-Orlando-Total		93	60		810	477		903	537	50	49	953	586
2583rd AB Gp Hq & Hq Sq		28	22		127	115		155	137	50	49	205	186
2583rd Maint & Supply Sq		8	5		79	66		87	71			87	71
2583rd Base Service Sq		9	9		208	190		217	199			217	199
2583rd Assembly Sq													
2583rd Opns Sq		17	8		329	66		346	74			346	74
2583rd Medical Sq		31	16		67	40		98	56			98	56

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

TABLE III

ORGANIZATION		OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
		AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
		T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIR BASE SQUADRONS														
2260th-Lockbourne	9AF		20	27		150	180		170	207		17	170	224
4404th-Dover	9AF		4	4		98	76		102	80		18	102	98
4405th-Sherman	10AF		12	12		140	123		152	135	30	30	182	165
4406th-Marshall	10AF		12	19		139	168		151	187	30	30	181	217
2600th-Pope	14AF		23	21		149	419		172	440	40	37	212	477
4408th-Lawson	14AF		41	31		239	230		280	261	72	72	352	333
BASE SERVICE SQUADRONS														
2476th Base Service Sq	10AF		2	3					2	3	14	14	16	17
COMMUNICATIONS SQUADRONS														
28th-Mitchel	CNC	9		10	186		180	195		190			195	190
34th Mitchel	1AF	6		6	82		70	88		76			88	76
35th-Hamilton	4AF	6		4	82		91	88		95			88	95
29th-Langley	9AF	6		6	82		86	88		92			88	92
36th-Ft Ben Harr	10AF	6		5	82		56	88		61			88	61
40th-Brooks	12AF	6		3	82		88	88		91			88	91
37th-Robins	14AF	6		4	82		87	88		91			88	91
AIRCRAFT CONTROL & WG GPS														
FIRST AIR FORCE - TOTALS		147		169	1 514		1 527	1 661		1 696			1 661	1 696
503rd AC/W Gp-Roslyn-Tot		147		169	1 514		1 527	1 661		1 696			1 661	1 696
503rd AC/W Gp Hq & Hq Sq		16		49	35		165	51		214			51	214
645th AC Sq-Selfridge		14		26	171		214	185		240			185	240
646th AC/W-Roslyn		28		30	350		324	378		354			378	354
647th AC/W Sq-Grenier		28		20	343		245	371		265			371	265
648th AC/W Sq-Pine Camp		45		19	503		321	548		340			548	340

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

TABLE III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIRCRAFT CONTROL & WG GPS (Cont)													
FIRST AIR FORCE (Cont'd)													
672nd AC/W Sq-Gravely Pt.	16		25	112		258	128		283			128	283
FOURTH AIR FORCE-TOTALS	76		73	800		707	876		780			876	780
505th AC/W Gp-Silver Lake-Tot	76		73	800		707	876		780			876	780
505th AC/W Gp Hq & Hq Sq	16		24	35		62	51		86			51	86
634th AC Sq-Everett	14		12	175		153	189		165			189	165
635th AC/W Sq-Paine Fld	23		20	295		260	318		280			318	280
637th AC/W-Moses Lake	23		17	295		232	318		249			318	249
TACTICAL CONTROL GROUPS													
FOURTEENTH AIR FORCE - TOTAL	90		77	986		733	1 076		810			1 076	810
502nd TCT Gp-POPE-Total	90		77	986		733	1 076		810			1 076	810
502nd TCT Gp Hq & Hq Sq	16		14	38		38	54		52			54	52
605th TAC Control Sq-Pope	20		21	210		171	230		192			230	192
606th AC/W Sq-Shaw	19		17	241		171	260		188			260	188
607th AC/W Sq-Turner	35		25	497		353	532		378			532	378
WAF SQUADRONS													
2243rd-Mitchel 1AF		1	1		7	34		8	35			8	35
2350th-Moses Lake 4AF			1			22			23				23
2351st-Hamilton 4AF		1	1		27	48		28	49			28	49
4412th-Langley 9AF		2	1		3	4		5	5			5	5
2475th-Ft Ben Harr 10AF		1	1		1	42		2	43			2	43

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

TABLE III

ORGANIZATION		OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
		AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
		T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
ORPDP'S														
2225th-Kilmer	1AF		38	36		355	364		393	400	37	25	430	425
2349th-Hamilton	4AF		47	31		476	396		523	427	22	20	545	447
2594th-Cp Leroy John	12AF		12	24		54	218		66	242	8	8	74	250
RADAR CALIB DETACHMENTS														
11th-Hamilton	4AF	9		5	26		26	35		31			35	31
7th- Langley	9AF	9		4	26		9	35		13			35	13
12th-Langley	9AF	9		9	26		26	35		35			35	35
5th-Pope	14AF	7		7	17		18	24		25			24	25
STANDBY BASE SQUADRONS														
2263rd-Grenier	1AF		5	128		150	1 133		155	1 261	20	27	175	1 288
2264th-Dow	1AF		5	92		150	836		155	928	26	26	181	954
2603rd-Greenville	14AF			87			927			1 014	50	50	50	1 054
2610th-Hawkins	14AF		1	1					1	1	11	7	12	8
4409th-Moody	14AF		1	1					1	1	11	11	12	12
AIR DIVISIONS														
26th-Roslyn	ADC	18		8	31		15	49		23				
25th-Silver Lake	4AF	18		7	31		11	49		18			49	18
8th-Pope	14AF	18		20	31		25	49		45			49	45
9th-Pope	14AF	18		12	31		18	49		30			49	30
AVIATION SQUADRONS														
2244th - Mitchel	1AF		3	1		35	63		38	64			38	64
2352nd - Hamilton	4AF					130	133		130	133			130	133
2599th- Brooks	12AF						42			42				42

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization And By Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AVIATION SQUADROND (Cont'd)													
2598th-Orlando 14AF						112			112				112
HOSPITAL SQUADRONS													
FIRST AIR FORCE - TOTALS		1	16		53	25		54	41			54	41
2200th-Waltham		1	16		53	25		54	41			54	41
FOURTH AIR FORCE - TOTALS		16	72		228	141		244	213			244	213
2209th-San Francisco		6	47		138	85		144	132			144	132
2210th-Tacoma		10	25		90	56		100	81			100	81
NINTH AIR FORCE - TOTALS		42	83		225	140		267	223			267	223
2201st-Washington, D.C.		34	44		103	82		137	126			137	126
2203rd-Phoenixville		8	39		122	58		130	97			130	97
TENTH AIR FORCE - TOTALS		24	65		248	64		272	129			272	129
2204th-Battle Creek		8	32		90	37		98	69			98	69
2208th-Denver		16	33		158	27		174	60			174	60
TWELFTH AIR FORCE - TOTALS		28	107		398	314		426	421			426	421
2205th-Hot Springs		1	17		33	23		34	40			34	40
2206th-Ft Sam Houston		26	65		308	254		334	319			334	319
2207th-El Paso		1	25		57	37		58	62			58	62
FOURTEENTH AIR FORCE - TOTAL		18	26		85	5		103	31			103	31
2202nd-Augusta		18	26		85	5		103	31			103	31

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and By Air Force

TABLE III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON-T/O		T/O E	NON T/O		T/O E	NON T/O					
ARMAMENT SQUADRON CHEMICAL													
2nd-Shaw 14AF	4		1	104		49	108		50			108	50
AIR FORCE BANDS													
FIRST AIR FORCE - TOTALS	1		1	34		38	35		39			35	39
581st-Mitchel	1		1	34		38	35		39			35	39
FOURTH AIR FORCE - TOTALS	1		1	34		35	35		36			35	36
573rd-Hamilton	1		1	34		35	35		36			35	36
NINTH AIR FORCE - TOTALS	1		1	34		35	35		36			35	36
564th-Langley	1		1	34		35	35		36			35	36
TENTH AIR FORCE - TOTALS	1		1	34		36	35		37			35	37
691st-Ft Ben Harrison	1		1	34		36	35		37			35	37
TWELFTH AIR FORCE - TOTALS	1		1	34		23	35		24			35	24
579th-Brooks	1		1	34		23	35		24			35	24
FOURTEENTH AIR FORCE - TOTALS	1		1	34		28	35		29			35	29
769th-Robins 14AF	1		1	34		28	35		29			35	29
SIGNAL BATTALION (SEPARATE)													
934th-Pope 14AF	26		14	329		317	355		331			355	331
SHORAN BEACON UNITS													
1st-Langley 9AF	2		3	12		17	14		20			14	20

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization And By Air Force

TABLE III

ORGANIZATION		OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
		AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
		T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
TAC RECON (PHOTO J)														
161st-Shaw	14AF	28		30	114		113	142		143			142	143
MOTOR TRANS SQUADRONS														
30th-Shaw	14AF	4		1	97		65	101		66			101	66
ASSAULT SQUADRON (L)														
2601-Smyrna	14AF		39	42		125	119		164	161			164	161
BOMB DISPOSAL UNITS														
4410th-Greenville	14A[illegible]		1	1		6	10		7	11			7	11
AIR POLICE SQUADRONS														
2597th-Brooks	12AF		1	1		40	73		41	74	1		42	74
TOW TARGET SQUADRONS														
2602nd-Bi[illegible]s	12AF		42	36		219	210		261	246			261	246
RECON TECH SQUADRONS														
363rd RTC Sq-Langley	9AF	10		7	119		101	129		108			129	108
RADIO RELAY SQ														
2nd-Pope	14AF	6		1	94		9	100		10			100	10
LIAISON FLIGHTS														
2nd-Langley	9AF	4		1	11			15		1			15	1
1st-Biggs	12AF	4		4	11		11	15		15			15	15
3rd-Lawson	14AF	4			11			15					15	

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CONTINENTAL AIR COMMAND

SUMMARY OF AUTHORIZED AND ASSIGNED PERSONNEL

BY TYPE ORGANIZATION AND B Y AIR FORCE.

TABLE III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED T/O E	AUTHORIZED NON T/O	ASGD	AUTHORIZED T/O E	AUTHORIZED NON T/O	ASGD	AUTHORIZED T/O E	AUTHORIZED NON T/O	ASGD	AUTH	EMPL	AUTH	AUTH & EMPL
LIAISON FLIGHTS (Cont'D) 4th Pope 14 AF	4			11			15					15	
HELICOPTER FLIGHT 5th Pope 14 AF	4		4	14		13	18		17			18	17
ENGINEER AVN MAINT CO. 919th-Cp Stoneham 4 AF			5			146			151				151
ENGINEER AVN BN. 803rd-McChord 4 AF	30		30	592		647	622		677			622	677
AIRCRAFT CONTROL & WG SQ 636th AC/W Sq Kirtland 12AF	23		16	295		173	318		189			318	189
WESTERN AIR DEFENSE FORCE 4AF			2			3			5	5	1	5	6

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30 June 1950

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CONTINENTAL AIR COMMAND

MONTHLY REPORT OF PERSONNEL STRENGTH

MICROFILMED

FS-P2b

AS OF

JUN 30 1950

SOURCES: AF-SC-P2
AF-SC-[illegible]
AF-SC-[illegible]

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PREPARED BY
HQ CONAC
OFFICE OF STATISTICAL SERVICES

2-3422-45

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FOREWORD

1. The strength data herein represents the number of authorized and assigned military and civilian personnel in the Continental Air Command as of 30 June 1950.

2. The authorized and assigned figures represent the following variables combined.

    a. Sex

    b. Race

    c. Departmental Status

3. The Authorizations shown herein are T/O and T/D. figures reflected separately.

4. The unallotted authorizations reported represent that portion of allotment for T/D. Units from Headquarters USAF not reallotted to any agency of the command.

5. Although Air National Guard and ROTC Instructors do compose part of the authorized and assigned complement of the headquarters and headquarters sq. of each air force, in this report the instructors are shown separately and are not included in the strength shown for each air force headquarters.

6. Data for Pipeline Personnel is included in Tables I and II only. Strength reflected in Tables III represent Permanent Party Personnel.

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Functional Category and Air Force

Table I

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
ConAC Grand Total	3 577	3 778	7 627	23 127	22 895	51 591	26 704	26 673	59 218	8 874	8 859	62 251	68 077
Permanent Party	3 577	3 778	7 017	23 127	22 895	46 298	26 704	26 673	53 315	8 874	8 859	62 251	62 174
Pipeline			610			5 293			5 903				5 903
FIRST AIR FORCE - TOTALS	652	598	1 273	4 646	4 183	9 849	5 298	4 781	11 122	1 935	1 944	12 014	13 066
Permanent Party	652	598	1 150	4 646	4 183	8 851	5 298	4 781	10 001	1 935	1 944	12 014	11 945
Pipeline			123			998			1 121				1 121
FOURTH AIR FORCE	940	583	1 960	6 623	4 596	15 195	7 563	5 179	17 155	1 751	1 757	14 493	18 912
Permanent Party	940	583	1 478	6 623	4 596	11 100	7 563	5 179	12 578	1 751	1 757	14 493	14 335
Pipeline			482			4 095			4 577				4 577
NINTH AIR FORCE - TOTALS	422	501	910	2 161	3 123	5 921	2 583	3 624	6 831	1 288	1 246	7 495	8 077
Permanent Party	422	501	905	2 161	3 123	5 844	2 583	3 624	6 749	1 288	1 246	7 495	7 995
Pipeline			5			77			82				82
TENTH AIR FORCE - TOTALS	341	648	886	2 380	4 036	6 588	2 721	4 684	7 494	1 481	1 537	8 886	9 011
Permanent Party	341	648	886	2 380	4 036	6 521	2 721	4 684	7 407	1 481	1 537	8 886	8 944
Pipeline						67			67				67
TWELFTH AIR FORCE - TOTALS	211	361	539	883	1 696	2 710	1 094	2 057	3 249	484	459	3 635	3 708
Permanent Party	211	361	539	883	1 696	2 710	1 094	2 057	3 249	484	459	3 635	3 708
Pipeline													
FOURTEENTH AIR FORCE - TOTALS	990	563	1 596	6 084	4 159	10 078	7 074	4 722	11 674	1 444	1 460	13 240	13 134
Permanent Party	990	563	1 596	6 084	4 159	10 022	7 074	4 722	11 618	1 444	1 460	13 240	13 078
Pipeline						56			56				56

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Functional Category and Air Force

Table I.

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	[illegible]IL	AUTH	ASGD & [illegible]IL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
ConAC Totals (Cont)													
ConAC Hq & Hq Sq		339	312		628	701		967	1 013	344	347	1 311	1 360
2220th Field Printing Sq		8	5		62	67		70	72	61	60	131	132
28th Comm Sq	9		8	186		189	195		197			195	197
ADC Hq & Hq Sq		1	1		1	1		2	2			2	2
TAC Hq & Hq Sq		66	62		43	44		109	106	35	33	144	139
EASTERN AIR DEFENSE FORCE		40	28		56	53		96	81	10	8	106	89
42nd Comm Sq	6		1	82		56	88		57			88	57
WESTERN AIR DEFENSE FORCE		45	40		57	58		102	98	11	8	113	106
43rd Comm Sq	6		6	82		81	88		87			88	87
Permanent Party Unallotted Authorisations		25			255			280		30		310	

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CONTINENTAL AIR COMMAND

Summary of Pipeline Personnel

By Air Force

Table II

AIR FORCE	FILLERS	DET. OF PATIENTS	RETURNEES FROM OVERSEAS	OVERSEAS REPLACEMENT	STUDENT	TOTAL
1st AF						
Officers	2	23	3	95		123
Enlisted	191	90	70	647		998
4th AF						
Officers			85	397		482
Enlisted	121	1	1 070	2 903		4 095
9th AF						
Officers	1	4				5
Enlisted	61	16				77
10th AF						
Officers						
Enlisted	67					67
12th AF						
Officers						
Enlisted						
14th AF						
Officers						
Enlisted	56					56
ConAC Comd Total-Offs	3	27	88	492		610
Enlisted	496	107	1 140	3 550		5 293

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/ O E	NON T/O					
Hq ConAC MITCHEL		339	312		628	701		967	1 013	344	347	1 311	1 360
Hq ADC MITCHEL		1	1		1	1		2	2			2	2
Hq TAC LANGLEY		66	62		43	44		109	106	35	33	144	109
2220th Field Printing Sq-Langley		8	5		62	67		70	72	61	60	131	132
EASTERN AIR DEFENSE-MITCHEL		40	28		56	53		96	81	10	8	106	89
WESTERN ADF HAMILTON		45	50		57	58		102	108	11	8	113	116
AIR FORCE HEADQUARTERS													
First Air Force - Mitchel		185	160		501	510		686	670	149	157	835	827
Fourth Air Force - Hamilton		188	184		469	414		657	598	149	139	806	737
Ninth Air Force - Langley		181	176		482	487		663	663	229	168	892	831
Tenth Air Force - Selfridge		200	156		603	569		803	725	287	256	1 090	981
Twelfth Air Force - Brooks		168	129		439	320		607	449	124	118	731	567
Fourteenth Air Force-Robins		177	177		554	555		731	732	170	188	901	920
ROTC INSTRUCTORS													
First Air Force		77	79		76	69		153	148			153	148
Fourth Air Force		89	90		84	101		173	191			173	191
Ninth Air Force		108	117		125	117		233	234			233	234
Tenth Air Force		156	151		158	170		314	321			314	321
Twelfth Air Force		70	95		64	63		134	158			134	158
Fourteenth Air Force		82	81		80	81		162	162			162	162

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table 111

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIR NATIONAL GUARD INSTRUCTORS													
First Air Force		29	31		76	75		105	106			105	106
Fourth Air Force		29	31		78	77		107	108			107	108
Ninth Air Force		26	29		72	65		93	94			93	94
Tenth Air Force		44	47		115	103		159	150			159	150
Twelfth Air Force		12	13		32	33		43	46			48	46
Fourteenth Air Force		16	17		42	47		53	64			58	64
AIR RESERVE TNG. CENTERS													
First Air Force - Totals		75	79		813	939		888	1 018	308	303	1 196	1 321
2230th - Floyd Bennett		19	21		249	331		268	352	115	113	383	465
2233rd - Mitchel		22	21		189	202		311	223	42	39	353	262
2234th - Hanscom		34	37		375	406		409	443	151	151	560	594
Fourth Air Force - Totals		99	106		1 178	1 231		1 277	1 337	362	362	1 639	1 699
2343rd - Portland		34	36		400	417		434	453	132	130	566	583
2345th - Hamilton		22	22		189	194		211	216	60	58	271	274
2347th - Long Beach		43	48		589	620		632	668	170	174	802	842
Ninth Air Force - Totals		133	107		1 406	1 569		1 539	1 676	450	420	1 989	2 096
2236th - Godman		33	27		298	345		331	372	109	111	440	483
2237th - New Castle Apt.		33	24		368	392		401	416	118	117	519	533
2239th - Greater Pittsburgh		34	27		372	376		406	403	134	109	640	512
2240th - Cleveland		33	29		368	456		401	485	89	83	490	568

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CONTINENTAL AIR COMMAND
Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table 111

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIR RESERVE TRAINING CTR (Cont)													
Tenth Air Force - Totals		207	202		2 300	2 532		2 507	2 734	803	874	3 310	3 608
2242nd - Selfridge		22	24		215	228		237	252	60	59	297	261
2465th - Wold-Chamberlain		34	33		371	419		405	452	127	138	532	590
2466th - Atterbury		34	32		396	437		430	469	143	193	573	662
2469th - Scott		22	21		215	249		237	270	60	61	297	331
2471st - O'Hare		45	47		606	614		651	661	259	272	910	933
2472nd - O'Lathe NAS		28	25		282	370		310	395	86	86	396	481
2473rd - Offutt		22	20		215	215		237	235	68	65	305	300
Twelfth Air Force - Totals		56	52		580	682		636	734	162	150	798	884
2592nd - Tinker		23	22		225	235		248	307	60	60	308	367
2596th - Hensley		33	30		355	397		388	427	102	90	490	517
Fourteenth Air Force -Totals		136	141		1 503	1 560		1 639	1 701	457	502	2 096	2 203
2584th - Memphis		34	32		368	399		402	431	125	126	527	557
2585th - Miami		33	33		370	380		403	413	121	113	524	531
2587th - Birmingham		33	34		380	396		413	430	93	97	506	527
2589th - Dobbins		36	42		385	385		421	427	118	161	539	588
FIGHTER WINGS													
First Air Force - Totals	348	33	403	2 151	654	2 936	2 499	687	3 339	452	447	3 638	3 786
33rd Ftr I Wg - Otis - Total	193	18	237	1 256	401	1 744	1 449	419	1 981	251	248	2 119	2 229
33rd Ftr I Wg - Hq & Hq Sq	30	2	36	64	24	99	94	26	135	251	248	371	383
33rd Ftr I Gp - Sq	11		9	25		25	36		34			36	34
58th Ftr I Sq	30		31	114		121	144		152			144	152
59th Ftr I Sq	30		32	114		126	144		158			144	158

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont)													
First Air Force -Totals (Cont)													
60th Ftr I Sq	30		32	114		120	144		152			144	152
33rd Maint & Supply Gp Hq	4		7	10	12	17	14	12	24			26	24
33rd Maint Sq	9		13	126	91	214	135	91	227			226	227
33rd Supply Sq	7	3	12	108	20	129	115	23	141			138	141
33rd Motor Vehicle Sq	4		5	143	44	170	142	44	175			191	175
33rd Comm Sq	4		5	52	3	71	56	3	76			59	76
33rd Air Base Gp Hq	9	8	29	60	97	247	69	105	276			174	276
33rd Air Police Sq	3		2	70	10	83	73	10	85			83	85
33rd Food Service Sq	4		3	102		93	106		96			106	96
33rd Installations Sq	4	2	7	87	88	164	91	90	171			181	171
33rd Medical Gp	14	3	14	67	12	65	81	15	79			96	79
52nd Ftr AW Wg-McGuire-Total	155	15	166	395	253	1 192	1 050	268	1 358	201	199	1 519	1 557
52nd Ftr AW Wg-Hq & Hq Sq	30	2	36	64	10	112	94	12	148	201	199	307	347
52nd Ftr AW Gp Hq	12		12	25		23	37		35			37	35
2nd Ftr AW Sq	33		25	97		95	130		120			130	120
5th Ftr AW Sq	33		31	97		98	130		129			130	129
52nd Maint & Supply Gp Hq	4	1	6	10	14	16	14	15	22			29	22
52nd Maint Sq	8	2	10	88	32	109	96	34	119			130	119
52nd Supply Sq	6	1	8	86		87	92	1	95			93	95
52nd Motor Vehicle Sq	3	1	4	93	57	124	101	58	128			159	128
52nd Air Base Gp Hq	9	7	14	60	64	169	69	71	133			140	133
52nd Comm Sq	4		2	39	3	43	43	3	45			46	45
52nd Air Police Sq	2		2	48	10	56	50	10	58			50	58

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	[illegible]	AUTH	ASGD & [illegible]
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont)													
First Air Force (Cont)													
52nd Food Service Sq	3		3	72	12	111	75	12	114			87	114
52nd Installations Sq	3	1	6	72	51	116	75	52	122			127	122
52nd Medical Gp	5		7	39		33	44		40			44	40
Fourth Air Force - Totals	586	104	768	3 533	1 843	5 570	4 119	1 947	6 338	926	936	6 992	7 274
78th Ftr I Wg-Hamilton-Total	193	53	298	1 256	814	2 235	1 449	867	2 533	414	424	2 730	2 957
78th Ftr I Wg-Hq & Hq Sq	30	11	49	64	74	170	94	85	219	414	424	593	643
78th Ftr I Gp Hq	11		12	25		22	36		34			36	34
82nd Ftr I Sq	30		37	114		115	144		152			144	152
83rd Ftr I Sq	30		37	114		115	144		152			144	152
84th Ftr I Sq	30		36	114		123	144		159			144	159
78th Maint & Supply Gp Hq	4	1	6	10	32	32	14	33	38			47	38
78th Maint Sq	9	3	13	126	105	282	135	108	295			243	295
78th Supply Sq	7	2	12	108	11	122	115	13	134			128	134
78th Motor Vehicle Sq	4		4	143	66	216	147	66	220			213	220
78th Air Base Gp	9	14	34	60	328	452	69	342	486			411	486
78th Comm Sq	4	1	5	52	13	77	56	14	82			70	82
78th Air Police S	3	1	3	70	62	122	73	63	125			136	125
78th Food Service Sq	4		3	102	50	157	106	50	160			156	160
78th Installations Sq	4	1	6	87	39	123	91	40	129			131	129
78th Medical Gp	14	19	41	67	34	107	81	53	148			134	148

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Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED T/O E	AUTHORIZED NON T/O	ASGD	AUTHORIZED T/O E	AUTHORIZED NON T/O	ASGD	AUTHORIZED T/O E	AUTHORIZED NON T/O	ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
FIGHTER WINGS (Cont)													
Fourth Air Force (Cont)													
325th Ftr AW Wg-McChord-Tot	200	27	247	1 100	510	1 533	1 300	537	1 780	339	340	2 176	2 120
325th Ftr AW Wg-Hq & Hq Sq	30	5	43	64	23	104	94	28	147	339	340	461	487
325th Ftr AW Gp	12		13	25		26	37		39			37	39
317 Ftr AW Sq	33		29	97		107	130		136			130	136
318th Ftr AW Sq	33		30	97		107	130		137			130	137
319th Ftr AW Sq-Larson	33		29	97		93	130		122			130	122
325th Maint & Sup Gp Hq	4	2	6	10	6	16	14	8	22			22	22
325th Maint Sq	8	2	13	88	115	175	96	117	188			213	188
325th Supply Sq	6	3	14	86	37	128	92	40	142			132	142
325th Motor Vehicle Sq	3	1	6	98	74	139	101	75	145			176	145
325th Air Base Gp Hq	9	9	29	60	106	194	69	115	223			184	223
325th Comm Sq	4	1	5	52	17	85	56	18	90			74	90
325th Air Police Sq	3		5	70	32	91	73	32	96			105	96
325th Food Service Sq	4		4	102	36	104	106	36	108			142	108
325th Installations Sq	4	1	5	87	52	94	91	53	99			144	99
325th Medical Gp	14	3	16	67	12	70	81	15	86			96	86
81st Ftr I Wg-Larson-Total	193	24	223	1 177	519	1 802	1 370	543	2 025	173	172	2 086	2 025
81st Ftr I Wg-Hq & Hq Sq	30	10	39	64	242	175	94	252	214	173	172	519	386
81st Ftr I Gp	11		8	25		22	36		30			36	30
91st Ftr I Sq	30		35	108		109	138		144			138	144
92nd Ftr I Sq	30		32	108		110	138		142			138	142
93rd Ftr I Sq-Kirtland	30		35	108		251	138		286			138	286
81st Maint & Sup Gp Hq	4	1	7	10	16	29	14	17	36			31	36

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Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont)													
Fourth Air Force (Cont)													
81st Maint Sq	9		8	121	60	162	130	60	170			190	170
81st Supply Sq	7	1	11	85	17	143	92	18	154			110	154
81st Motor Vehicle Sq	4		5	127	13	168	131	13	173			144	173
81st Air Base Gp Hq	9	3	14	60	35	174	69	38	188			107	188
81st Comm Sq	4	1	3	52	17	61	56	18	64			74	64
81st Installations Sq	4	1	4	70	67	108	74	68	112			142	112
81st Food Service Sq	4		3	102	27	146	106	27	149			133	149
81st Air Police Sq	3		1	70	25	81	73	25	82			98	82
81st Medical Gp	14	7	18	67		63	81	7	81			88	81
Ninth Air Force - Totals	193	51	273	1 238	1 015	2 590	1 431	1 066	2 863	609	650	3 106	3 526
4th Ftr I Wg-Langley-Total	193	51	273	1 238	1 015	2 590	1 431	1 066	2 863	609	650	3 106	3 526
4th Ftr I Wg-Hq & Hq Sq	30	13	53	64	50	144	94	63	197	609	650	766	855
4th Ftr I Gp Hq	11		10	25		25	36		35			36	35
334th Ftr I Sq	30		34	108		113	138		147			138	147
335th Ftr I Sq	30		34	108		111	138		145			138	145
336th Ftr I Sq	30		32	108		116	138		148			138	148
4th Maint & Supply Gp Hq	4	1	6	10	28	45	14	29	51			43	51
4th Maint Sq	9	3	13	126	263	358	135	266	371			401	371
4th Supply Sq	7	5	12	108	98	226	115	103	238			218	238
4th Motor Vehicle Sq	4	1	6	143	70	259	147	71	265			218	265
4th Air Base Gp Hq	9	10	27	60	229	366	69	239	393			308	393
4th Comm Sq	4	1	3	52	6	103	56	7	106			63	106
4th Air Police Sq	3		5	70	50	123	73	50	128			123	128

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O&E	NON T/O		T/O&E	NON T/O		T/O&E	NON T/O					
FIGHTER WINGS (Cont)													
Ninth Air Force-Total(Cont)													
4th Food Service Sq	4		5	102	96	250	106	96	255			202	255
4th Installations Sq	4	1	7	87	92	216	91	93	223			184	223
4th Medical Gp	14	16	31	67	23	135	81	49	166			130	166
Tenth Air Force - Totals	193	29	234	1 238	593	1 887	1 431	622	2 121	364	380	2 417	2 501
56th Ftr I Wg Selfridge-Tot	193	29	234	1 238	593	1 887	1 431	622	2 121	364	380	2 417	2 501
56th Ftr I Wg Hq & Hq Sq	30		40	64		111	94		151	364	380	458	531
56th Ftr I Gp	11	7	11	25	47	20	36	54	31			90	31
61st Ftr I Sq	30		33	108		111	138		144			138	144
62nd Ftr I Sq	30		33	108		106	138		139			138	139
63rd Ftr I Sq	30		32	108		116	138		148			138	148
56th Maint & Supply Gp Hq	4	1	6	10	9	24	14	10	30			24	30
56th Maint Sq	9		7	126	55	165	135	55	172			190	172
56th Supply Sq	7	2	6	108	40	156	115	42	162			157	162
56th Motor Vehicle Sq	4	1	4	143	21	151	147	22	155			169	155
56th Air Base Gp Hq	9	12	29	60	206	315	69	218	344			287	344
56th Comm Sq	4		2	52	11	76	56	11	78			67	78
56th Installations Sq	4		5	87	120	204	91	120	209			211	209
56th Food Service Sq	4		3	102	38	145	106	38	148			144	148
56th Air Police Sq	3		3	70	30	105	73	30	108			103	108
56th Medical Gp	14	6	20	67	16	82	81	22	102			103	102
Fourteenth Air Force - Totals	386	32	486	2 512	683	3 169	2 898	715	3 655	473	432	4 086	4 087
20th Ftr B Wg-Shaw-Totals	193	17	245	1 256	312	1 588	1 449	329	1 833	240	223	2 018	2 056
20th Ftr B Wg Hq & Hq Sq	30	2	48	64	29	80	94	31	128	240	223	365	351
20th Ftr B Gp	11		10	25		19	36		29			36	29

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Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table 111

ORGANIZATIONS	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTAL	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	[illegible]	AUTH	ASGD & [illegible]
	T/O&E	NON T/O		T/O&E	NON T/O		T/O&E	NON T/O					
FIGHTER WINGS (Cont)													
Fourteenth Air Force-Tot(Cont)													
55th Ftr Bomb Sq	30		30	114		125	144		155			144	155
77th Ftr Bomb Sq	[illegible]		35	114		134	144		159			144	159
79th Ftr Bomb Sq	30		30	114		118	144		148			144	148
20th Maint & Sup Gp Hq	4	2	9	10	13	17	14	15	26			29	26
20th Maint Sq	9		14	126	38	169	135	38	183			173	155
20th Supply Sq	7	2	10	108	16	145	115	18	155			133	183
20th Motor Vehicle Sq	4		5	143	53	173	147	53	178			200	178
20th Air Base Gp Sq	9	10	25	60	121	170	69	131	195			200	195
20th Comm Sq	4		5	52	2	68	56	2	73			58	73
20th Installations Sq	4	1	6	87	40	111	91	41	117			132	117
20th Food Service Sq	4		2	102		114	106		116			106	116
20th Air Police Sq	3		2	70		82	73		84			73	84
20th Medical Gp	14		14	67		63	81		77			81	77
31st Ftr B Wg-Turner-Tot	193	15	241	1 256	371	1 581	1 449	386	1 822	235	209	2 070	2 031
31st Ftr B Wg-Hq & Hq Sq	30	3	41	64	16	86	94	19	127	235	209	348	336
31st Ftr B G	11		10	25		25	36		35			36	35
307th Ftr Bomb Sq	30		33	114		126	144		159			144	159
308th Ftr Bomb Sq	30		29	114		111	144		140			144	140
309th Ftr Bomb Sq	30		36	114		133	144		169			144	169
31st Maint & Sup Gp Hq	4	1	6	10	15	21	14	16	27			30	27
31st Maint Sq	9		10	126	75	161	135	75	171			210	171
31st Supply Sq	7	2	13	108	24	129	115	26	142			141	142
31st Motor Vehicle Sq	4	1	5	143	69	188	147	70	193			217	193
31st Air Base Gp Hq	9	6	20	60	78	136	69	84	156			153	156

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
FIGHTER WINGS (Cont)													
Fourteenth Air Force (Cont)													
31st Comm Sq	4	1	5	52	6	69	56	7	74			63	74
31st Food Service Sq	4		5	102		109	106		114			106	114
31st Air Police Sq	3		3	70	32	101	73	32	104			105	104
31st Air Installations Sq	4	1	7	87	56	115	91	57	122			148	122
31st Medical Gp	14		18	67		71	81		89			81	89
TROOP CARRIER WINGS													
FOURTEENTH AIR FORCE TOTAL	387	25	384	1 719	528	2 059	2 106	553	2 443	223	222	2 882	2 665
314th TC Wg-Sewart-Totals	288	25	293	1 415	528	1 790	1 703	553	2 083	223	222	2 479	2 305
314th TCM Wg-Hq & Hq Sq	30	9	38	64	32	87	94	41	125	223	222	358	347
314th TCM Gp	13		12	28		27	41		39			41	39
50th TCM Sq	67		59	155		139	222		198			222	198
61st TCM Sq	67		60	155		156	222		216			222	216
62nd TCM Sq	43		41	138		133	181		174			181	174
314th Maint & Sup Gp Hq	4	1	5	10	13	17	14	14	22			28	22
314th Maint Sq	9		9	169	107	235	178	107	244			285	244
314th Supply Sq	7	2	9	100	47	119	107	49	128			156	128
314th Motor Vehicle Sq	4	1	7	134	60	156	138	61	163			199	163
314th Air Base Gp	9	9	20	55	136	218	64	145	238			209	238
314th Air Police Sq	3		2	20	20	78	73	20	80			93	80
314th Food Service Sq	4		4	115	29	145	119	29	149			148	149
314th Comm Sq	4	1	5	52	8	66	56	9	71			65	71
314th Installations Sq	4	1	6	93	76	141	97	77	147			174	147
314th Medical Gp	20	1	16	27		73	97	1	89			98	89

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Summary of Authorized and Assigned Personnel

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Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
TROOP CARRIER MEDIUM GROUPS													
316th TCM Gp-Totals	99		91	304		269	403		360			403	360
316th TCM GP-Hq & Hq Sq(14AF)	13		12	28		25	41		37			41	37
36th TCM SQ (14AF)	43		41	138		123	181		164			181	164
37th TCM Sq (14AF)	43		38	138		121	181		159			181	159
TROOP CARRIER GROUPS HEAVY													
Twelfth Air Force-Total	142		143	454		449	596		592		1	596	592
62 TCH GP Kelly-Total	142		143	454		449	596		592		1	596	592
62 TCH Gp	13		18	28		36	41		54			41	54
4 TCH Sq Larson	43		42	142		131	185		173			185	173
7 TCH Sq	43		44	142		140	185		184			185	184
8 TCH Sq	43		39	142		142	185		181			185	181
BOMB LIGHT SQUADRONS													
Ninth Air Force-Totals	110		109	386		370	496		479			496	479
84th BL Jet Sq	55		53	193		185	248		238			248	238
85th BL Jet Sq	55		56	193		185	248		241			248	241
TAC RECON GROUPS													
Ninth Air Force-Totals	78		42	176		193	254		235			254	235
363rd RCT-Langley-Total	78		12	176		23	254		35			254	35
363rd RCT-Gp Hq	14		12	23		23	37		35			37	35
162nd TAC Recon Photo (N)	64		30	153		170	217		200			217	200
AIR BASE GROUPS													
First Air Force - Total		157	154		1 553	1 716		1 710	1 870	989	1 000	2 699	2 870
2500th AB Gp-Mitchel-Total		122	125		1 238	1 361		1 360	1 486	780	789	2 140	2 275

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table 111

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	Non T/O		T/O E	Non T/O		T/O E	Non T/O					
AIR BASE GROUPS (Cont)													
First Air Force (Cont)													
2500th AB Gp-Hq & Hq Sq		46	49		260	324		306	373	780	789	1 086	1 162
2500th Installations Sq		6	4		133	126		139	130			139	130
2500th Air Police Sq		3	3		139	127		142	130			142	130
2500th Maint Sq		11	10		351	389		362	399			362	399
2500th Supply Sq		8	8		110	108		118	117			118	117
2500th Food Service Sq		4	3		119	159		123	162			123	162
2500th Medical Sq		44	48		126	128		170	176			170	176
4400th AB Gp-Stewart-Total		35	29		315	355		350	384	209	211	559	595
4400th AB Gp-Hq & Hq Sq		21	20		114	144		135	164	209	211	344	375
4400th Maint & Supply Sq		5	4		113	125		118	129			118	129
4400th Air Installations Sq		2	2		69	68		71	70			71	70
4400th Medical Sq		7	3		19	18		26	21			26	21
Twelfth Air Force Totals		47	52		508	636		555	688	197	190	752	878
2595th AB Gp Brooks Total		47	52		508	636		555	688	197	190	752	878
2595th AB Gp Hq & Hq Sq		20	23		83	100		103	123	197	190	300	313
2595th Maint & Supply Sq		11	11		219	277		230	288			230	288
2595th Base Service Sq		9	10		172	205		181	215			181	215
2595th Opns Sq		3	2		19	30		22	32			22	32
2595th Medical Sq		4	6		15	24		19	30			19	30
AIR BASE SQUADRONS													
4405th-Sherman 10AF		5	4		81	99		86	103	11	11	97	114
2600th-Pope 14AF		31	34		376	377		407	411	42	42	449	453
4408th-Lawson 14AF		17	23		173	152		190	175	77	74	267	249
2581st-Elgin 14AF		3	3		73	66		76	69			76	69

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table 111

ORGANIZATION		OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
		AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
		T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIR BASE SQUADRONS (Cont)														
2579th-George	4AF		15	10		307	120		322	130	291	297	613	427
BASE SERVICE SQUADRONS														
2476th-Base Service Sq	10AF		6	6		183	166		189	172	16	16	205	188
COMMUNICATIONS SQUADRONS														
28th-Mitchel	CNC	9		8	186		189	195		197			195	197
34th-Mitchel	1AF	6		2	82		76	88		78			88	78
35th-Hamilton	4AF	6		4	82		73	88		77			88	77
29th-Langley	9AF	6		7	82		122	88		129			88	129
36th-Selfridge	10AF	6		3	82		68	88		71			88	71
40th-Brooks	12AF	6		6	82		82	88		88			88	88
37th-Robins	14AF	6		5	82		75	88		80			88	80
42nd-Mitchel	CNC	6		1	82		56	88		57			88	57
43rd-Hamilton	CNC	6		6	82		58	88		64			88	64
AIRCRAFT CONTROL & WG GPS														
First Air Force Totals		267		187	2 328		2 073	2 595		2 260			2 595	2 260
503rd AC/W Gp-Roslyn Total		137		103	1 197		1 136	1 334		1 239			1 334	1 239
503rd AC/W Gp-Hq & Hq Sq		16		19	35		59	51		78			51	78
645th AC/W Sq-Roslyn		14		15	157		166	171		181			171	181
646th AC/W Sq-Twin Lights		42		28	387		447	429		475			429	475
647th AC/W Sq-Gravely Pt.		28		25	252		299	280		324			280	324
648th AC/W Sq-Ind.Town Gap		14		13	142		160	156		173			156	173
658th AC/W Sq-Mitchel		23		3	224		5	247		8			247	8
540th AC/W Gp-Stewart Total		130		84	1 131		937	1 261		1 021			1 261	1 021
540th AC/W Gp-Hq & Hq Sq		16		15	35		44	51		59			51	59

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table 111

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIRCRAFT CONTROL & WG GPS (Con)													
653rd AC/W Sq-Stewart	19		13	161		171	180		184			180	184
654th AC/W Sq-Grenier	29		16	252		242	281		258			281	258
655th AC/W Sq-Pine Camp	22		17	231		188	253		205			253	225
656th AC/W Sq-Schenectady	22		11	227		135	249		146			249	146
657th AC/W Sq-Ft Williams	22		12	225		157	247		169		-	247	169
Fourth Air Force Total	238		137	1 731		1 468	2 019		1 605			2 019	1 605
505th AC/W Gp-Silver Lake Tot	131		89	1 049		931	1 180		1 070			1 180	1 070
505th AC/W Gp-Hq & Hq Sq	16		16	35		38	51		54			51	54
634th AC/W Sq-Everett	21		12	170		190	191		202			191	202
635th AC/W Sq-Paine Fld	42		23	354		332	396		355			396	355
636th AC/W Sq-McChord	27		16	252		228	279		244			279	244
637th AC/W Sq-Larson	10		15	118		121	134		136			134	136
638th AC/W Sq-McChord	9		7	120		72	129		79			129	79
542 AC/W Gp-Hamilton Total	107		48	732		487	839		535			839	535
542 AC/W Gp-Hq & Hq Sq	16		15	35		75	51		90			51	90
667 AC/W Sq-Hamilton	20		5	170		109	190		114			190	114
668 AC/W Sq-Hamilton	25		17	187		153	212		170			212	170
669 AC/W Sq-Ft MacArthur	26		6	193		83	219		89			219	89
670 AC/W Sq-Cp Cooke	20		5	147		67	167		72			162	72
Tenth Air Force Total	129		72	1 006		879	1 135		951			1 135	951
541st AC/W Gp-Selfridge Tot	129		72	1 006		879	1 135		951			1 135	951
541st AC/W Gp-Hq & Hq Sq	16		24	35		84	51		108			51	108
660th AC/W Sq-Selfridge	21		8	170		125	191		133			191	133
661st AC/W Sq-Selfridge	39		25	316		293	355		318			355	318

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table 111

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
AIRCRAFT CONTROL & WG GPS (Con)													
Tenth Air Force (Cont)													
662nd AC/W Sq-Lockbourne	15		13	169		282	184		295			134	295
664th AC/W Sq-Lockbourne	33		2	316		95	354		97			354	97
TACTICAL CONTROL GROUPS													
Fourteenth Air Force Totals	90		37	936		986	1 076		1 073			1 076	1 073
502nd TCT Gp Total	90		87	936		986	1 076		1 073			1 076	1 073
502nd TCT Gp-Hq & Hq Sq-Pope	16		11	38		37	54		48			54	48
605th TAC Control Sq-Pope	20		17	210		166	230		183			230	183
606th AC/W Sq-Shaw	19		23	241		251	260		274			260	274
607th AC/W Sq-Turner	35		36	497		532	532		568			532	568
AF SQUADRONS													
2223rd-Mitchel 1AF		1	2		3	4		4	6			4	6
4400th-Stewart 1AF		1	1		3	1		4	2			4	2
2214th-McChord 4AF		1	1		3	3		4	4			4	4
2350th-Larson 4AF		1	1		3	2		4	3			4	3
2351st-Hamilton 4AF		1	1		3	3		4	4			4	4
4412th-Langley 9AF		1	1		3	4		4	5			4	5
2475th-Selfridge 10AF		1	1		3	2		4	3			4	3
2213th-Brooks 12AF		1	1		3	2		4	3			4	3
ORP P'S													
Fourth Air Force Totals		56	41		628	509		684	550	23	23	707	573
2349 ORP GP Total		56	41		628	509		684	550	23	23	707	573
2349 ORPGP Cp Stoneman		45	32		549	439		594	471	23	23	617	494
2349 ORP Sq		8	7		59	51		67	58			67	58
2349 Returnee Sq		3	2		20	19		23	21			23	21

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
ORP GROUPS													
First Air Force Total		40	35		504	364		544	399	37	37	581	436.
2225th Orp Gp-Ft Dix Total		40	35		504	364		544	399	37	37	581	436
2225th Orp Gp		32	31		410	329		442	360	37	37	479	397
2225th Orp Sq		2	2		19	11		21	13			21	31
2225th Returnee Sq		2	1		19	19		21	20			21	20
2225th Assembly Process Sq.		4	1		56	5		60	6			60	6
RADAR CALIB UNITS													
11th Hamilton 4AF	9		9	39		38	48		47			48	47
7th Langley 9AF	9		10	39		53	48		63			48	63
12th Langley 9AF	9		10	39		53	48		63			48	63
5th Pope 14AF	8		7	18		25	26		32			26	32
AIR DIVISIONS													
26th Roslyn 1AF	18		7	31		28	49		35			49	35
32nd Stewart 1AF	12		9	20		20	32		29			32	29
25th Silver Lake 4AF	18		13	31		22	49		35			49	35
28th Hamilton 4AF	12		10	20		27	32		37			32	37
30th Selfridge 10AF	12		9	20		20	32		29			32	29
8th Pope 14AF	18		22	31		28	49		50			49	50
9th Pope 14AF	18		11	31		24	49		35			49	35
AIR FORCE BANDS													
581st Mitchel 1AF	1		1	34		40	35		41			35	41
573rd Hamilton 4AF	1		1	34		33	35		34			35	34
564th Langley 9AF	1		1	34		38	35		39			35	39
691st Selfridge 10AF	1		1	34		26	35		27			35	27

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION		OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
		AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
		T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
AIR FORCE BANDS (Cont)														
579th Brooks	12AF	1		1	34		23	35		24			35	24
769th Robins	14AF	1		1	34		35	35		36			35	36
SIGNAL BATTALION (SEPARATE)														
934th Pope	14AF	26		19	329		282	355		301			355	301
SHORAN BEACON UNITS														
1st Langley	9AF	2		4	37		32	39		36			39	36
TAC RECON (PHOTO J)														
161st Shaw	14AF	28		25	115		116	143		141			143	141
MOTOR TRANS SQUADRONS														
30th Shaw	14AF	4		3	97		92	101		95			101	95
SIGNAL AVIATION HEAVY CONS.CO.														
472nd Larson	4AF	7		4	149		146	156		150			156	150
ASSAULT SQUADRON (L)														
2601st Stewart	14AF		43	40		140	130		183	170			183	170
BOMB DISPOSAL UNITS														
4410th Pope	14AF		1	1		7	15		8	16			8	16
AIR POLICE SQUADRONS														
2597th Brooks	12AF		3	4		70	78		73	82	1		74	82

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CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION		OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
		AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
		T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
TOW TARGET SQUADRONS														
1st-Biggs	12AF	58		40	302		331	360		371			360	371
RECON TECH SQUADRONS														
363rd-RTC Sq-Langley	9AF	10		9	119		127	129		136			129	136
RADIO RELAY SQUADRONS														
2nd-Pope	14AF	6		5	94		85	100		90			100	90
LIAISON FLIGHTS														
2nd-Langley	9AF	4		4	11		13	15		17			15	17
1st-Biggs	12AF	4		3	11		11	15		14			15	14
3rd-Lawson	14AF	4		4	11		11	15		15			15	15
4th-Pope	14AF	4		15	11		33	15		48			15	48
HELICOPTER FLIGHT														
5th-Pope	14AF	4		5	14		19	18		24			18	24
ENGINEER AVN BN														
803rd-McChord	4AF	30		31	592		861	622		892			622	892
AIRCRAFT CONTROL & WC SQ														
690th-Kirtland	4AF	33		36	362		402	395		438			395	438
ASSEMBLY & PROCESSING SQ														
2212-Langley	9AF		1	1		20	11		21	12			21	12

CONTINENTAL AIR COMMAND

Summary of Authorized and Assigned Personnel

By Type Organization and by Air Force

Table III

ORGANIZATION	OFFICERS			AIRMEN			TOTAL MILITARY			CIVILIANS		TOTALS	
	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTHORIZED		ASGD	AUTH	EMPL	AUTH	ASGD & EMPL
	T/O E	NON T/O		T/O E	NON T/O		T/O E	NON T/O					
UNALLOTTED													
Command Permanent Party Unallotted		25			255			280		30		310	

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Continental Air Command
Inventory of USAF on Hand
Jan - Dec 1949

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF A/C ON HAND
As of 31 January 1949

TYPE		HQ TAC	1AF	4AF	9AF	10AF	12AF	14AF	TOTAL
BOMBER	B-17		1	1					2
	B-25	7	29	24	1	11	1	13	86
	B-26	13	16	34	9	7	65	25	169
	B-29						1		1
FIGHTER	F-47		10		76				86
	F-51	3	11	1	7	11	3	27	63
	F-61		3	6				1	10
	F-80			55	71	73	7		206
	F-82		33	30	1				64
	F-84		156		1			156	313
TRAINER	T-6	2	19	27	27	16	8	28	127
	T-7							1	1
	T-13							1	1
LIAISON	L-4			11				13	24
	L-5		1	4	13	14		4	36
	L-13			18	12	7		2	39
	H-5				8	4			12
GLIDER	G-15							121	121
	G-18							2	2
TOW TARGET	Q-14						25		25
RECON.	RB-17				1				1
	RB-26			19	18				37
	RF-51							37	37
	RF-80			15	34				49
CARGO	C-45		24	17	5	24	6	5	81
	C-47	9	29	31	23	26	22	45	185
	C-82			53	1		8	87	149
TOTAL		34	332	346	308	193	146	568	1927

SOURCE: AF Form 110A.

2-3416-19

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF A/C ON HAND
As of 28 February 1949

TYPE		HQ TAC	1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	TOTAL
BOMBER	B-17		1						1
	B-25		11			1	1		13
	B-26	6	5	17	10	8	34	45	125
	B-29						1		1
	B-50				1				1
FIGHTER	F-47		9		73				82
	F-51		7	1	7	7	4	22	48
	F-61		1	5				1	7
	F-80			65	52	71	6		194
	F-82		33	29	1				63
	F-84		157	1				159	317
TRAINER	T-6	2	19	27	27	15	7	21	118
	T-7							1	1
	TB-17			1					1
	TB-25	7	19	23	1	10		12	72
	TB-26	6	11	17	8	1	30	6	79
	TF-47				3				3
	TF-51	3	5			3		4	15
	PT-13							1	1
LIAISON	L-4			11				12	23
	L-5			4	12	15			31
	L-13			18	12	10		14	54
	L-17							1	1
	H-5				8	4			12
GLIDER	G-15						58	75	133
	G-18							1	1
TOW TARGET	Q-14						23		23
RECON.	RB-26			19	18				37
	RF-51							36	36
	RF-80			18	34				52
CARGO	C-45		23	17	6	23	5	5	79
	C-47	9	29	31	25	23	20	42	179
	C-82			49	1		8	83	141
TOTAL		33	330	353	299	191	197	541	1944

SOURCE: AF Form 110A.

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF A/C ON HAND

As of 31 March 1949

TYPE		HQ TAC	1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	TOTAL
BOMBERS	B-25		1			1			2
	B-26	4	4	15	10	8	29	25	95
	B-29						1		1
	B-45						2		2
	B-50				1				1
CARGO	C-45		20	20	5	19	2	5	71
	C-47	9	33	31	28	29	12	42	184
	C-82			48	1			83	132
	CB-25		23						23
	CB-26			1					1
TRAINERS	T-6	2	19	27	27	16	2	27	120
	TB-17			1					1
	TB-25	5	2	20		7		9	43
	TB-26	8	11	17	1	1	25	6	69
	TF-47				1				1
	TF-51	3	5			3		4	15
FIGHTERS	F-47		1		61				62
	F-51		6	1	7	5		22	41
	F-80			65	67	69	6	18	225
	F-82		32	30	1				63
	F-84		156	15				163	334
	F-86			34					34
RECON.	RB-26			9	26				35
	RF-51							28	28
	RF-80			18	33				51
MISC.	DC-45						3		3
	DF-51					1			1
	G-15							84	84
	H-5				19	11			30
	L-4			11				12	23
	L-5		1	4	2	1	6	3	17
	L-13			18	12	10		14	54
	PT-13							1	1
	Q-14						17		17
	SA-10			1					1
	VB-17		1						1
	VB-25		1						1
	VB-26			1				1	2
	VC-47		2			2	2	1	7
	YG-18							2	2
	YH-5					1			1
TOTAL		31	318	387	302	184	107	550	1879

SOURCE: AF FORM 110 A.

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF A/C ON HAND

As of 30 April 1949

TYPE		1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	HQ TAC	TOTAL
BOMBERS	B-25		1		4				5
	B-26	4	14	10	8	29	25	3	93
	B-29					1			1
	B-45					8			8
CARGO	CB-25	9							9
	CB-26		1						1
	C-45	19	15	4	15	2	6		61
	C-47	24	27	23	16	13	41	9	153
	C-82		45	1			72		118
TRAINERS	T-6	19	27	27	15	2	28	2	120
	TB-17		1						1
	TB-25	20	18		3		9	5	55
	TB-26	10	17	7	1	28	4	5	72
	TC-47					1			1
	TF-51	5			3			3	11
FIGHTERS	F-47	9		50					59
	F-51	6		7	5		10		28
	F-80		54	64	67	6	3		194
	F-82	30	26	1			1		58
	F-84	153	63	1			167		384
	F-86		59						59
RECON.	RB-26		19	19					38
	RF-51						24		24
	RF-80		1	32					33
GLIDERS	G-15						85		85
TOW TARGET	Q-14					14			14
LIAISON	L-4	1	11		3		15		30
	L-5	1	4	13	8	5	4		35
	L-13		18	12	8		14		52
	H-5			8	3				11
MISC.	VB-26		1	1			1	3	6
	VC-47	3		1	1	2	2		9
	VB-17	1							1
	YG-18						2		2
	SA-10		1						1
	DC-45					3			3
	DF-51				1				1
	YH-5				1				1
TOTAL		314	423	281	162	114	513	30	1837

SOURCE: AF FORM 110 A.

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF AIRCRAFT ON HAND

For Month of May 1949

TYPE		1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	HQ TAC	TOTAL
BOMBERS	B-26	4	12	13	8	28	22		87
	B-29					1			1
	B-45					12			12
CARGO	CB-25	9							9
	CB-26		1						1
	C-45	18	16	3	13	2	5		57
	C-47	20	16	28	12	9	39		124
	C-82		45				63		108
TRAINERS	T-6	19	9	27	15	2	28		100
	TB-17		1						1
	TB-25	17	16	3	9		9		54
	TB-26	10	8	12	1	27	5		63
	TF-51	5			3		4		12
	TRF-51						7		7
FIGHTERS	F-47	7		39					46
	F-51	5		6	5		4		20
	F-80	1		63	71	6	4		145
	F-82	29	40	1		1	1		72
	F-84	148	62	1			150		361
RECON.	RB-26			18					18
	RF-51						17		17
	RF-80			29					29
GLIDER	G-15						72		72
TOW TARGET	Q-14					14			14
LIAISON	L-4				3		13		16
	L-5	1	2	12	8	5	4		32
	L-13			12	10		14		36
	H-5			8	1				9
MISC.	VC-47	5		1	2	1	1		10
	EF-47	1							1
	ZEC-46			1					1
	PT-13						1		1
	YG-18						3		3
	DP-51				1				1
	VH-5				1				1
	DC-45					3			3
	VB-26		1	3			1		5
	VB-17	1							1
TOTAL		300	229	280	163	111	467		1550

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF AIRCRAFT ON HAND

For Month of June 1949

TYPE		1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	HQ ConAC	TOTAL
BOMBERS	B-26	3	14	13	7	28	9	1	75
	B-29					1			1
	B-45					15			15
CARGO	CB-25	8							8
	CB-26								
	C-45	19	14	3	14	2	24		76
	C-47	17	11	26	12	9	37	2	114
	C-82		45				58		103
TRAINERS	T-11	3	4						7
	T-6	68	8	30	15	8	26		155
	TB-17		1						1
	TB-25	13	12		6		9	5	45
	TB-26	6	10	9	1	27	4	4	61
	TF-51	5			3		4		12
	TRF-51								
FIGHTERS	F-47	8		38					46
	F-51	5		7	5		4		21
	F-80	1		52	75	11	5		144
	F-82	29	40	1			1		71
	F-84	147	62				136		345
	F-86			22					22
RECON.	RC-45			1					1
	RB-26			18					18
	RF-51						19		19
	RF-80			25					25
	RB-17				1				1
GLIDER	G-15						32		32
TOW TARGET	Q-14					12			12
LIAISON	L-4				4		11		15
	L-5	1	1	12	8	5	3		30
	L-13		1	12	10		14		37
	H-5			5	1				6
MISC.	VC-47	1		2	2	2		3	10
	SB-17		1						1
	EC-46			1					1
	PT-13						1		1
	YG-18						3		3
	VB-25			2					2
	DB-26				1				1
	DC-45					3			3
	VB-26			6			1		7
	VB-17							1	1
	DF-51				1				1
TOTAL		334	220	289	166	123	401	16	1549

SOURCE: AF Form 110 PREPARED BY: **Headquarters Continental Air Command**
Office of Statistical Services

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF AIRCRAFT ON HAND

For Month of July 1949

TYPE		HQ ConAC	1AF	4AF	9AF	10AF	12 AF	14AF	TOTAL
BOMBERS	B-25					1			1
	B-26	1	15	16	13	7	23	8	83
	B-29			1			1		2
	B-45						23		23
FIGHTERS	F-47		4		3				7
	F-51		7	1	4	4	2	4	22
	F-80		1		35	74	24	2	136
	F-82		29	37	1			1	68
	F-84		148	62	2			125	337
	F-86				48				48
TRAINERS	T-6		67	9	23	16	14	26	155
	T-11		1		3				4
	TB-17			1					1
	TB-25	5	12	12		6		15	50
	TB-26	4	4	10	9	1	28	7	63
	TF-51			5		2		4	11
	TRF-51							1	1
LIAISON	L-4					3		12	15
	L-5		2		8	8	6	3	27
	L-13			1	12	10		12	35
	H-5				6	1			7
CARGO	C-45		19	14	2	16	2	5	58
	C-47	6	20	14	27	16	12	39	134
	C-82			50				60	110
	CB-25		9						9
RECON	RB-17					1			1
	RB-26				18				18
	RF-80				25				25
MISC	VB-17	1							1
	VB-25	2							2
	VB-26				5			1	6
	VC-47	4	2		2	2	2		12
	EF-47		1						1
	SB-17			1					1
	DF-51					1			1
	DC-45						3		3
	Q-14						12		12
	PT-13							1	1
	YG-18							3	3
	G-15							50	50
TOTAL		23	341	234	246	169	152	379	1544

SOURCE: AF FORM 110

PREPARED BY:
Headquarters Continental Air Command
Office of Statistical Services.

CONTINENTAL AIR COMMAND

INVENTORY OF USAF AIRCRAFT ON HAND

For Month of August 1949

TYPE		HQ ConAC	1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	TOTAL
BOMBERS	B-25	2		1		1	1		5
	B-26		13	8	18	5	15	10	69
	B-29						1		1
	B-45						22		22
FIGHTERS	F-47		4						4
	F-51		91	2	4	4	2	2	105
	F-80		1		21	87	29	1	139
	F-82		27	40	1			1	69
	F-84		147	63	1	1		103	315
	F-86				72		5		77
TRAINERS	T-6		69	9	24	16	15	29	162
	T-7					1			1
	T-11		1						1
	TB-17			1					1
	TB-25	5	11	13		8		17	54
	TB-26	1	1	8	9	1	27	7	54
	TC-46		1						1
	TC-47							1	1
	TF-51		2	5		1		4	12
	TF-80							1	1
LIAISON	L-4		1		1	2		13	17
	L-5		2		6	9	6	3	26
	L-13			1	12	10		12	35
	H-5				5	1			6
CARGO	C-45	1	24	15	4	17	3	4	68
	C-47	9	22	14	30	19	13	35	142
	C-82			49				67	116
	CB-25		10	1					11
RECON.	RB-17					1			1
	RB-26				18				18
	RF-51							2	2
	RF-80				24				24
MISC.	VB-17	1							1
	YG-18							2	2
	YH-5				1				1
	G-15							49	49
	Q-14						11		11
	SB-17			1					1
	DC-45						2		2
	DF-51					1			1
	EF-47		1						1
	PT-13							1	1
TOTAL		19	428	231	251	185	152	364	1630

SOURCE: AF FORM 110

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF AIRCRAFT ON HAND

For month of September 1949

TYPE		HQ ConAC	1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	TOTAL
BOMBERS	B-25			1					1
	B-26		12	8	13	4	10	2	49
	B-29						1		1
	B-45						26		26
FIGHTERS	F-47		4						4
	F-51		89	4	4	4	2	3	106
	F-80		1		16	87	27		131
	F-82		26	39	1				66
	F-84		103	61	1			108	273
	F-86				76		16		92
TRAINERS	T-6	2	65	26	26	15	15	23	172
	T-7					1			1
	T-11		1						1
	TB-17			1					1
	TB-25	5	12	20		12	1	19	69
	TF-80							1	1
	TB-26	1	1	8	8	1	27	5	51
	TF-51			7			1	4	12
	TC-46		1						1
LIAISON	L-4		1	1	1	2		10	15
	L-5		2	1	6	2	6	4	21
	L-13				18	7	5	8	38
	H-5				1			5	6
CARGO	C-45	2	22	19	2	10	4	12	71
	C-47	6	18	16	27	20	13	33	133
	C-82			48				77	125
	CB-25		9	1					10
RECON	RB-26				19				19
	RF-80				3			19	22
MISC	VC-47	4	1	1	1	1	1		9
	VB-17	1							1
	VB-25	2					1		3
	EF-47		1						1
	SB-17			2					2
	VB-26				5			2	7
	DC-45						3		3
	Q-14						11		11
	PT-13							1	1
	G-15							49	49
	YG-18							2	2
	YH-5							1	1
TOTAL		23	369	264	228	166	170	388	1608

SOURCE: AF FORM 110

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Air Command
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CONTINENTAL AIR COMMAND

INVENTORY OF USAF AIRCRAFT ON HAND

For month of October 1949

TYPE		Hq ConAC	1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	TOTAL
BOMBERS	B-25			1					1
	B-26		9	6	16	2	2	3	38
	B-29			2	5		1		8
	B-45				23		2		25
FIGHTERS	F-47		3						3
	F-51		36	3	4	4	2	3	52
	F-80		1		5	85	13	18	122
	F-82		26	39	1				66
	F-84		73	61		1		134	269
	F-86				68		37		105
TRAINERS	T-6	2	68	34	19	15	15	23	176
	T-7					1	1		2
	T-11		1						1
	TB-17			1					1
	TB-25	6	16	22		11		20	75
	TB-26			6	8		24	5	43
	TC-46		1						1
	TF-51			7			2	4	13
LIAISON	H-5				1			4	5
	L-4		1		1	2		1	5
	L-5		2		6	2	2	2	14
	L-13			1	16	7	7	6	37
CARGO	C-45	2	23	19	5	9	6	13	77
	C-47	6	16	16	30	15	10	31	124
	C-82			31				85	116
	C-54			11					11
	CB-25		9						9
RECON	RB-26				18				18
	RF-80		2		3				5
MISC.	DC-45						3		3
	EF-47		1						1
	G-15							52	52
	PT-13							1	1
	Q-14						11		11
	SA-10			1					1
	SB-17			1					1
	VB-17	1							1
	VB-25	2					1		3
	VB-26				5			2	7
	VB-47	4	2		2	1	1		10
	YG-18							2	2
	YH-5							2	2
TOTAL		23	290	262	236	155	140	411	1517

SOURCE: AF FORM 110

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF AIRCRAFT ON HAND

For month of November 1949

		Hq ConAC	1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	TOTAL
BOMBERS	B-26		1	4	17	1		3	26
	B-29			3	5	1	1		10
	B-45				33				33
FIGHTERS	F-51		6	3	4	4	2	2	21
	F-80		1		5	86	9		101
	F-82		26	38	1				65
	F-84		88	55		1		142	286
	F-86				68		57		125
TRAINERS	T-6	2	56	16	20	15	15	23	147
	T-7					1		1	2
	T-33		3			1			4
	TB-17			1					1
	TB-25	6	15	22		11		20	74
	TB-26			6	8		24	5	43
	TC-46		1						1
	TF-51			6			2	4	12
LIAISON	L-4		1		1			1	3
	L-5				2	2	3		7
	L-13			1	17	4	4	7	33
	H-5				1			2	3
CARGO	C-45	2	22	20	3	8	7	17	79
	C-47	5	14	20	30	15	11	30	125
	C-54			36					36
	C-82			23				91	114
	CB-25		9						9
RECON	RB-26				18				18
	RB-80		2		3			12	17
MISC.	DC-45						3		3
	ETB-25		1						1
	G-15							51	51
	PT-13							1	1
	Q-14						10		10
	SB-17			1					1
	VB-25	2	1				1		4
	VB-26				5			2	7
	VC-47	4	2		2	2	1		11
	YG-18							3	3
	YH-5							4	4
	ZI-4					2			2
TOTAL		21	249	255	243	154	150	421	1493

SOURCE: AF FORM 110

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CONTINENTAL AIR COMMAND

INVENTORY OF USAF AIRCRAFT ON HAND

For month of December 1949

D-17
B-50 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
B-36

		Hq ConAC	1 AF	4 AF	9 AF	10 AF	12 AF	14 AF	TOTAL
BOMBERS	B-26			2	16	1		4	23
	B-29			3	5		1		9
	B-45				33				33
FIGHTERS	F-51		6	3	4	4	2	3	22
	F-80		1		5	85	9		100
	F-82		25	37	1				63
	F-84		74	53				132	259
	F-86				69		73		142
TRAINERS	T-6	2	48	15	20	15	8	22	130
	T-7		1			3		1	5
	T-33		3			3		4	10
	TB-17			1					1
	TB-25	6	14	22	1	7		20	70
	TB-26			3	9		24	5	41
	TF-51			5			2	3	10
LIAISON	L-5			1	2			2	5
	L-13			1	4	2	5	8	20
	H-5							2	2
CARGO	C-45	2	23	20	3	9	7	16	80
	C-47	4	14	22	30	19	12	36	137
	C-54			27					27
	C-82			23				78	101
	C-119							14	14
	CB-25		4						4
RECON	RB-26				17				17
	RF-80		1		3			6	10
MISC.	DC-45						3		3
	ETB-25		1						1
	G-15							51	51
	PT-13							1	1
	Q-14						10		10
	VB-17	1							1
	VB-25	2	1				1		4
	VB-26				5			2	7
	VC-47	4	3		2	1	2		12
	YG-5							4	4
	YG-18							4	4
	ZL-4					1			1
TOTAL		21	219	238	229	150	159	418	1434

SOURCE: AF FORM 110

PREPARED BY:
Headquarters Continental Air Command
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419.271
31 Dec 1948

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ConAC - Roster of Key Personnel

as of 31 December 1948

UNCLASSIFIED

3-8054-11

3-3054-11

CHANGES, ROSTER OF KEY AIR FORCE PERSONNEL
Continental Air Command
Mitchel Air Force Base, New York

Control Symbol
AF-SC-P4H
(AG PERS)

As of 31 December 1948

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Roster of Key AF Pers., ConAC, Mitchel AFB, NY, 31 Dec 48 RCS-AF-SC-P4H
CHANGES, ADDITIONS and DELETIONS

CONTINENTAL AIR COMMAND
Headquarters ConAC, Mitchel AFB, New York

1. All references to Air Defense Command on copy of Roster of Key Air Force Personnel, Air Defense Command, Mitchel Air Force Base, New York, as of 30 November 1948 be changed to read Continental Air Command (Due to establishment of ConAC, 1 December 1948, G.O. 1, Hq ConAC, 1 December 1948)

2. Deputy for Air Defense, ConAC, MAFB, NY
Gordon [illegible] Saville, M/Gen, AO-17006 (Add dy) Appointed (New Staff Position)

3. Assistant Deputy for Air Defense, ConAC, MAFB, NY
Bruce K. Holloway, Col, AO-20664 (Add dy), Appointed (New Staff Position)

4. Deputy for Tactical Air Operations, ConAC, MAFB, NY
Robert M. Lee, M/Gen, AO-18483 (Add dy) Appointed (New Staff Position)

5. Surgeon, ConAC, MAFB, NY
Geoffrey P. Wiedeman, Major, O-43212, Relieved, Michael G. Healey, Col, O-10688, Appointed

6. The following ConAC staff positions under Deputy for Materiel are to be deleted.

Director of Air Materiel, Roger V. Williams, Col, AO-17406
Air Engineer, Ward T. Abbott, Col, AO-17515
Ordnance Officer, Charles B. Tyler, Jr., Lt Col, AO-20232
Transportation Officer, Walter A. Rotkis, Major, AO-43961
Quartermaster, Hartwell N. Williams, Col, O-8004

7. The following new ConAC staff positions are appointed under the Deputy for Materiel:

Director of Materiel Planning, Clyde C. Jakway, Col, AO-203106
Director of Installations, Ward T. Abbott, Col, AO-17515
Director of Maintenance and Supply, Roger V. Williams, Col, AO-17406
Director of Materiel Services, Hartwell N. Williams, Col. O-8004

Roster of Key AF Pers., ConAC, Mitchel AFB, NY, 31 Dec 48 RCS-AF-SC-P4H

CHANGES, ADDITIONS and DELETIONS

Hq Continental Air Command, Mitchel AF Base, NY Cont'd

8. Provost Marshal, ConAC, MAFB, NY, Clifford V. Oje, Lt Col, AO-39519, relieved, Archibald E. Tanner, Col, AO-153077, Appointed.

9. To be deleted:

Office of Vice Commander, Sp Projects, Gordon P. Saville, M/Gen, AO-17006
Director of Air Defense, Bruce K. Holloway, Col, AO-20664

UNITS ASSIGNED TO HQ ConAC

CO 2220th Extension School, Fort Benjamin Harrison, Ind, Elbert W. A. Taylor, Col, AO-245565 (Not previously reported)

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Roster of Key AF Pers., ConAC, Mitchel AFB, NY, 31 Dec 48
CHANGES, ADDITIONS and DELETIONS

RCS-AF-SC-P4H
(AG PERS)

AIR DEFENSE COMMAND (Designated Operational Air Command with Station at Mitchel Air Force Base, New York & assigned to Continental Air Command)

Headquarters Air Defense Command, Mitchel AFB, New York

Commanding General, Gordon P. Saville, M/Gen, AO-17006
Vice Commander (Actg) Bruce K. Holloway, Col, AO-20664

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Roster of Key AF Pers., ConAC, Mitchel AFB, NY, as of 31 Dec 48
CHANGES, ADDITIONS and DELETIONS

RCS-AF-SC-P4H
AG Pers

TACTICAL AIR COMMAND (Designated Operational Air Command with station, Langley AFB, Va & asgd ConAC)

Headquarters Tactical Air Command, Langley AFB, Va

NAME	GRADE	SERIAL NUMBER	STAFF POSITION
Robert M. Lee	M/Gen	AO 18483	Commanding General
James M. Fitzmaurice	B/Gen	AO 15346	Vice Commander
James M. Fitzmaurice	B/Gen	AO 15346	Chief of Staff
Earl B. Cook	Col	AO 22852	Comptroller
George L. Colley	Maj	AO 649026	Asst Comptroller
John F. Barr	Col	AO 18459	Deputy for Personnel & Administration
James W. Twitty	Col	AO 30758	Asst Deputy for Pers & Admin
Albert F. Clark	Col	AO 20218	Director of Personnel
Frank Forchtner	Maj	AO 261379	Director of Personnel Services
Paul Boucher	Maj	AO 42038	Judge Advocate (Actg)
Joseph F. McDonough	Lt Col	0 31008	Surgeon (Actg)
Henry C. Fennington	Lt Col	0 30940	Chaplain
Ernest K. Warburton	Col	AO 17401	Deputy for Operations
John C. Kolborn	Col	AO 18167	Asst Deputy for Operations
Donald J. French	Col	AO 22422	Director for Operations & Trng
William M. Gross	Col	AO 19463	Director of Plans & Requirements
Ernest B. Maxwell	Lt Col	AO 21972	Director of Flying Safety
Rox H. Donaldson	Col	AO 14879	Director of Intelligence
E. Blair Garland	Col	AO 16753	Director of Communications
Allen W. Reed	Col	AO 17259	Deputy for Materiel
William F. Golden	Maj	AO 563120	Asst Deputy for Materiel
Eston E. Selvey	Col	AO 48381	Director of Maintenance
John W. Thompson	Lt Col	0 21067	Director of Air Installations
Augustus E. Betschick	Lt Col	AO 277068	Director of Transportation
			Director of Food Services
Tommy E. Correll	Capt	AO 35702	Director of Procurement
Xura L. Horn	Col	AO 438787	Director of Supply
Earl L. Smith, Jr.	Capt	AO 423275	Armament Officer
Sam W. Cheney	Col	AO 17438	Inspector General
William S. Pocock	Col	AO 38796	Air Inspector
Everett B. Howe	Lt Col	AO 34179	Air Provost Marshal
Neil J. O'Brien	Col	AO 30758	Adjutant General

Hq Tactical Air Command (Cont'd)

Public Information Officer, Leon Booth, Lt Col, AO-41886
Commanding Officer, Headquarters and Headquarters Squadron TAC, Kyle L. Riddle, Col, AO-32161

Following units and stations formerly assigned to Tactical Air Command (Major Air Command) reassigned as indicated:

1. a. Dover AFB, Delaware (assigned 14th AF)

CO Dover AFB, Roydon L. Reichley, Major, AO-29873
CO 4404th Standby Base Sq, Roydon L. Reichley, Major, AO-29873

b. Langley AFB, Va. (assigned 14th AF)

CO 4th Photo Tech Sq, Floyd W. Brewer, Major, AO-508265
CO 29th Communications Sq, Frederick G. Reinhaul, Captain, AO-559328
CO 4412th WAF Sq, Alberta M. Courchene, 1st Lt, L-105218
CO 837th Engr Bn, Edward A. Gibson, Major, AO-49693 (Assigned for Command Only)
CO 564th AF Band, Elmer H. Reade, CWO, AW-902039

c. Sherman AFB, Kansas (assigned 10th AF)

CO Sherman AFB, Ormond J. Mosman, Lt Col, AO-22314
CO 4405th Air Base Sq, Ormond J. Mosman, Lt Col, AO-22314

Hq Tactical Air Command (Cont'd)

d. Stewart Fld, New York (assigned 1st AF)

CO (Actg) 4400th AF Group, Hallock P. K. Walmsley, Lt Col, AO-32814
CO (Actg) Stewart Fld, Hallock P.K. Walmsley, Lt Col, AO-32814

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FIRST AIR FORCE (Reassigned from former ADC)

Headquarters, First Air Force, Fort Slocum, New York

1. Chaplain, Vernon O. Rogers, Major, 0-43137, relieved, Thomas M. Anthony, Major, 0-39662, Appointed.

2. Surgeon, Levi M. Browning, Col, 0-20397, relieved, Harrison J. Brownlee, Captain, 0-1716512, (Actg) Appointed.

3. Commanding Officer, Headquarters and Headquarters Squadron, First Air Force, Alexander B. Currie, Major, AO-249887, relieved, Dee W. Rains, Lt Col, AO-294701, Appointed.

UNITS AND STATIONS OF FIRST AIR FORCE

1. Dow AFB, Bangor, Maine

CO 2228th AF Reserve Tng Center, Albert B. Parsons, Major, AO-40693, relieved, Albert H. Mikkelson, Captain AO-54953, Appointed.

2. Selfridge AFB, Mt. Clemens, Michigan (SAC)

CO 2242nd AF Reserve Tng Center, Howard W. Gray, Col, AO-2247, to be deleted unit assigned to Tenth AF.

3. Stewart Field, Newburg, New York (CO Actg) Hallock P. K. Walmsley, Lt Col, AO-32814 (Asgd fr TAC)
(Actg CO) 4400 AB Group, Hallock P. K. Walmsley, Lt Col, AO-32814 (Asgd from TAC)

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UNITS AND STATIONS OF FIRST AIR FORCE Cont'd

4. Otis AFB, Falmouth, Massachusetts

a. CO 33rd Ftr Wing, Gwen G. Atkinson, Col, AO-21660

b. CO 33rd Maint & Supply Gp, Kent C. Geyer, Major, AO-745349

c. CO 33rd Air Base Gp, Oscar H. Coen, Lt Col, AO-35955

d. CO 33rd Station Med Gp, Fred W. Kolle, Captain, O-1776425

e. Above units 4 a, b, c and d relieved from SAC and assigned ConAC 1 December 1948.

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Roster of Key AF Pers., ConAC, Mitchel AFB, NY, 31 Dec 48
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FOURTH AIR FORCE

Headquarters Fourth AF, Hamilton AFB, Hamilton Fld., Calif.

1. Comptroller, Elliott T. Pardee, Lt Col, AO-22498, relieved. Robert S. Macrum, Col, AO-17942 Appointed.

2. Assistant Comptroller, Allen W. Glienke, Major, AO-1280676, relieved. Elliot T. Pardee, Lt Col, AO-22498, Appointed.

3. Director of Programs & Costs, David L. McAbee, Capt, AO-1702885, relieved. William W. Converse, Lt Col, AO-40572, Appointed.

4. Deputy for Personnel & Administration, Cecil C. Williams, Lt Col, AO-41985 (Actg) relieved. Col Herbert M. Nestrom, AO-17026 (Add Dy) Appointed.

5. Assistant Deputy for Personnel & Administration, Cecil C. Williams, Lt Col, AO-41985 (Add Dy) Appointed.

6. Assistant Deputy for Operations, Barton M. Russell, Col, AO-31850, relieved. Robert F. Harris, Col, AO-23368, Appointed.

7. Director of Air Defense, Robert F. Harris, Col, AO-23368, (Add Dy) Appointed.

8. Commanding Officer, Headquarters & Headquarters Squadron, Fourth Air Force, Uriel P. D'Acosta, Major, AO-40272 (Actg) relieved. Verree A. Mason, Major, AO-330927 (Actg) Appointed.

9. Ordnance Officer, William W. Converse, Lt Col, AO-40572 (staff position to be deleted)

Roster of Key AF Pers., ConAC, Mitchel AFB, NY, 31 Dec 48
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UNITS AND STATIONS OF FOURTH AIR FORCE

1. Moses Lake AFB, Moses Lake, Washington

a. CO 325th Fighter Wing All Weather, Harold E. Kofahl, Col, AO-32162 (not previously reported).

b. CO 325th Fighter Group All Weather, Gordon D. Timmons, Lt Col, AO-35261 (not previously reported).

c. CO 325th Maintenance & Supply Group, Frank L. O'Brien, Jr., Lt Col, AO-25276 (not previously reported).

d. CO 325th Air Base Group, Marlan E. Lowell, Major, AO-47608 (not previously reported).

2. Hamilton AFB, California

a. CO 573rd Air Force Band, Gunnar Salin, CWO, AW-902041, relieved. Elmer R. Bruna, WO(JG) AW-2126091, Appointed.

b. CO 78th Fighter Group, Barton M. Russell, Col, AO-31850 (not previously reported).

c. CO 78th Air Base Group, Arthur J. Lynch, Col, AO-10180 to be deleted.
CO 78th Air Base Group, Arthur J. Melanson, Col, AO-10180 (to be added).

3. McChord AFB, Tacoma, Washington

CO 2345th AFRTC, Henry R. Baxter, Col, AO-16461, relieved. Jackson W. Lewis, Lt Col, AO-29006, Appointed.

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UNITS AND STATIONS OF FOURTH AIR FORCE Cont'd

4. Silver Lake, Washington

CO 25th Air Defense Division, John C. Burnett, Major, AO-33437 (not previously reported).

5. Following were assigned from Twelfth Air Force:

a. March Air Force Base, California

(1) CO 1st Fighter Wing, Clifford H. Rees, Col, AO-18847
(2) CO 1st Fighter Group, Frank S. Perego, Col, AO-33546
(3) CO 1st Maintenance & Supply Group, Charles F. Scott, Jr., Lt Col, AO-259281, relieved. John C. Robertson, Col, AO-44101, Appointed.
(4) CO 1st Air Base Group, Herbert O. Wangeman, Col, AO-22805
(5) CO 1st Station Medical Group, Edward J. Tracy, Col, O-18272
(6) CO 67th Tactical Reconnaissance Wing, Jack W. Hayes, Lt Col, AO-23480, relieved. William J. Clark, Col, AO-29732, Appointed.
(7) CO 67th Reconnaissance Group, Horace A. Hanes, Col, AO-23480
(8) CO 67th Maintenance & Supply Group, George D. Blank, Major, AO-460633, relieved. Charles F. Scott, Jr., Lt Col, AO-259281, Appointed.
(9) CO 67th Air Base Group, Laroy R. Stoltz, Lt Col, AO-42187
(10) CO 67th Station Medical Group, Alton H. Saxer, Lt Col, O-2263
(11) CO 31st Motor Transportation Sq. Avn., Edwin Oian, Capt, AO-514228
(12) CO 506th Tactical Control Group, James R. McNitt, Lt Col, AO-30625, relieved. Edgar B. Gravette, Lt Col, AO-432130, Appointed.
(13) CO 933rd Signal Bn Separate, Charles H. Carlen, Major, O-331842
(14) CO 817th Engineer Avn Bn, Charles M. Parkin, Jr., Lt Col, O-24150
(15) CO 7th Liaison Sq, William R. Crooks, Major, AO-40411
(16) CO 3rd Shoran Beacon Unit, Neil A. Voshurgh, Capt, AO-566993
(17) CO 8th Radar Calib Det
(18) CO 924th Engineer Bn Gp
(19) CO 622nd Engr Maint Co Avn

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UNITS AND STATIONS OF FOURTH AIR FORCE Cont'd

5. b. McChord Air Force Base, Washington

(1) CO 62nd Troop Carrier Wing, Fred C. Nelson, Col, AO-10519
(2) CO 62nd Troop Carrier Group, Adriel N. Williams, Col, AO-022677
(3) CO 62nd Maintenance & Supply Group, Lester W. Nicol, Lt Col, AO-377225
(4) CO 62nd Air Base Group, Homer E. Fackler, Lt Col, AO-28934, relieved. Benjamin S. Lambeth, Jr., Lt Col, AO-44490, Appointed.
(5) CO 62nd Station Medical Group, Harvey B. Porter, Col, AO-16976

c. Fort Lewis, Washington

CO 4th Depot Unit, Army, William W. Short, Jr., Major, AO-46312, relieved. Ralph R. Byers, Jr., 1st Lt, AO-777514, Appointed.

6. CO 4th Troop Carrier Squadron (Medical) Elemandorff, Alaska, Paul W. Stephens, Lt Col, AO-365202, (not previously reported).

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NINTH AIR FORCE (formerly asgd Tactical Air Command)

Headquarters Ninth Air Force, Greenville AFB, South Carolina

1. Deputy for Civilian Components, Einar Malmstrom, Col, AO-29775, Appointed (new staff position).

2. Comptroller; Lawrence J. McCall, Lt Col, AO-38677, relieved. Harold J. Smith, Lt Col, AO-203428, Appointed.

3. Inspector General, Henry H. Waller, Jr., Col, AO-31947, Appointed (Not previously reported).

4. D/CS Operations, Einar Malmstrom, Col, AO-29775, relieved. Mark Hubbard, Lt Col, AO-32096, Appointed (Actg).

5. Director of Budget & Fiscal, Clarence J. McCall, Lt Col, AO-38677 (Not previously reported).

6. Director of Intelligence, Walter R. Harris, Jr., Captain, AO-45910 (Not previously reported).

UNITS AND STATIONS OF NINTH AIR FORCE

1. CO 316th Troop Carrier Wing, Paul H. Prentiss, Col, AO-11299, relieved. Newton Longfellow, Col, AO-10995, Appointed.

2. CO 5th Radar Calib. Det., James H. Kenyon, 1st Lt, AO-55485, relieved. Pascal Carritors, 1st Lt, AO-54826, Appointed.

3. CO 4410th Bomb Disposal Unit, Francis T. McGuire, 1st Lt, AO-15519, Appointed (Not previously reported).

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UNITS AND STATIONS OF NINTH AIR FORCE Cont'd

4. Moody AFB, Georgia

CO 4409th Standby Base Sq, Merritt G. Garner, Major, AO-37129, relieved. John R. O. Bradley, Lt Col, AO-175084, Appointed.

5. Pope AFB, North Carolina

CO 10th Maint & Supply Gp, Donald J. Green, Lt Col, AO-33671, relieved. Carver T. Bussey, Lt Col, AO-24116, Appointed.

6. Smyrna AFB, Smyrna, Tennessee

CO 314th Maint & Supply Gp., Rondel L. Cole, Major, AO-504161, relieved. Lyle D. Tarter, Captain, AO-573343 (Actg) Appointed.

7. The following units were assigned from 14th Air Force:

a. McDill Air Force Base
CO 2582nd AFRTC, Lawrence R. Branstetter, Lt Col, AO-396366

b. Orlando Air Force Base
CO 2583rd AB Group, John G. Williams, Col, AO-10697

c. Memphis Mun Airport
CO 2584th AFRTC, Donald K. Fargo, Col, AO-330152

d. Miami International Airport

CO 2585th AFRTC, Junius H. Houghton, Col, AO-4491

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UNITS AND STATIONS OF NINTH AIR FORCE Cont'd

7. e. Gunter Air Force Base

CO 2586th AFRTC, Leslie R. Bratton, Lt Col, AO-32859

f. Birmingham Municipal Airport

CO 2587th AFRTC, Louie C. Mallory, Col, AO-11122

g. Hawkins Field

CO 2588th AFRTC, John A. H. Miller, Lt Col, AO-268603

h. Marietta Air Force Base

CO 2589th AFRTC, George H. Kneen, Lt Col, AO-33512

8. Marshal AFB, Ft. Riley, Kansas

CO 4406th Air Base Sq, Everett.K.Jenkins,Jr., Major, AO-40768
(Unit to be deleted Asgd to 10th AF)

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TENTH AIR FORCE (Asgd from former ADC with station at Fort Benjamin Harrison, Ind.)

Headquarters Tenth Air Force, Fort Benjamin Harrison, Ind.

Deputy for Civilian Components, Louie P. Turner, Col, AO-17069 reld. Earl H. De Ford, Col, AO-9085, Appointed.

Assistant Deputy for Civilian Components, Louie P. Turner, Col, AO-17069, Appointed (New Staff position)

Director of Air National Guard, Francis G. Gallagher, Lt Col, AO-21668, Appointed (New staff position)

Director of Air Reserve Officer Training Corps, Clifton Pyle, Lt Col, AO-33574, Appointed (New staff position)

Director of USAF Reserve, Edward A. Sanders, Lt Col, AO-34217, Appointed (New staff position)

UNITS AND STATIONS OF TENTH AIR FORCE

1. Marshal AFB, Ft. Riley, Kansas

   CO 4406th Air Base Sq, Everett K. Jenkins, Jr., Major, AO-40768 (Unit asgd from 9th AF)

2. Sherman AFB, Ft. Leavenworth, Kansas

   CO 4405th Air Base Sq, Ormond J. Mosman, Lt Col, AO-22341, (Unit asgd from former TAC)

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UNITS AND STATIONS OF TENTH AIR FORCE Cont'd

3. Selfridge AFB, Selfridge Fld, Michigan

a. CO 56th Ftr Wg, William T. Hudnell, Col, AO-20046

b. CO 56th Ftr Gp, Irwin H. Dregne, Lt Col, AO-35326

c. CO 56th Maint & Supply Gp, Paul E. Hoeper, Lt Col, AO-46891

d. CO 56th Air Base Gp, David T. McNight, Lt Col, AO-31492

e. CO 56th Sta Med Gp, Russell S. Leone, Col, O-18293

f. Above units 3a,b,c,d and e reld from SAC and assigned ConAC, 1 December 1948.

4. CO 2242nd AFRTC, Selfridge AFB, Selfridge Fld, Michigan, Howard W. Gray, Col, AO-22447 (Assigned from 1st AF).

TWELFTH AIR FORCE (Assigned from Tactical Air Command with station at Brooks AFB, Texas)

Headquarters Twelfth Air Force, Brooks AFB, Texas

1. Deputy Chief of Staff, Charles J. Lutz, Lt Col, AO-33009, Appointed (Not previously reported).

2. Inspector General, Col Exekiel W. Napier, AO-17668, Appointed (Not previously reported).

3. Commanding Officer, Headquarters and Headquarters Squadron, 12th AF, John E. Pryor, Major, AO-801381, Appointed (Not previously reported).

UNITS AND STATIONS OF TWELFTH AIR FORCE

1. 47th Bomb Wing, Barksdale AFB, La

CO 47th Bomb Wing, Newton Longfellow, Col, AO-10995, releived, Willis F. Chapman, Col, AO-19832, Appointed.

2. Fort Lewis, Washington

CO 4th Depot Unit, (Army), William W. Short, Jr., Major, AO-46312, to be deleted unit assigned 4th AF.

3. Following to be deleted:

a. March AFB, California (assigned 4thAF)

b. McChord AFB, Washington (assigned 4thAF)

c. 4th Depot Unit (Army), Fort Lewis, Washington (assigned 4thAF)

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FOURTEENTH AIR FORCE

Headquarters Orlando Air Force Base, Orlando, Florida

Headquarters Fourteenth AF, Orlando AFB, Orlando, Fla

No Change

UNITS AND STATIONS OF FOURTEENTH AIR FORCE

1. Following units to be deleted reassigned to 9th AF

   a. MacDill AFB

      CO 2582nd AFRTC, Lawrence R. Branstetter, Lt Col, AO-396366

   b. Orlando AFB

      CO 2583d AB Group, John G. Williams, Col, AO-10697

   c. Memphis Municipal Airport

      CO 2584th AFRTC, Donald K. Fargo, Col, AO-330152

   d. Miami International Airport

      CO 2585th AFRTC, Junius H. Houghton, Col, AO-4491

   e. Gunter Air Force Base

      CO 2586th AFRTC, Leslie R. Bratton, Lt Col, AO-32859

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UNITS AND STATIONS OF FOURTEENTH AIR FORCE Cont'd

f. Birmingham Municipal Airport

CO 2587th AFRTC, Louie C. Mallory, Col, AO-11122

g. Hawkins Field

CO 2588th AFRTC, John A. H. Miller, Lt Col, AO-268603

h. Marietta Air Force Base

CO 2589th AFRTC, George H. Kneen, Lt Col, AO-33512

2. Following units assigned from commands as indicated:

Tactical Air Command (former major air command)

a. CO Dover AFB, Delaware

Roydon L. Reichley, Major, AO-29873 (assigned 14th AF)

b. Dover AFB, Delaware

CO 4404th Standby Base Sq, Roydon L. Reichley, Major, AO-29873

c. Langley AFB, Va.

CO 4th Photo Tech Sq, Floyd W. Brewer, Major, AO-508265

d. Langley AFB, Va.

CO 29th Communications Sq, Frederick G. Reinhaul, Captain, AO-559328

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Tactical Air Command (former major air command) Cont'd

e. Langley Fld, Va.

CO 4412 WAF Sq., Alberta M. Courchene, 1st Lt, L-105218

CO 837th Engr. Bn, Edward A. Gibson, Major, AO-49693

CO 564th AF Band, Elmer H. Reade, CWO, AW-902039

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31 Oct. 1949

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ConAC - Roster of Key Personnel

as of 31 October 1949

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ROSTER OF KEY AIR FORCE PERSONNEL

Continental Air Command

Mitchel Air Force Base, New York

as of 31 October 1949

Control Symbol
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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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CONTINENTAL AIR COMMAND
Headquarters Continental Air Command, Mitchel Air Force Base, New York

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Ennis C. Whitehead	L/Gen	9A	CP	Commanding General
Charles T. Myers	M/Gen	37A	CP	Vice Commander
William C. Warren	Colonel	878A	N/R	Asst Vice Commander, Secretary to the Staff (Add dy)
Robert M. Lee	M/Gen	590A	CP	Deputy for Tactical Air Operations (Add dy)
James F. Fitzmaurice	B/Gen	230A	CP	Asst Deputy for Tactical Air Operations ConAC (Add dy)
Robert C. Candee	B/Gen	100A	CP	Comptroller
Earl B. Cook	Colonel	3629A	SP	Asst Comptroller
Edward T. Baydala	Major	14091A	N/R	Director of Budget
Elmer W. Gude	Colonel	837A	N/R	Director of Finance
Robert F. Daniels	Major	3021A	N/R	Director of Audits
Tom R. Taylor	Lt Col	5041A	N/R	Director of Programs & Costs
Jack E. Wert	Lt Col	2671A	N/R	Director of Statistical Services (Actg)
Charles R. Landon	Colonel	712A	N/R	Deputy for Personnel
Jay O. Gray	Major	9506A	P	Asst Deputy for Personnel
John C. McCurnin	Colonel	AO 299162	N/R	Director of Military Personnel
Richard W. Fellows	Colonel	1334A	SP	Director of Pers Plan & Mgmt
Frederick W. Shipley, Jr.	Lt Col	AO 426989	N/R	Director of Mil Pers Procurement
Frederick R. Taylor	Civilian			Director of Civilian Personnel
Burgess Gradwell	Major	10203A	P	Director of Personnel Services (Actg)
Roy F. Reynolds	Colonel	AO 279860	N/R	Chaplain
Desmond O'Keefe	Colonel	125A	N/R	Judge Advocate
Marjorie O. Hunt	Major	AL 80049	N/R	WAF Staff Director
Dexter L. Hodge	Lt Col	8185A	P	Director of Air Force ROTC
Edmund J. Evans	Major	AO 475070	N/R	Director of Ground Safety
Herbert B. Thatcher	B/Gen	634A	SP	Deputy for Operations
George S. Brown	Colonel	4090A	P	Asst Deputy for Operations
James H. Price	Colonel	1152A	P	Asst Deputy for Operations & Programs

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Hq Continental Air Command, Mitchel AF Base, NY Cont'd

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NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Dolf E. Muehleisen	Colonel	1144A	CP	Director of Operations & Training
Ernest J. White, Jr.	Lt Col	8947A	P	Director of Intelligence (Actg)
James H. Price	Colonel	1152A	P	Director of Plans & Organization (Add dy)
Hobart R. Yeager	Colonel	200A	CP	Director of Comm & Elect
George R. Acheson	B/Gen	335A	CP	Deputy for Materiel
Signa A. Gilkey	Colonel	305A	CP	Asst Deputy for Materiel
Robert C. McBride	Colonel	1441A	P	Director of Materiel Planning
Clyde C. Jakway	Colonel	AO 203106	CP	Director of Materiel Services
Marion G. Ferguson, Jr.	Colonel	2497A	N/R	Director of Maintenance Supply & Svcs
Ward T. Abbott	Colonel	862A	N/R	Director of Installations
Reuben Kyle, Jr.	Colonel	306A	CP	Deputy for Reserve Forces
Michael G. Healy	B/Gen	188A	FS	Surgeon
Charles E. Thomas, Jr.	B/Gen	192A	CP	Inspector General
Sam W. Cheyney	Colonel	856A	CP	Air Inspector (Actg)
Archibald E. Tanner	Lt Col	AO 153077	N/R	Provost Marshal
August E. Weil	Major	9736A	P	Director of Flying Safety
Neal J. O'Brien	Colonel	824A	N/R	Adjutant General
Max D. Hampton	Major	AO 568482	N/R	Public Information Officer (Actg)
Arthur V. Schultz	Major	AO 820077	P	Commanding Officer, Hq & Hq Sq, ConAC

UNITS ASSIGNED TO HQ CONAC

	COMMANDING OFFICER'S NAME		COMMANDING OFFICER'S GRADE	SERIAL NUMBER
28 Communications Sq, AF Mitchel AF Base, NY	Charles H. Carlin	N/R	Maj	AO 331802
2220 Extension Gp Fort Benjamin Harrison, Ind	E. W. A. Taylor	N/R	Colonel	AO 245565

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Hq Continental Air Command, Mitchel AF Base, NY Cont'd

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NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Dolf E. Muehleisen	Colonel	1144A	CP	Director of Operations & Training
Ernest J. White, Jr.	Lt Col	8947A	P	Director of Intelligence (Actg)
James H. Price	Colonel	1152A	P	Director of Plans & Organization (Add dy)
Hobart R. Yeager	Colonel	200A	CP	Director of Comm & Elect
George R. Acheson	B/Gen	335A	CP	Deputy for Materiel
Signa A. Gilkey	Colonel	305A	CP	Asst Deputy for Materiel
Robert C. McBride	Colonel	1441A	P	Director of Materiel Planning
Clyde C. Jakway	Colonel	AO 203106	CP	Director of Materiel Services
Marion G. Ferguson, Jr.	Colonel	2497A	N/R	Director of Maintenance Supply & Svcs
Ward T. Abbott	Colonel	862A	N/R	Director of Installations
Reuben Kyle, Jr.	Colonel	306A	CP	Deputy for Reserve Forces
Michael G. Healy	B/Gen	188A	FS	Surgeon
Charles E. Thomas, Jr.	B/Gen	192A	CP	Inspector General
Sam W. Cheyney	Colonel	856A	CP	Air Inspector (Actg)
Archibald E. Tanner	Lt Col	AO 153077	N/R	Provost Marshal
August E. Weil	Major	9736A	P	Director of Flying Safety
Neal J. O'Brien	Colonel	824A	N/R	Adjutant General
Max D. Hampton	Major	AO 568482	N/R	Public Information Officer (Actg)
Arthur V. Schultz	Major	AO 820077	P	Commanding Officer, Hq & Hq Sq, ConAC

UNITS ASSIGNED TO HQ CONAC

			COMMANDING OFFICER'S	
	NAME		GRADE	SERIAL NUMBER
28 Communications Sq, AF Mitchel AF Base, NY	Charles H. Carlin	N/R	Maj	AO 331802
2220 Extension Gp Fort Benjamin Harrison, Ind	E. W. A. Taylor	N/R	Colonel	AO 245565

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Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

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EASTERN AIR DEFENSE FORCE
Mitchel Air Force Base, New York

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Robert M. Webster	M/Gen	21A	CP	Commanding General
William P. Matheny	B/Gen	428A	CP	Deputy Commander
Bruce K. Holloway	Colonel	1336A	SP	Deputy for Operations
William M. Talbot	Colonel	AO 17632	N/R	Chief, Joint Operations Division

TACTICAL AIR COMMAND (Operational)
Headquarters Tactical Air Command, Langley AF Base, Virginia

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Robert M. Lee	M/Gen	590A	CP	Commanding General, Deputy for Tactical Air Operations, ConAC (Add dy)
James M. Fitzmaurice	B/Gen	230A	CP	Vice Commander, Asst Deputy for Tactical Air Operations, Conac(Add dy)
Earl E. Batten	Lt Col	3823A	P	Asst Vice Commander
John C. Kilborn	Colonel	562A	CP	Liaison Officer, ConAC
Ernest K. Warburton	Colonel	407A	CP	Deputy for Operations
George M. Foster	**Lt Col**	5143A	P	Director of Training
Francis B. Valentine	Colonel	199A	CP	Director of Intelligence
Kenneth R. Martin	Colonel	1574A	SP	Director of Joint Operations Center
William M. Gross	Colonel	663A	CP	Deputy for Requirements
Harry B. Young	Colonel	1871A	SP	Director of Acft Requirements
James W. Townsend	Lt Col	2629A	N/R	Director of Equipment
Henry Viccellio	Colonel	1728A	SP	Deputy for Plans
Albert P. Clark, Jr.	Colonel	1218A	SP	Director of Doctrine
Loren G. McCollom	Colonel	1632A	P	Director of Field Exercise Plans

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Roster of Key Air Force Pers ConAC, Mitchel AFB, NY
Headquarters Tactical Air Command, Cont'd

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NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
David M. Jones	Colonel	1811A	SP	Director of War Plans
Joseph E. Long	Major	8222A	N/R	Deputy for Communications
Carlyle R, Smith	Major	AO 453916	N/R	Director of Communications Systems
William L, Rice, Jr.	Captain	12699A	N/R	Director of Telecom
Daniel Reuther, Jr.	Captain	AO 582299	N/R	Director of Electronics
Robert H. Thom	Lt Col	AO 301102	N/R	Adjutant General
Leon Booth	Lt Col	2321A	N/R	Public Information Officer
Arthur M, Gray	1st Lt	16649A	P	Commanding Officer, Hq & Hq Sq, TAC

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Roster of Key Air Force Personnel ConAC, Mitchel AFB, NY

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FIRST AIR FORCE
Headquarters First Air Force, Mitchel Air Force Base, New York

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Glenn O. Barcus	M/Gen	87A	CP	Commanding General
Clifford C. Nutt	B/Gen	140A	CP	Vice Commander
Richard T. Lively	Lt Col	3247A	SP	Comptroller
				Asst Comptroller
Lyle C. Grimes	Lt Col	2538A	N/R	Director of Budget
Lawrence A. Boyd	Major	AO 567410	N/R	Director of Finance
Francis C. Cartaglia	Lt Col	AO 297697	N/R	Director of Audits
Benjamin R. Richards	Major	AO 904402	N/R	Director of Programs & Costs (Actg)
Douglas B. Blackford	Major	AO 567323	N/R	Director of Statistical Services (Actg)
Emory L. **Bruns**	Colonel	736A	N/R	Deputy for Personnel
Hugh A. Frandsen	Lt Col	2069A	N/R	Asst Deputy for Personnel (Actg)
Edward D. S. Sullivan	Major	7442A	N/R	Director of Personnel
Raymond F. Wisnieski	Major	9650A	N/R	Director of Personnel Services
Charles W. Marteney	Lt Col	18714A	N/R	Chaplain
Jerome Loewenberg	Lt Col	963A	N/R	Judge Advocate
Sheldon S. Brownton	Colonel	0 38643	AO (Med)	Surgeon
Robert M. Stillman	Colonel	1114A	SP	Deputy for Operations
				Asst Deputy for Operations
Lester J. Krause Jr	Lt Col	8025A	P	Director of Operations & Training
Howard H. Symons	Capt	15884A	P	Director of Intelligence
Otto G. Quanrud	Lt Col	1000A	N/R	Director of Communications & Electronics
Frederick P. Knoll	Colonel	AO 367428	N/R	Director of Air National Guard
William R. Purinton	Lt Col	3623A	SP	Director of Plans & Requirements
Norton H. Van Sicklen III	Colonel	1841A	SP	Deputy for Reserve Forces
Edward J. Soulliere	Lt Col	3011A	N/R	Asst Deputy for Reserve Forces
Albert B. Parsons	Major	4986A	P	Director of USAF Reserve (Actg)
Kenneth W. Holbert	Lt Col	5200A	P	Director of Air Force ROTC & Air Scouts

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Roster of Key Air Force Pers ConAC, Mitchel AFB, NY
Headquarters First Air Force, Mitchel AFB, NY, Cont'd

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NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Robert T. Zane	Colonel	173A	CP	Deputy for Materiel
				Asst Deputy for Materiel
Robert W. Ryder	Lt Col	1565A	CP	Director of Maintenance & Supply
Miles H. Thompson	Lt Col	1311A	N/R	Director of Installations
Homer J. Victory	Major	0 31826	N/R	Ordnance Officer
Frank T. Watrous, Jr.	Major	0 23254	N/R	Director of Materiel Services
Mark T. Brenzo	Captain	0 1579420	N/R	Transportation Officer
Richard H. Ballard	Colonel	108A	C/P	Inspector General
Adolphus R. McConnel	Colonel	698A	CP	Air Inspector
Clement G. Slattery	Major	AO 127137	N/R	Provost Marshal
Ralph J. Erickson	Colonel	AO 211986	N/R	Adjutant General
Albert F. Davis	Major	2505A	N/R	Public Information Officer
Dee W. Rains	Lt Col	AO 204701	N/R	Commanding Officer, Hq & Hq Sq, 1AF

UNITS & STATIONS OF FIRST AIR FORCE

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
CAMP KILMER, NEW JERSEY (ARMY)	Evan M. Houseman	N/R	Lt Col	0 17307
2225th AFORD	Edward B. Roth	N/R	Lt Col	AO 484684
DOW AFB, BANGOR MAINE				
2264th Standby Base Squadron	George A. McHenry	CP	Colonel	176A
SLOCUM AF BASE, NEW YORK	Philip R. Deubler	N/R	Lt Col	AO 388730
2226th Air Base Group	Armstead B. Gordon	N/R	1st Lt	AO 568339

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Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

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UNITS & STATIONS OF FIRST AIR FORCE CONT'D

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
HANSCOM AIRPORT, BEDFORD, MASS.				
2234th AF Reserve Training Center	Melvin S. Hollidge	CP	Colonel	843A
MITCHEL AF BASE, HEMPSTEAD, NY	Robert W. C. Wimsatt	P	Colonel	214A
2500th Air Base Group	Robert W. C. Wimsatt	P	Colonel	214A
2500th Base Service Squadron	Henry W. Collins	P	Capt	AO 807200
2500th Maint & Supply Squadron	Douglas S. Lane	SP	Capt	AO 411712
2500th Medical Group	Carl B. Stilson	FS	Colonel	O 21729
581st Air Force Band	Adam B. Shaffer, Jr.	N/R	CWO	AW 951154
2243rd WAF Squadron	Elizabeth Ray	N/R	Capt	AL 80214
2244th Aviation Squadron	William R. Martin	N/R	Capt	AO 560078
FLOYD BENNETT NAVAL AIR STATION, NY				
2230th AF Reserve Training Center	Riley A. Whittington	P	Major	6193A
ROSLYN, NY				
503rd Acft Contl & Warning Gp	Charles B. Harvin	CP	Colonel	1158A
26th Air Division (Defense)	Ernest H. Beverly	SP	Colonel	1590A
12th Radar Calibration Det	Robert H. Brady, Jr.	P	Captain	AO 798426
26th Air Division (Defense)	Leonard A. Cohen		1st Lt	AO 163889
OTIS AF BASE, FALMOUTH, MASS.	Arthur C. Agan, Jr.	SP	Colonel	1759A
33rd Fighter Wg	Arthur C. Agan, Jr.	SP	Colonel	1759A
33rd Fighter Gp	Charles H. MacDonald	SP	Colonel	1830A
33rd Air Base Gp	Robert H. Krueger	N/R	Colonel	704A

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UNITS & STATIONS OF FIRST AIR FORCE CONT'D

OTIS AF BASE, FALMOUTH MASS CONT'D	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
33rd Maint & Supply Gp	Joseph C. Smith	SP	Lt Col	9130A
33rd Medical Gp	Everett M. Chalker	FS	Major	0 30901
STEWARD FIELD, NEWBURGH, NY	Hallock P. K. Walmsley	SP	Lt Col	1931A
4404th Air Base Gp	Hallock P. K. Walmsley	SP	Lt Col	1931A
4403rd Station Medical Gp	Wilbur L. Kenoyer	FS	Captain	0 59673
GRENIER AF BASE, NH				
2260th Hospital Squadron	Wilford H. Kunz	N/R	Captain	AO 904272
2263rd Standby Base Squadron	William P. Litton	SP	Colonel	2024A
McGUIRE AFB, NEW JERSEY	Edward C. Tates	SP	Colonel	1914A
52nd Fighter Wing, All Weather	Edward C. Tates	SP	Colonel	1914A
52nd Fighter Gp, All Weather	Oliver G. Cellini	SP	Colonel	1829A
52nd Maint & Supply Group	Charles L. Perkins	N/R	Colonel	AO 560214
52nd Air Base Group	Russell D. Hale	SP	Lt Col	3761A
52nd Medical Group	Stephen P. Farraro	FS	Captain	AO 1718420

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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FOURTH AIR FORCE
Headquarters Fourth Air Force, Hamilton Air Force Base, Calif

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
John E. Upston	M/Gen	49A	CP	Commanding General
Hugo P. Rush	B/Gen	75A	CP	Vice Commander
Joseph H. Davidson	Colonel	121A	CP	Chief of Staff
Newton Longfellow	Colonel	166A	CP	Special Asst to the Commanding General
Robert S. Macrum	Colonel	519A	CP	Comptroller
Henry J. Clerici	Major	6795A	P	Asst Comptroller
Allen W. Glienke	Major	AO 1280676	N/R	Director of Budget (Add dy)
Delbert O. Watson	Major	AO 357393	N/R	Director of Finance
Francis C. Wibom	Captain	AO 564618	N/R	Director of Audits
William W. Converse	Lt Col	4027A	N/R	Director of Programs & Costs
Raymond E. Brett	Major	4729A	SP	Director of Statistical Services
Herbert M. Nestrom	Colonel	AO 17026	CP	Deputy for Personnel & Administration(Add dy)
Cecil C. Williams	Lt Col	2383A	N/R	Asst Deputy for Personnel & Administration
Theodore R. Clinkscales	Lt Col	3627A	SP	Director of Personnel
Charles J. Thelen	Captain	AO 728036	P	Director of Welfare
George J. McMurray	Colonel	0 10739	N/R	Chaplain
Stewart S. Maxey	Colonel	913A	N/R	Judge Advocate
Andrew W. Smith	Colonel	0 5442	AO(Med)	Surgeon
Joseph P. Bailey	Colonel	195A	CP	Deputy for Operations
Robert F. Harris	Colonel	2041A	SP	Asst Deputy for Operations
Robert S. Israel, Jr.	Colonel	354A	CP	Director of Air Defense
Emanuel F. Bonvicin	Major	5985A	N/R	Director of Intelligence
Gus B. Hoffman	Colonel	807A	N/R	Director of Comm & Elect
William H. Clark	Colonel	1002A	SP	Director of Operations & Training
				Director of Plans & Organizations
Melie J. Coutlee	Colonel	867A	SP	Deputy for Materiel
Albert L. Perry	**Lt Col**	AO 409080	N/R	Asst Deputy for Materiel
John J. Traunicht	Lt Col	AO 252718	N/R	Director of Air Materiel
Keth P. Siegfried	Major	AO 1703783	N/R	Director of Materiel Planning

Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

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HEADQUARTERS FOURTH AIR FORCE, HAMILTON AFB, CALIF, CONT'D

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Austin R. McCraken	Major	3575A	N/R	Director of Materiel Services
John J. Traunicht	Lt Col	AO 252718	N/R	Director of Maintenance & Supply
Frank J. Hainze	Lt Col	AO 245319	N/R	Air Engineer
Howard B. McIlhenny	Major	AO 489725	N/R	Transportation Officer
Nathaniel R. Rogers	Colonel	2170A	N/R	Deputy for Reserve Forces
William E. Hanes	Major	AO 431427	P	Director of USAF Reserve
Stanley W. Tobiason	Lt Col	AO 414573	SP	Director of Air ROTC
Harold D. Smith	Colonel	687A	CP	Inspector General
Landon E. McConnell	Lt Col	3316A	SP	Asst Inspector General
Miles A. Conner	Lt Col	AO 347376	N/R	Provost Marshal
James E. Lasenby	Major	AO 40624	SP	Air Inspector
Harold L. Fuller	Lt Col	2257A	N/R	Adjutant General
Robert T. Cronau	Colonel	685A	CP	Public Information Officer
Elmon R. Cobb	Major	5005A	SP	Commanding Officer, Hq & Hq Sq, 4th AF

UNITS & STATIONS OF FOURTH AIR FORCE

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
EVERETT, WASHINGTON				
634th Acft Contl & Warning Sq	Louis N. Macomber	P	Maj	AO 416318
SILVER LAKE, WASHINGTON				
25th Air Division (Defense)	Clinton D. Vincent	SP	Colonel	1213A
LONG BEACH MUN APT, CALIF.				
2347th AF Res Trng Center	Claude E. Duncan	CP	Colonel	686A
78th Fighter Wing	George L. Usher	CP	Colonel	120A
78th Fighter Group	Brian O'Neill	SP	Colonel	1826A

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Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

UNITS & STATIONS FOURTH AIR FORCE CONT'D

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	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
HAMILTON AF BASE, CALIF				
78th Maint & Supply Gp	Walter E. Vannier	N/R	Lt Col	AO 240245
78th Air Base Gp	Arthur J. Melanson	P	Colonel	679A
78th Medical Gp	Edwin L. Brockney	N/R	Colonel	O 8683
35th Communications Sq (Comd)	Eugene Allison	N/R	Captain	11135A
573rd AF Band	Elmer R. Bruna	N/R	WOJG	AW 2126091
2346th AF Reserve Training Center	David B. Lancaster, Jr.	CP	Colonel	876A
2349th AF Overseas Repl Depot	Peter A. Blake	N/R	Lt Col	AO 900945
2351st WAF Sq	Annie E. Barrett	N/R	Captain	AL 906005
2352nd Aviation Sq	Anthony J. Souza	N/R	Captain	AO 520395
LETTERMAN GENERAL HOSP, SAN FRANCISCO, CALIF				
2209th Hospital Squadron	George Danko	N/R	Captain	AO 517699
McCHORD AF BASE, TACOMA, WASH				
62nd Troop Carrier Wg	Fred C. Nelson	CP	Colonel	142A
62nd Troop Carrier Gp	Adriel N. Williams	SP	Colonel	1970A
62nd Maint & Supply Gp	Lester W. Nicol	SP	Lt Col	AO 377225
62nd Medical Gp	Hervey B. Porter	FS	Colonel	O 16976
62nd Air Base Gp	Kenneth R. Crosher	CP	Colonel	509A
11th Radar Calib Det	Otto B. McIver	SP	Major	AO 333843
505th Acft Control & Warning Gp	Peter D. Green	AO (Radar)	Lt Col	AO 428215
531st Acft Control & Warning Gp	Lee J. Hoddy	P	Major	AO 432196
SAN FRANCISCO POE, FORT MASON, CALIF (ARMY)				
2349th AF Overseas Replacement Depot (Det)	Llewelyn Karr	N/R	Captain	AO 1634955

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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UNITS & STATIONS FOURTH AIR FORCE CONT'D

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
SEATTLE POE, SEATTLE, WASH (C of T)				
2349th AF Overseas Replacement Depot	Ray W. Alford	N/R	Major	2926A
MOSES LAKE AF BASE, WASHINGTON				
325th Ftr Wg, All Weather	Thomas A. Bennett	CP	Colonel	1513A
325th Ftr Gp, All Weather	Walter C. Hearne	P	Lt Col	AO 432290
325th Maint & Supply Group	Dean E. Mansfield	SP	Lt Col	AO 361282
325th Air Base Gp	Ernest G. Ford	SP	Colonel	1760A
325th Medical Gp				
ELMANDORFF, ALASKA				
4th Troop Carrier Sq	Richard Jones Jr.	P	Colonel	3969A
PORTLAND, OREGON				
2343rd AFRTC	Jackson W. Lewis	SP	Lt Col	2116A

WESTERN AIR DEFENSE FORCE

Headquarters Western Air Defense Force, Hamilton Air Force Base, California

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
John E. Upston	M/Gen	49A	CP	Commanding General

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Roster of Key Air Force Pers., ConAC, Mitchel AFB, NY

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NINTH AIR FORCE

Headquarters Ninth Air Force Base, Langley Air Force Base, Virginia

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Willis H. Hale	M/Gen	19A	CP	Commanding General
Robert C. Oliver	B/Gen	228A	CP	Vice Commander
Harold W. Bowman	Colonel	486A	CP	Asst Vice Commander
Harold J. Smith	Lt Col	AO 203428	N/R	Comptroller
Clarence J. McCall	Lt Col	2250A	N/R	Asst Comptroller
Shirley B. Thompson	Major	9302A	P	Director of Budget
Charles W. Griffin	Major	5630A	N/R	Director of Finance
Jess E. Spicher	1st Lt	AO 2092192	P	Director of Audits
Willie M. Platt	Captain	AO 581094	N/R	Director of Programs & Costs
Blake P. Howard	Captain	AO 649063	N/R	Director of Statistical Services
James W. Twitty	Colonel	2917A	N/R	Deputy for Personnel
Charles E. Clark	Lt Col	5275A	N/R	Asst Deputy for Personnel
Coy T. Sevier	Major	9209A	N/R	Director of Personnel
Robert E. Quay	Lt Col	AO 433894	P	Director of Military Personnel Proc
Lawrence J. Gilmore	Major	9859A	N/R	Director of Personnel Plan & Mgmt
James H. Hayden	Major	9235A	N/R	Director of Personnel Services
Robert E. Moist	Major	5678A	N/R	Director of Reserve Personnel Actions
Floyd S. Smith	Lt Col	0 338559	N/R	Chaplain
David D. Porter	Lt Col	713A	N/R	Judge Advocate
Virginia D. Harmon	Captain	AL 410531	N/R	WAF Staff Director
Charles A. Harrington	Colonel	321A	CP	Deputy for Operations
David E. Daniel	Lt Col	4308A	P	Asst Deputy for Operations
David E. Daniel	Lt Col	4308A	P	Director of Operations & Training
Edward F. McClenanhan	Lt Col	2809A	N/R	Director of Intelligence
Bernard R. Muldoon	Lt Col	5007A	P	Director of Plans & Organizations
Kenneth W. Klise	Lt Col	AO 441650	N/R	Director of Comm & Electronics
Robert Morris	Colonel	1125A	N/R	Deputy for Materiel
Augustus E. Betschick	Lt Col	AO 277068	N/R	Asst Deputy for Materiel

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Hq Ninth AF, Langley AF Base, Virginia (Cont'd)

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NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Carl R. Tankersley	Maj	7256A	N/R	Director of Materiel Planning
David B. Hamilton	Maj	AO 28088	N/R	Director of Materiel Services
William D. Weldon	Maj	3664A	SP	Director of Maint & Supply
Thomas H. Garett	Lt Col	0 293406	N/R	Director of Installations
Harold W. Bowman	Col	486A	CP	Deputy for Reserve Forces (Add dy)
Henry A. Waller, Jr.	Col	1404A	N/R	Inspector General
Raymond T. Jenkins	Col	19154A	MO	Surgeon
Loren Cornell	Lt Col	2193A		Air Inspector
Thaddeus D. Harris	Maj	AO 565579	N/R	Provost Marshal
Erlath W. Zuehl	Lt Col	AO 258954	N/R	Adjutant General
Daniel M. Ellis	Lt Col	AO 382887	N/R	Public Information Officer
Walter H. Williamson	Lt Col	4395A	SP	Commanding Officer, Hq & Hq Sq, 9th AF
Wallace H. Graham	B/Gen	AO 343889		Personal Physician to the President

UNITS & STATIONS NINTH AIR FORCE

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
LANGLEY AF BASE, VIRGINIA				
4th Ftr Wg	George F. Smith	CP	Col	380A
4th Maint & Supply Gp	Ulysses S. Nero	N/R	Lt Col	708A
4th Ftr Gp	Albert L. Evans, Jr.	CP	Col	1675A
4th Air Base Gp	Everette C. Finnel	N/R	Lt Col	AO 264483
4th Medical Gp	Raymond T. Jenkins	AO (Med)	Col	0 21738
363rd TAC Recon Gp	Bert N. Smiley	P	Lt Col	7540A
4th Photo Tech Sq	Floyd W. Brewer	N/R	Maj	AO 508265
564th AF Band	Elmer H. Reade	N/R	CWO	AW 902039
4412th WAF Sq	Alberta M. Courchene	N/R	1st Lt	AL 80080
29th Communication Sq	Frederick G. Reinhard	N/R	Capt	AO 559328
7th Radar Calib Unit	Albert M. Lentz	P	Capt	AO 798662
12th Radar Calib Unit	George W. Criss	P	Major	9814A

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Roster of Key Air Force Pers., ConAC, Mitchel AFB, NY

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UNITS & STATIONS NINTH AIR FORCE CONT'D

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
1st Shoran Beacon Unit	Gaillard M. Jackson	P	1st Lt	AO 754628
84th Bomb Sq (L)	Charles V. Greffet	P	Major	9102A
85th Bomb Sq (L)	Hubert M. Blair	P	Major	8697A
2nd Liaison Flt	August P. Kern	P	1st Lt	AO 1698926
Lockbourne AF Base, Ohio	Edward C. Gleed	P	Major	7345A
2260th Air Base Sq	Edward C. Gleed	P	Major	7345A
Godman AF Base, Ft Knox, Ky	John I. Moore	CP	Colonel	127A
2236th AF Reserve Training Center	John I. Moore	CP	Colonel	127A
Reading Mun Apt. Pa.				
2237th AF Reserve Training Center	Frederick C. Roberts	SP	Lt Col	7423A
Greater Pittsburgh Apt, Pa	William S. Pocock	CP	Colonel	5316A
2239th AF Reserve Training Center	William S. Pocock	CP	Colonel	5316A
Cleveland Mun Apt, Ohio (AMC)				
2240th AF Reserve Training Center	Charles A. Bassett	CP	Colonel	285A
Army Med Center, Wash DC				
2201st Hosp Sq	Ira D. Cope	N/R	Major	AO 235416
Valley Forge Gen Hosp., Phoenixville, Pa.				
2203rd Hosp Sq	Judson G. North	N/R	Major	AO 462762

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TENTH AIR FORCE

Headquarters Tenth Air Force, Benjamin Harrison AFB, Indiana

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Paul L. Williams	M/Gen	24A	CP	Commanding General
Harry A. Johnson	B/Gen	157A	CP	Vice Commander
James M. Winterbottom	Major	4323A	AO	Asst Vice Commander
Richard M. Wightman	Colonel	05267	N/R	Comptroller
Leland A. Herrington	Lt Col	AO 278724	N/R	Asst Comptroller
Milton J. Scott	1st Lt	AO 2076775	AO (Nav)	Director of Budget
Ralph W. Jerabek	Lt Col	AO 251059	N/R	Director of Finance
Herman Strasheim	Major	AO 379485	N/R	Director of Audits
Benjamin C. Bowman	Major	AO 449564	N/R	Director of Programs & Costs
John M. Cremin	Major	AO 370254	N/R	Director of Statistical Services
Walter Urbach	Colonel	919A	N/R	Deputy for Personnel & Administration
				Asst Deputy for Personnel & Adm
Bennie R. Leach	Lt Col	AO 342288	N/R	Director of Personnel
Bernice C. Phillips	Major	L 900009	N/R	Director of Welfare
Leslie F. Zimmerman	Lt Col	0 354445	N/R	Chaplain
William L. Doolan	Colonel	AO 185578	N/R	Judge Advocate
Harold E. Schneider	Colonel	19028A	AO (Med)	Surgeon
Earl H. Deford	Colonel	676A	CP	Deputy for Operations
				Asst Deputy for Operations
William R. Sweeley	Colonel	695A	CP	Director of Intelligence
Sten E. Sjogren	Major	AO 480053	N/R	Director of Communications & Elect
George T. Crowell	Colonel	1925A	P	Director of Operations Service
Thomas L. Bond	1st Lt	AO 807987	P	Chief Weapons Division
Harlin T. McCormick	Colonel	204A	CP	Deputy for Materiel
Nathaniel S. Cobb	**Lt Col**	AO 484466	N/R	Asst Deputy for Materiel
Gilbert F. Noakes	Lt Col	5291A	SP	Director of Air Materiel
William L. Boland	Lt Col	0 288771	N/R	Chief Arm & Auto Div
Paul M. Ellman	Colonel	762A	N/R	Director of Installations

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
HQ TENTH AIR FORCE, BENJAMIN HARRISON AFB, CONT'D

RCS-AF-SC-P4M
(MIL PERS)

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Ralph H. Lane	Captain	AO 370613	N/R	Director of Materiel Services (Actg)
James B. Deth	Captain	AO 1580858	N/R	Transportation Officer
Earl H. DeFord	Colonel	676A	CP	Deputy for Reserve Forces (add dy)
Louie P. Turner	Colonel	352A	CP	Asst Deputy for Civilian Components
Edwin A. Doss	Colonel	1898A	CP	Director of USAF Reserve
Francis B. Gallagher	Lt Col	3229A	SP	Director of Air National Guard
Clifton Pyle	Lt Col	4124A	P	Director of Air ROTC
Leonard J. Barrow, Jr.	Lt Col	4382A	SP	Inspector General (Actg)
Leonard J. Barrow, Jr.	Lt Col	4382A	SP	Air Inspector
Michael N. Mikulak	Lt Col	3105A	N/R	Provost Marshal
Harold O. Allison	Colonel	847A	N/R	Adjutant General
Lawrence F. Krebs	Major	7210A	SP	Public Information Officer
Grahams T. Stevens	Major	AO 292291	N/R	Commanding Officer, Hq & Hq Sq, 10AF

UNITS & STATIONS TENTH AIR FORCE

O'HARE INTERNATIONAL APT, PARK RIDE, ILL.	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
2471st AF Reserve Training Center	Victor H. Strahm	CP	Colonel	130A
FAIRFAX FIELD, KANSAS				
2472nd AF Reserve Training Center	Richard A. Moorehouse	SP	Colonel	799A
BENJAMIN HARRISON AFB, IND	Lotha A. Smith	CP	Colonel	131A
2463rd Base Service Gp	Lotha A. Smith	CP	Colonel	131A
36th Communication Sq (Comd)	Harold C. Green	N/R	Captain	AO 2044860
691st AF Band	Ernest W. Greer	N/R	WOJG	AW 950646
2475th WAF Sq	Doris D. Diamant	N/R	1st Lt	AL 80109
MARSHALL AF BASE, KANSAS	Everett K. Jenkins Jr.	P	Major	3045A
4406th Air Base Sq	Everett K. Jenkins Jr.	P	Major	3045A

Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

RCS-AF-CS-P4M
(MIL PERS)

TWELFTH AIR FORCE
Headquarters Twelfth Air Force, Brooks Air Force Base, Texas

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Alden R. Crawford	M/Gen	64A	CP	Commanding General
Glen C. Jamison	B/Gen	55A	CP	Vice Commander
Richard M. Bristol	Col	902A	P	Asst Vice Commander
Edward O. Gwynn	Lt Col	2168A	N/R	Comptroller
George L. Colley	Major	AO 649026	N/R	Asst Comptroller
Max T. Leyendecker	Captain	5515A	AO (Non-Spec)	Director of Budget
Edward H. Hoffman	Major	AO 1280003	N/R	Director of Finance
				Director of Programs & Costs
John P. Kelly	Captain	AO 649366	N/R	Director of Statistical Services
Vincent W. Howard	Colonel	1606A	P	Deputy for Personnel
Charles C. Andrews	Lt Col	3476A	SP	Asst Deputy for Personnel
Phillip C. Musgrave	Major	2898A	SP	Director of Military Personnel
Alpha A. Adams	Major	AL 80021	N/R	Director of Personnel Services
John L. Hood	Major	AO 906899	N/R	Director of Planning & Management
David K. Lyster	Lt Col	4436A	SP	Director of Personnel Procurement
Luther B. Matthews	Lt Col	2802A	SP	Director of Air ROTC & Air Scouts
Clement A. Siwinski	Lt Col	18762A	N/R	Chaplain
Allen W. Rigsby	Colonel	943A	N/R	Judge Advocate
Blaine B. Campbell	Lt Col	1492A	CP	Deputy for Operations
Broadus B. Taylor	Lt Col	1833A	SP	Asst Deputy for Operations
George F. Keene Jr.	Lt Col	2305A	SP	Director of Operations & Training
George M. Sander	Major	2885A	N/R	Director of Intelligence
Charles R. Myers, Jr.	Lt Col	9112A	SP	Director of Requirements
Frederick W. Shipe	Lt Col	5401A	N/R	Director of Communications & Elect
Seth L. McKee	Lt Col	4279A	SP	Director of Air Force Reserve
Wallace E. Hopkins	Lt Col	4987A	P	Director of Air National Guard
Ezekiel W. Napier	Colonel	468A	CP	Deputy for Materiel
				Asst Deputy for Materiel
Anthony L. McCluskey	Major	AO 907970	N/R	Director of Materiel Services

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Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

RCS-AF-CS-P4M
(MIL PERS)

HQ TWELFTH AIR FORCE, BROOKS AIR FORCE BASE, TEXAS CONT'D

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Clifford A. Johnston	Major	3797A	SP	Director of Maintenance & Supply
Edward W. Angle	Lt Col	AO 255332	N/R	Director of Installations
				Director of Materiel Planning
Michael F. Davis	Colonel	96A	CP	Deputy for Reserve Forces
				Asst Deputy for Reserve Forces
Seth J. McKee	Lt Col	4279A	SP	Director of AF Reserve
Wallace E. Hopkins	Lt Col	4987A	P	Director of Air National Guard
Luther B. Matthews	Lt Col	2802A	SP	Director of Air ROTC
Fred D. Stevers	Colonel	1757A	CP	Inspector General
William C. Adams	Lt Col	3723A	SP	Air Inspector
John J. Manbeck	Captain	AO 1285965	N/R	Provost Marshal
Robert T. Engle	Lt Col	7611A	N/R	Adjutant General
Neely C. Mashburn	Colonel	O 8836	FS	Surgeon
Gregory T. Carpenter	Major	AO 429358	P	Public Information Officer
John E. Pryor	Major	AO 801381	P	Commanding Officer, Hq & Hq Sq, 12AF

UNITS & STATIONS TWELFTH AIR FORCE

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
BIGGS AF BASE, TEXAS				
2602 Tow Target Sq	Leonard Kaufman	F	Major	9225A
CAMP LE ROY JOHNSON, LA (ARMY)				
2594th AF Overseas Replacement Depot	Frederick Bauer, Jr.	N/R	Lt Col	AO 305868
BROOKS AF BASE, TEXAS	Cecil E. Henry	CP	Colonel	711A
2595th Air Base Gp	Cecil E. Henry	CP	Colonel	711A
2599th Aviation Sq	William J. Smith	P	1st Lt	13739A

Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

RCS-AF-SC-P4M
(MIL PERS)

UNITS & STATIONS TWELFTH AIR FORCE CONT'D

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
BROOKS AF BASE, TEXAS CONT'D				
579th AF Band	Clyde C. Owens	N/R	CWO	AW 902066
40th Comm Sq Comd	William A. Werber	P	Captain	AO 863933
2597th Air Police Sq	John R. Gee	AO	Lt Col	2223A
HENSLEY FLD, TEXAS				
2596th AF Reserve Training Center	Sam C. Gribi	CP	Lt Col	2114A
FT SAM HOUSTON, TEXAS				
2206th Hospital Sq	Charles W. Bucy	N/R	Captain	AO 559647
EL PASO, TEXAS				
2207th Hospital Sq	Tracy B. Watson	N/R	Captain	AO 564575
TINKER AF BASE, OKLAHOMA (AMC)				
2592nd AF Reserve Training Center	F. H. LeFebre	P	Lt Col	9088A
KIRTLAND AF BASE, NEW MEXICO				
81st Fighter Wg	Thomas W. Blackburn	CP	Colonel	156A
81st Fighter Gp	Gladwyn E. Pinkston	SP	Colonel	1828A
81st AB Gp	Thomas L. Wiper	SP	Lt Col	0 4029A
81st Maint & Supply Gp	Arthur F. Reinhart	SP	Lt Col	2186A
81st Sta Med Gp	Cecil P. Jone	N/R	Captain	0 1786644
636th Acft Cont & Warning Sq	Charles F. Striplin Jr	N/R	Lt Col	2806A
HOT SPRINGS, ARKANSAS				
2250th Hospital Sq	L. I. Stephens	N/R	1st Lt	AO 2023228

Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

RCS-AF-SC-P4M
(MIL PERS)

FOURTEENTH AIR FORCE

Headquarters Fourteenth Air Force, Robins Air Force Base, Georgia

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITION
Ralph F. Stearly	M/Gen	59A	CP	Commanding General
Ralph A. Snavely	B/Gen	221A	CP	Vice Commander
Robert A. Woods	Lt Col	3812A	N/R	Asst Vice Commander
Kennard W. Gephard	Colonel	AO 301343	N/R	Comptroller
Oliver P. Shaffer	Major	AO 259809	N/R	Asst Comptroller
Benjamin L. Gregory	Captain	AO 1296850	N/R	Director of Budget
Ralph E. Johnstone	Captain	AO 1281127	N/R	Director of Finance
				Director of Audits
William E. Booth	Captain	AO 672265	P	Director of Programs & Costs
Harold A. Benner	Major	AO 564789	N/R	Director of Statistical Services
Robert A. Rollison	Colonel	747A	N/R	Deputy for Personnel
Herman L. Fagley	Lt Col	AO 461556	N/R	Asst Deputy for Personnel
Herman L. Fagley	Lt Col	AO 461556	N/R	Director of Personnel
Harold D. Stanhope	Major	AO 426440	P	Director of Personnel Services
Claude S. Buchanan	Lt Col	AO 264596	N/R	Director of Military Pers Proc
Robert A. Rollison	Colonel	747A	N/R	Director of Pers Plan & Management
William E. Byerts	Lt Col	4324A	P	Director of Air ROTC & Air Scouts
Eugene J. Graebner	Lt Col	AO 345930	N/R	Chaplain
Claire D. Wallace	Lt Col	AO 271331	N/R	Judge Advocate
Clifford P. Michael	Colonel	O 20383	N/R	Surgeon
Cortlandt S. Johnson	Colonel	161A	CP	Deputy for Operations
Robert F. Schirmer	Colonel	AO 388637	N/R	Asst Deputy for Operations
Hyman B. Wax	Lt Col	AO 277495	N/R	Director of Plans & Organizations
George D. Hastings	Lt Col	2161A	N/R	Director of Intelligence
Bishop P. Parrish	Lt Col	2183A	SP	Director of Operations & Training
Carroll S. Miller	Colonel	740A	N/R	Director of Communications & Elect
Robert Whelchel	Lt Col	2316A	N/R	Deputy for Materiel
Boleslaus Krupinski	Lt Col	AO 399042	N/R	Asst Deputy for Materiel
Howard E. Rinehart	Major	2583A	N/R	Director of Materiel Planning
Lewis E. Nichols	Lt Col	AO 314270	N/R	Director of Materiel Services

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Roster of Key Air Force Pers, ConAC Mitchel AF Base, NY

RCS-AF-SC-P4M
(MIL PERS)

Hq Fourteenth Air Force Cont'd

NAME	GRADE	SERIAL NUMBER	AERONAUTICAL RATING	STAFF POSITIONS
Joseph E. O'Bryan	Major	5540A	N/R	Director of Maint & Supply
Stephan F. Noonan	Major	6380A	N/R	Director of Installations
Thomas K. McGehee	Colonel	AO 33107	SP	Deputy for Reserve Forces
Edward A. Collins	Captain	11629A	P	Asst Dep for Reserve Forces
James B. Buck	Colonel	1137A	SP	Inspector General
Harris K. McCauley	Lt Col	10527A	SP	Air Inspector
John P. Mulligan	Lt Col	2202A	N/R	Air Provost Marshal
Horace P. Bonnewitz	Colonel	AO 251930	N/R	Adjutant General
Robert DeT Lawrence	Major	AO 353560	N/R	Public Information Officer
Burton T. Poole	Captain	AO 578897	N/R	Commanding Officer, Hq & Hq Sq, 14AF
Willard A. Wolfinbarger	B/Gen	317A	CP	Commanding General, 8th Air Division

UNITS & STATIONS FOURTEENTH AIR FORCE

BIRMINGHAM MUN APT, ALABAMA	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
2587th AF Reserve Training Center	Leslie R. Bratton	SP	Lt Col	3620A
GREENVILLE AF BASE, SC	Louis M. Merrick	CP	Col	211A
316th Troop Carrier Wg	Louis M. Merrick	CP	Col	211A
316th Troop Carrier Gp	Edgar W. Hampton	SP	Col	1805A
316th Maint & Supply Gp	Cecil B. Guile	CP	Col	AO 108633
316th Air Base Gp	Earle R. Meyers	SP	Lt Col	5746A
316th Medical Gp	Edgar O. Nunez	N/R	Captain	0 474312
316th Finance Disbursing Unit	Harry J. McAuley	N/R	Major	0 335984
4410th Bomb Disposal Unit	Francis P. McGuire	N/R	1st Lt	AO 1551919
1st Veterinary Detachment	Robert J. Strickland	N/R	Major	AO 220056
5th Liaison Sq	William P. Binks Jr.	P	Captain	10626A
5th Radar Calibration Detachment	Pascal J. Corritore	P	1st Lt	13207A
256th Medical Disp Unit	Bertram L. Tesman	N/R	Captain	0 1726363

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Roster of Key Air Force Pers, ConAC Mitchel AF Base, NY

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UNITS & STATIONS FOURTEENTH AIR FORCE CONT'D.

HAWKINS FIELD, MISS	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
2610th Standby Sq	Harold M. Powers (Actg)	P	Major	9906A
LAWSON AF BASE, GEORGIA				
4408th Air Base Sq	Gilbert T. Collar	CP	Colonel	673A
MARIETTA AF BASE, GEORGIA				
2589th AF Reserve Training Center	George H. Kneen, Jr.	P	Lt Col	4015A
MEMPHIS MUN APT, TENN				
2584th AF Reserve Training Center	Preston C. Newton	SP	Lt Col	4220A
MIAMI INTERNATIONAL APT, FLA				
2585th AF Reserve Traing Center	John V. Hart	CP	Colonel	179A
MOODY AF BASE, GEORGIA				
4409th Standby Sq	Robert F. Montgomery	N/R	Captain	AO 870774
ORLANDO AF BASE, FLA	John G. Williams	CP	Colonel	148A
769th AF Band	Edwin H. Sanford	N/R	CWO	AW 902033
539th Acft Control & Warning Group	Howard T. Wright	P	Major	3678A
2583rd Air Base Gp	John G. Williams	CP	Colonel	148A
2598th Aviations Sq	David D. Nesler	N/R	1st Lt	AO 878196
37th Comm Sq (Command)	Wiley S. Adams, Jr.	N/R	Captain	AO 425453

Roster of Key Air Force Pers, ConAC Mitchel AFB, NY
UNITS & STATIONS FOURTEENTH AIR FORCE CONT'D

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(MIL PERS)

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
SHAW AF BASE, SUMTER, SC	P. K. Morrill, Jr.	CP	Colonel	474A
20th Ft Wg	P. K. Morrill, Jr.	CP	Colonel	474A
20th Ftr Gp	John A. Dunning	SP	Colonel	1855A
20th Maint & Supply Gp	Claude L. Green	N/R	Lt Col	AO 4800747
20th Air Base Gp	Gerhard J. Schriever	SP	Colonel	2043A
20th Medical Gp	Asaw Deloach	N/R	Captain	0 1736015
20th Finance Disbursing Unit	Nile C. Shau	N/R	Captain	AO 493126
2nd Armament Sq	George Wetzler, Jr.	N/R	1st Lt	AO 1036792
30th Motor Transport Sq	James C. Stanley	N/R	Captain	AO 367975
606th Acft Control & Warning Sq	Horace B. McWhirter	SP	Major	4898A
161st TAC Recon Sq (Photo Jet)	Hugh H. Marble	SP	Lt Col	3900A
SMYRNA AF BASE, TENNESSEE	Hoyt L. Prindle	CP	Colonel	334A
314th Troop Carrier Wing	Hoyt L. Prindle	CP	Colonel	334A
314th Troop Carrier Gp	Richard W. Henderson	CP	Colonel	995A
314th Maint & Supply Gp	Bruce R. Ferrell	N/R	Lt Col	AO 447767
314th Air Base Gp	Charlie M. Ross	SP	Colonel	AO 388915
314th Medical Gp	Clark B. Proctor	FS	Lt Col	0 295886
314th Finance Disbursing Unit	James H. Sackett, Sr.	N/R	1st Lt	AO 1003618
TURNER AF BASE, ALBANY, GEORGIA	Eugene H. Snavely	SP	Colonel	1750A
31st Fighter Wing	Eugene H. Snavely	SP	Colonel	1750A
31st Fighter Group	Carroll W. McCoplin	P	Colonel	3514A
31st Maint & Supply Gp	Charles A. Gayle	SP	Lt Col	2047A
31st Air Base Gp	Albert V. Kanig	N/R	Lt Col	AO 463191
31st Medical Gp	Paul V. Davis	FS	Major	0 57380
31st Finance Disbursing Unit	Roy B. Hogg	P	Captain	AO 794232
607th Acft Control & Warning Sq	Edwin D. Connell	P	Captain	AO 430921

Roster of Key Air Force Pers ConAC, Mitchel AFB, NY

RCS-AF-SC-P4M
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UNITS & STATIONS FOURTEENTH AIR FORCE CONT'D

	NAME	AERONAUTICAL RATING	COMMANDING OFFICER'S GRADE	SERIAL NUMBER
POPE AF BASE, FORT BRAGG NC				
8th Air Div (Defense)	Willard R. Wolfinbarger	CP	B/Gen	317A
9th Air Div (Defense)	Delbert H. Hahn	P	Lt Col	3436A
934 Sig Bn Separate	John M. Meersch	N/R	Lt Col	AO 318301
502nd Tactical Control Gp	Arthur L. Logan	SP	Lt Col	2303A
2600th Air Base Sq	Richard G. Herbine	SP	Lt Col	2077A
2nd Relay Sq				
OLIVER GENERAL HOSPITAL, AUGUSTA, GA.				
2202nd Hospital Sq	William L. Mitchell, Jr	N/R	Capt	AO 583416

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Roster of Key Personnel

31 January 1950

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ROSTER OF KEY PERSONNEL

Continental Air Command

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Mitchel Air Force Base, New York

31 January 1950

STAFF POSITIONS	NAME
Commanding General	Lt Gen Ennis C. Whitehead
Vice Commander	M Gen Charles T. Myers
Army & Navy Liaison Officer	M Gen Willard W. Irvine
Assistant for Reserve Forces	Col Reuben Kyle, Jr.
Assistant to the Vice Commander	Col William C. Warren
Chief, Manpower Evaluation Board	Lt Col Edward H. Nigro
Air Adjutant General	Col Neal J. O'Brien
Assistant Air Adjutant General	Lt Col Vance E. Murphy
Director of Publications	Maj Walter N. Armbruster
Director of Administration (Actg)	Capt Bruce H. Gemmel
Director of Historical Services	Civilian Jacob J. Lichman
Air Surgeon	B Gen John W. Hargreaves
Inspector General	M Gen Charles E. Thomas
Air Inspector (Actg)	Col Edgar T. Selzer
Flying Safety	Maj August E. Weil
Air Provost Marshal	Lt Col Archibald E. Tanner
Public Information	Maj Max D. Hampton
Comptroller	B Gen Robert C. Candee
Assistant Comptroller	Col Earl B. Cook
Director of Programs & Costs	Lt Col Tom R. Taylor
Director of Statistical Services	Lt Col Jack E. Wert
Director of Budget	Maj Edward T. Haydala
Director of Audits (Actg)	Capt Joseph V. Matella
Director of Finance	Col Elmer W. Cude
Deputy for Personnel	Col Charles R. Landon
Assistant Deputy for Personnel	Col Richard W. Fellows
Air Chaplain	Col Roy R. Reynolds
Air Judge Advocate	Col Desmond O'Keefe
WAF Staff Director	Maj Marjorie O. Hunt
Director Personnel Planning & Management	Lt Col Richard A. Yudkin
Director of Military Personnel	Col John C. McCurnin
Director of Military Personnel Procurement	Lt Col Frederick W. Shipley, Jr.
Director of Civilian Personnel	Civilian Frederick R. Taylor
Director of Personnel Services (Actg)	Maj Burgess Gradwell
Director of Air Force ROTC	Lt Col Dexter L. Hodge
Ground Safety	Maj Edmund J. Evans
Director of Civil Air Defense	Col John C. Kilborn
Deputy for Operations	B Gen Herbert B. Thatcher
Assistant Deputy for Operations	Col George S. Brown
Director of Operations & Training	Col Dolf E. Muehleisen
Director of Plans Organizations & Requirements	Col James H. Price
Director of Communications & Electronics	Col Hobart R. Yeager
Director of Intelligence (Actg)	Lt Col Ernest J. White, Jr.

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STAFF POSITIONS	NAME
Deputy for Materiel	Col Signa A. Gilkey
Assistant Deputy for Materiel	Col Robert C. McBride
Director of Materile Planning	Lt Col Robert L. Petit
Director of Maintenace Supply & Services	Col Marion G. Ferguson, Jr.
Director of Installations	Col Ward T. Abbott
Deputy for Tactical Air Operations (Add dy)	M Gen Robert M. Lee
Commanding Officer, Hq & Hq Sq, ConAC	Maj Arthur V. Schultz

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ROSTER OF KEY PERSONNEL

Continental Air Command

Mitchel Air Force Base, New York

28 February 1950

STAFF POSITIONS	NAME
Commanding General	L Gen Ennis C. Whitehead
Vice Commander	M Gen Charles T. Myers
Army & Navy Liaison Officer	M Gen Willard W. Irvine
Assistant for Reserve Forces	Col Reuben Kyle, Jr.
Assistant to the Vice Commander	Col William C. Warren
Chief, Manpower Evaluation Board	Lt Col Edward H. Nigro
Air Adjutant General	Col Neal J. O'Brien
Assistant Air Adjutant General	Lt Col Vance E. Murphy
Director of Publications	Maj Walter N. Armbruster
Director of Administration (Actg)	Capt Bruce H. Gemmel
Director of Historical Services	Civilian Jacob J. Lichman
Air Surgeon	B Gen John W. Hargreaves
Inspector General	M Gen Charles E. Thomas
Air Inspector	Col Edgar T. Selzer
Flying Safety	Maj August E. Weil
Air Provost Marshal (Actg)	Lt Col Archibald R. Tanner
Public Information Officer	Maj Max D. Hampton
Comptroller	B Gen Robert C. Candee
Assistant Comptroller	Col Earl B. Cook
Director of Programs & Costs	Lt Col Tom R. Taylor
Director of Statistical Services	Lt Col Jack E. Wert
Director of Budget (Actg)	Maj Earl H. Butler
Director of Audits	Capt Joseph V. Matella
Director of Finance	Col Elmer W. Rude
Deputy for Personnel	Col Richard W. Fellows
Assistant Deputy for Personnel	Lt Col Lawrence P. Dash
Air Chaplain	Col Roy F. Reynolds
Air Judge Advocate	Col Desmond O'Keefe
WAF Staff Director	Maj Marjorie O. Hunt
Director of Personnel Planning & Management	Lt Col Richard A. Yudkin
Director of Military Personnel	Col John C. McCurnin
Director of Military Personnel Procurement	Lt Col Frederick W. Shipley Jr.
Director of Civilian Personnel	Civilian Frederick R. Taylor
Director of Personnel Services	Maj Burgess Gradwell
Director of Air Force ROTC	Lt Col Dexter L. Hodge
Ground Safety	Maj Edmund J. Evans
Deputy for Operations	B Gen Herbert B. Thatcher
Assistant Deputy for Operations	Col George S. Brown
Director of Civil Air Defense	Col John C. Kilborn
Director of Operations & Training	Col Dolf E. Muehleisen
Director of Plans Organizations & Requirement	Col Bruce K. Hollowary
Director of Communications & Electronics	Col Hobart R. Yeager
Director of Intelligence (Actg)	Lt Col Ernest J. White, Jr.

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STAFF POSITIONS	NAME
Deputy for Materiel	Col Signa A. Gilkey
Assistant Deputy for Materiel	Col Robert C. McBride
Director of Materiel Planning	Lt Col Robert L. Petit
Director of Maintenace Supply & Services	Col Marion G. Ferguson, Jr.
Director of Installations	Col Ward T. Abbott
Deputy for Tactical Air Operations (Add dy)	M Gen Robert M. Lee
Commanding Officer, Hq & Hq Sq, ConAC	Maj Riley N. Whittington

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ROSTER OF KEY PERSONNEL

Continental Air Command

Mitchel Air Force Base, New York

31 March 1950

STAFF POSITIONS	NAME
Commanding General	L Gen Ennis C. Whitehead
Vice Commander	M Gen Charles T. Myers
Army & Navy Liaison Officer	M Gen Willard W. Irvine
Assistant to the Vice Commander	Col William C. Warren
Chief, Manpower Evaluation Board	Lt Col Edward H. Nigro
Air Adjutant General	Col Neal J. O'Brien
Assistant to Air Adjutant General	Lt Col Vance E. Murphy
Director of Publications	Lt Col James C. Barlow
Director of Administration	Lt Col William P. Mullins
Director of Historical Services	Civilian Jacob J. Lichman
Air Surgeon	B Gen John W. Hergreaves
Inspector General	M Gen Charles E. Thomas
Air Inspector	Col Edger T. Selzer
Flying Safety	Maj Ausust E. Weil
Air Provost Marshal	Col Robert B. Deans
Public Information Officer	Maj Max D. Hempton
Comptroller	B Gen Robert C. Cendee
Assistant Comptroller	Col Earl B. Cook
Director of Programs & Costs	Lt Col Tom R. Tayler
Director of Statistical Services	Lt Col Jack E. Wert
Director of Budget	Maj Earl H. Butler
Director of Audits	Capt Joseph V. Metella
Director of Finance	Col Elmer W. Gude
Deputy for Personnel	Col Reuben Kyle Jr.
Assistant Deputy for Personnel	Col Richard W. Fellows
Air Chaplain	Col Roy F. Reynolds
Air Judge Advocate	Col Desmond O'Keefe
WAF Staff Director	Maj Marjorie O. Hunt
Director of Personnel Planning & Management	Lt Col Richard A. Yudkin
Director of Military Personnel	Col John C. McCurnin
Director of Military Personnel Procurement	Lt Col Frederick W. Shipley Jr.
Director of Civilian Personnel	Civilian Frederick R. Taylor
Director of Personnel Services	Maj Burgess Gradwell
Director of Air Force ROTC	Lt Col Dexter L. Hodge
Ground Safety	Maj Edmund J. Evans

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STAFF POSITIONS	NAME
Deputy for Operations	B Gen Herbert B. Thatcher
Assistant Deputy for Operations	Col George S. Brown
Director of Civil Air Defense	Col Jhon C. Kilborn
Director of Operations & Training	Col Dolf E. Muehleisen
Director of Plans Organizations & Requirements	Col Bruce K. Holloway
Director of Communications & Electronics	Col Hobart R. Yeager
Director of Intelligence (Actg)	Lt Col Ernest J. White, Jr.
Deputy for Materiel	Col Signa A. Gilkey
Assistant Deputy for Meteriel	Col Robert C. McBride
Director of Materiel Planning	Lt Col Robert L. Petit
Director of Maintenance Supply & Services	Col Marion G. Ferguson, Jr.
Director of Installations	Col Ward T. Abbott
Deputy for Tactical Air Operations (Add dy)	M Gen Robert M. Lee
Commanding Officer, Hq & Hq Sq, ConAC	Maj Riley N. Whittington

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ROSTER OF KEY PERSONNEL

Continental Air Command

Mitchel Air Force Base, New York

30 April 1950

STAFF POSITIONS	NAME
Commanding General	Lt Gen Ennis C. Whitehead
Vice Commander	M Gen Charles T. Myers
Manpower Evaluation Board	Lt Col William A. Lanford
Army & Navy Liasion	M Gen Willard W. Irvine
Air Adjutant General	Col Neal J. O'Brien
Air Surgeon	B Gen John W. Hargreaves
Inspector General	M Gen Charles E. Thomas, Jr.
Air Inspector	Col Edgar T. Selzer
Dir of Flying Safety	Maj August E. Weil
Air Provost Marshal	Col Robert S. Deans
Public Information Officer	Maj Max D. Hampton
Air Judge Advocate	Col Desmond O'Keefe
Comptroller	B Gen Robert C. Candee
Director of Programs & Cost	Lt Col Tom R. Taylor
Director of Stat Services	Lt Col Jack E. Wert
Director of Budget	Maj Earl H. Butler (Actg)
Director of Audits	Capt Joseph V. Matella
Diredtor of Finance	Col Elmer W. Gude
Deputy for Personnel	Col Reuben Kyle, Jr.
Air Chaplain	Col Roy F. Reynolds
WAF Staff Director	Maj Marjorie O. Hunt
Dir of Pers Plan & Magnt	Lt Col Richard A. Yudkin
Dir of Military Personnel	Col John C. McCurnin
Dir of Military Pers Proc	Lt Col Frederick W. Shipley, Jr.
Dir of Personnel Services	Maj Burgess Gradwell
Dir of Air ROTC & Air Scouts	Lt Col Dexter L. Hodge
Ground Safety	Maj Edmund J. Evans
Deputy for Operations	B Gen Herbert B. Thatcher
Dir of Operations & Training	Col Dolf E. Muehleisen
Dir of Plans Organ & Rqmts	Col Bruce K. Holloway
Dir of Communications & Electronics	Col Hobart B. Yeager
Dir of Intelligence	Lt Col Ernest J. White, Jr., (Actg)
Dir of Civil Air Defense	Col John C. Kilborn
Deputy for Materiel	Col Signa A. Gilkey
Dir of Materiel Planning	Lt Col Robert L. Petit
Dir of Maint Supply & Sev	Col Marion G. Ferguson Jr.
Dir of Installations	Col Ward T. Abbott
Commanding Officer Hq & Hq Sq	Maj Riley N. Whittington
Eastern Air Defense Force	M Gen Robert M. Webster

ROSTER OF KEY PERSONNEL

Continental Air Command

Mitchel Air Force Base, New York

31 June 1950

STAFF POSITIONS	NAME
Commanding General	Lt Gen Ennis C. Whitehead
Vice Commander	M Gen Charles T. Myers
Army & Navy Liaison Officer	M Gen Willard W. Irvine
Assistant to the Vice Commander	Col William C. Warren
Chief, Manpower Evaluation Board	Lt Col William A. Lanford
Air Adjutant General	Col Neal J. O'Brien
Assistant to Air Adjutant General	Lt Col Vance E. Murphy
Director of Publications	Lt Col James C. Barlow
Director of Administration	Lt Col William P. Mullins
Director of Historical Services	Civilian, Jacob J. Lichman
Air Surgeon	B Gen John W. Hargreaves
Inspector General	M Gen Charles E. Thomas
Air Inspector	Col Edgar T. Selzer
Flying Safety	Maj August E. Weil
Air Provost Marshal	Col Robert B. Deans
Public Information Officer	Maj Max D. Hampton
Comptroller	B Gen Robert C. Candee
Assistant Comptroller	Col Earl B. Cook
Director of Programs & Costs	Lt Col Tom R. Taylor
Director of Statistical Services	Lt Col Jack E. Wert
Director of Budget	Maj Edward T. Heydala
Director of Audits	Capt Joseph V. Matella
Director of Finance	Col Elmer W. Gude
Deputy for Personnel	Col Reuben Kyle Jr.
Assistant Deputy for Personnel	Col Richard W. Fellows
Air Chaplain	Col Roy F. Reynolds
Air Judge Advocate	Col Desmond O'Keefe
WAF Staff Director	Maj Marjorie O. Hunt
Director of Personnel Planning & Management	Lt Col Richard A. Yudkin
Director of Military Personnel	Col John C. McCurnin
Director of Military Personnel Procurement	Lt Col Frederick W. Shipley Jr.
Director of Civilian Personnel	Civilian, Frederick R. Taylor
Director of Personnel Services	Maj Burgess Gradwell
Director of Air Force ROTC	Lt Col Dexter L. Hodge
Ground Safety	Maj Edmund J. Evans

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STAFF POSITIONS	NAME
Deputy for Operations	B Gen Herbert B Thatcher
Assistant Deputy for Operations	Col George S. Brown
Director of Civil Air Defense	Col John C. Kilborn
Director of Operations & Training	Col Dolf E. Muehleisen
Director of Plans Organizations & Requirements	Col James H. Price
Director of Communications & Electronics	Col Hobart R. Yeager
Director of Intelligence (Actg)	Lt Col Ernest J. White, Jr.
Deputy for Materiel	Col Signa A. Gilkey
Assistant Deputy for Materiel	Col Robert C. McBride
Director of Materiel Planning	Lt Col Robert L. Petit
Director of Maintenance Supply & Services	Col Marion G. Ferguson, Jr.
Director of Installations	Col Ward T. Abbott
Deputy for Tactical Air Operations (Add Dy)	M Gen Robert M. Lee
Commanding Officer, Hq & Hq Sq, ConAC	Maj Riley N. Whittington

ROSTER OF KEY PERSONNEL

Continental Air Command

Mitchel Air Force Base, New York

31 July 1950

STAFF POSITIONS	NAME
Commanding General	Lt Gen Ennis C. Whitehead
Vice Commander	M Gen Charles T. Myers
Manpower Evaluation Board	Lt Col William A. Lanford
Army Navy Liaison	Lt Col Lamar C. Ratcliffe
Air Adjutant General	Col Neal J. O'Brien
Air Surgeon	B Gen John W. Hargreaves
Inspector General	Col Frank H. Robinson
Air Inspector	Col John L. Medwed
Dir of Flying Safety	Lt Col Ralph Lockwood
Air provost Marshal	Col Robert F. Deans
Public Information Officer	Maj Max D. Hampton
Air Judge Advocate	Col Desmond O'Keefe
Comptroller	Col Robert Macrum
Dir of Programs & Costs	Lt Col Tom R. Taylor
Dir of Stat Services	Lt Col Jack E. Wert
Dir of Budget	Maj Earl H. Butler (Actg)
Dir of Audits	Capt Joseph V. Matella
Dir of Finance	Col Elmer W. Gude
Deputy for Personnel	Col Reuben Kyle, Jr.
Air Chaplain	Col Roy F. Reynolds
WAF Staff Director	Maj Marjorie O. Hunt
Dir Pers Plan & Mgmt	Lt Col Richard A. Yudkin
Dir of Military Personnel	Col John C. McCurnin
Dir of Pers Procurement	Lt Col Frederick W. Shipley Jr.
Dir of Personnel Services	Maj Burgess Gradwell
Dir of Air ROTC & Air Scouts	Lt Col Dexter L. Hodge
Ground Safety	Maj Edmund J. Evans
Deputy for Operations	B Gen Herbert B. Thatcher
Dir of Operations & Training	Col Dolf E. Muehleisen
Dir of Programs & Organizations	Col James H. Price
Dir of Plans & Requirements	Col Kenneth P. Bergquist
Dir of Communications & Electronics	Col Hobart R. Yeager
Dir of Intelligence	Lt Col Ernest I. White, Jr. (Actg)
Dir of Civil Air Defence	Col Bernard M. Wootton
Deputy for Materiel	Col Signa A. Gilkey
Dir for Materiel Planning	Lt Col Robert L. Petit
Dir of Maint Supply & Services	Col Fletcher T. Jaques
Dir of Installations	Col Ward T. Abbott
Commanding Officer, Hq & Hq Sq ConAC	Maj Robert N. Whittington

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ROSTER OF KEY PERSONNEL

Continental Air Command

Mitchel Air Force Base, New York

31 October 1950

STAFF POSITIONS	NAME
Commanding General	Lt Gen Ennis C. Whitehead
Vice Commander	M Gen Charles T. Myers
Antiaircraft Staff Section	M Gen Willard W. Irvine
Air Adjutant General	Col Neal J. O'Brien
Air Surgeon	B Gen John W. Hargreaves
Inspector General	Col Frank H. Robinson
Manpower Evaluation Board	Lt Col William A. Lanford
Air Inspector	Col John L. Nedwed
Director of Flying Safety	Lt Col Ralph G. Lockwood
Air Provost Marshal	Lt Col Frank M. Schumm (Actg)
Public Information Officer	Maj Max D. Hampton
Air Judge Advocate	Col Desmond O'Keefe
ConAC Board of Appeals	B Gen Clyde H. Mitchell
ConAC Board of Appeals	B Gen Douglas Keeney
Comptroller	Col Robert S. Macrum
Dir of Programs &Costs	Lt Col Joseph F. Mooney
Dir of Statistical Services	Lt Col Jack E. Wert
Dir of Budget	Maj Earl H. Butler
Dir of Finance	Col Elmer W. Gude
Deputy for Personnel	Col Reuben Kyle, Jr.
Air Chaplain	Col William W. Sissel
WAF Staff Director	Maj Marjorie O. Hunt
Dir of Personnel Planning & Mgmt	Lt Col Richard A. Yudkin
Dir of Military Personnel	Col John C. McCurnin
Dir of Pers Mobilization Control	Col Roland J. Bernick
Dir of Personnel Services	Maj Burgess Gradwell
Dir of Air ROTC & Air Scouts	Lt Col Dexter L. Hodge
Ground Safety	Maj Edmund J. Evans
Deputy for Operations	B Gen Herbert B. Thatcher
Dir of Operations & Training	Col Dolf E. Muehleisen
Dir of Programing & Organization	Col James H. Price
Dir of Plans & Requirements	Col Kenneth P. Bergquist
Dir of Communications & Electronics	Col Hobert R. Yeager
Dir of Intelligence	Col Eugene P. Mussett
Dir of Civil Defense	Col Bernard M. Wooton
Deputy for Materiel	Col Signa A. Gilkey
Dir of Materiel Planning	Lt Col Robert L. Petit
Dir of Supply	Lt Col Henry S. Monroe
Dir of Maintenance	Col Charles E. Tyler

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STAFF POSITIONS	NAME
Dir of Materiel Services	Col Fletcher P. Jaquess
Dir of Transportation	Maj Fred P. Wright
Dir of Air Installations	Col Ward T. Abbott
Headquarters Squadron ConAC	Maj Riley N. Whittington
28th Communications Squadron	Maj Robert J. McCleary

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ROSTER OF KEY PERSONNEL

Continental Air Command

Mitchel Air Force Base, New York

31 December 1950

STAFF POSITIONS	NAME	
Commanding General	Lt Gen Ennis C. Whitehead	(1-14 Dec)
	M Gen Willis H. Hale	(14 Dec --)
Vice Commander	M Gen Charles T. Myers	
Air Adjutant General	Col Neal J. O'Brien	
Air Surgeon	Col Sheldon S. Brownton	
Inspector General	Col John L. Nedwed	
Manpower Evaluation Board	Lt Col Howard E. Ferguson	
Air Inspector	Lt Col Irby V. Tedder	
Director of Flying Safety	Maj Robert W. Myers	
Air Provost Marshal	Lt Col John H. Gee	
Public Information Officer	Vacant	
Air Judge Advocate	Col Stewart S. Maxey	
ConAC Board of Appeals	B Gen Clyde H. Mitchell	
ConAC Board of Appeals	B Gen Douglas Keeney	
Comptroller	Col George W. Johnson	
Dir of Statistical Services	Maj Harold A Benner	
Dir of Budget	Lt Col Lyle C. Grimes	
Dir of Finance	Lt Col Edwin W. Ashwick	
Deputy for Personnel	Col Herbert M. West, Jr.	
Air Chaplain	Col William R. Bissel	
WAF Staff Director	Maj Dorothy Cooper	
Dir of Personnel Mobilization Con	Col Roland J. Barnick	
Dir of Personnel Planning & Mgmt	Vacant	
Dir of Military Personnel	Vacant	
Dir of Personnel Services	Vacant	
Dir of Air Force ROTC	Lt Col Dexter L. Hodge	
Dir of Ground Safety	Vacant	
Deputy for Operations	Col James B. Burwell	
Dir of Civil Air Defense	Vacant	
Dir of Operations & Training	Lt Col Elmer C. Blaha	
Dir of Programming & Organization	Lt Col James W. Townsend	
Dir of Plans & Requirements	Vacant	
Dir of Communications & Electronics	Col Bernard M. Wootton	
Dir of Intelligence	Lt Col William J. McNamara	
Deputy for Materiel	Col Signa A. Gilkey	
Dir of Supply	Lt Col John E. Crowley	
Dir of Materiel Services	Maj John J. Brunelly, Jr.	
Dir of Transportation	Maj Fred P. Wright	
Dir of Installations	Col Howard E. Webster	
Headquarters Squadron ConAC	Lt Col Frank L. Fenn	
28th Communications Squadron	Maj Frank S. Cushing	

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Roster of Key Personnel

Feb. 1950

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Roster of Key USAF Personnel

Continental Air Command

Mitchel Air Force Base, New York

as of 28 February 1950

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Roster of Key Air Force Pers, ConAC Mitchel AFB, NY

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CONTINENTAL AIR COMMAND
Headquarters Continental Air Command, Mitchel Air Force Base, New York

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITIONS
Ennis C. Whitehead	L/Gen	9A	CP	Commanding General
Charles T. Myers	M/Gen	37A	CP	Vice Commander
Willard W. Irvine	M/Gen	0 5838	N/R	Army & Navy Liaison Officer
Reuben Kyle, Jr.	Col	306A	CP	Assistant for Reserve Forces
William C. Warren	Col	878A	N/R	Assistant to the Vice Commander
Edward H. Nigro	Lt Col	4889A	SP	Chief, Manpower Evaluation Board
Neal J. O'Brien	Col	824A	N/R	Air Adjutant General
Vance E. Murphy	Lt Col	2246A	N/R	Assistant Air Adjutant General
Walter N. Armbruster	Maj	AO 885820	N/R	Director of Publications
Bruce H. Gemmel	Capt	AO 563088	N/R	Director of Administration (Actg)
Jacob J. Lichman	Civilian			Director of Historical Services
John W. Hargreaves	B/Gen	233A	AC Med	Air Surgeon
Charles E. Thomas	M/Gen	192A	CP	Inspector General
Edgar T. Selzer	Col	699A	CP	Air Inspector
August E. Weil	Maj	9736A	P	Flying Safety
Archibald E. Tanner	Lt Col	AO 153077	N/R	Air Provost Marshal(Actg)
Max D. Hampton	Maj	AO 568482	N/R	Public Information Officer
Robert C. Candee	B/Gen	100A	CP	Comptroller
Earl B. Cook	Col	3629A	SP	Assistant Comptroller
Tom R. Taylor	Lt Col	5041A	N/R	Director of Programs & Costs
Jack E. Wert	Lt Col	2671A	N/R	Director of Statistical Services
Earl H. Butler	Maj	8217A	N/R	Director of Budget (Actg)
Joseph V. Matella	Capt	AO 308615	N/R	Director of Audits
Elmer E. Gude	Col	837A	N/R	Director of Finance
Richard W. Fellows	Col	1334A	SP	Deputy for Personnel
Lawrence P. Dash	Lt Col	2494A	N/R	Assistant Deputy for Personnel
Roy F. Reynolds	Col	AO 279360	N/R	Air Chaplain
Desmond O'Keefe	Col	125A	N/R	Air Judge Advocate
Marjorie O. Hunt	Maj	AL 80049	N/R	WAF Staff Director

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Hq ConAC, Mitchel AFB, NY, Cont'd.

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(All Pers)

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Richard A. Yudkin	Lt Col	4480A	N/R	Director of Personnel Planning & Management
John C. McCurnin	Col	AO 299162	N/R	Director of Military Personnel
Frederick W. Shipley Jr	Lt Col	AO 426989	N/R	Director of Military Personnel Procurement
Frederick R. Taylor	Civilian			Director of Civilian Personnel
Burgess Gradwell	Maj	10203A	P	Director of Personnel Services
Dexter L. Hodge	Lt Col	8185A	P	Director of Air Force ROTC
Edmund J. Evans	Maj	AO 475070	N/R	Ground Safety
Herbert B. Thatcher	B/Gen	634A	SP	Deputy for Operations
George S. Brown	Col	4090A	P	Assistant Deputy for Operations
John C. Kilborn	Col	562A	CP	Director of Civil Air Defense
Dolf E. Muehleisen	Col	1144A	CP	Director of Operations & Training
Bruce K. Holloway	Col	1336A	SP	Director of Plans Organizations & Requirements
Hobart R. Yeager	Col	200A	CP	Director of Communications & Electronics
Ernest J. White, Jr.	Lt Col	8947A	P	Director of Intelligence (Actg)
Signa A. Gilkey	Col	305A	CP	Deputy for Materiel
Robert C. McBride	Col	1441A	P	Assistant Deputy for Materiel
Robert L. Petit	Lt Col	5213A	P	Director of Materiel Planning
Marion G. Ferguson, Jr.	Col	2497A	N/R	Director of Maintenance Supply & Services
Ward T. Abbott	Col	862A	N/R	Director of Installations
Robert [illegible]. Lee	M/Gen	590A	CE	Deputy for Tactical Air Operations (Add dy)
Riley N. Whittington	Maj	6193A	P	Commanding Officer, Hq & Hq Sq, ConAC

UNITS ASSIGNED TO HQ ConAC

	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
28th Communications Sq, AF Mitchel AF Base, NY	Robert J. McCleary	N/R	Maj	6684A
2220th Extension Group Benjamin Harrison AF Base, Ind	E. W. A. Taylor	N/R	Col	AO 245565

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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EASTERN AIR DEFENSE FORCE
Mitchel Air Force Base, New York

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Robert M. Webster	M/Gen	21A	CP	Commanding General
George R. Acheson	B/Gen	335A	CP	Vice Commander
Joseph A. Cunningham	Col	2054A	SP	Director of Combat Operations
Frederick E. Rosier	WgCmdr	37425	P	Director of Analysis & Evaluation Director of Special Projects & Liaison
Adrain E. Lewie	Capt	AO 1031895	N/R	Director of Intelligence
Theodore Wansley	Maj	5784A	N/R	Air Adjutant General

TACTICAL AIR COMMAND (Operational)
Headquarters Tactical Air Command, Langley Air Force Base, Virginia

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITIONS
Robert M. Lee	M/Gen	590A	CP	Commanding General, Deputy for Tactical Air Operations, ConAC (Add dy)
Ernest K. Warburton	Col	407A	CP	Vice Commander
James W. Townsend	Lt Col	2629A	N/R	Asst to the Vice Commander
Robert H. Thom	Lt Col	AO 301102	N/R	Air Adjutant General
Leon Booth	Lt Col	2321A	N/R	Public Information Officer
Ernest K. Warburton	Col	407A	CP	Deputy for Operations (Add dy)
Arthur P. Hurr	Lt Col	9850A	P	Director of Training
Frances B. Valentine	Col	199A	CP	Director of Intelligence
Frank H. Mears	Col	1879A	CP	Director of Joint Operations Center
William M. Gross	Col	663A	CP	Deputy for Requirements
Harry B. Young	Col	1871A	SP	Director of Aircraft Requirements
Woodrow T. Merrill	Lt Col	6446A	P	Director of Equipment Requirements
Henry Viccellio	Col	1728A	SP	Deputy for Plans
George R. Brooking	Lt Col	8071A	P	Director of Policy & Doctrine
Loren G. McCollom	Col	1632A	P	Director of Field Exercise Plans
David M. Jones	Col	1811A	SP	Director of War Plans

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(Mil Pers)

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Tactical Air Command, Cont'd.

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
				Deputy for Communications
Edwin T. Keith	Capt	AO 572233	N/R	Director of Communications Systems
				Director of Special Projects
James H. Stover	Capt	AO 811153	P	Director of Electronics Systems
Arthur M. Gray	1st Lt	16649A	SP	Commanding Officer, Hq & Hq Sq, TAC

FIRST AIR FORCE
Headquarters First Air Force, Mitchel Air Force Base, New York

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Glenn O. Barcus	M/Gen	87A	CP	Commanding General
Reuben Kyle, Jr.	Col	306A	CP	Vice Commander (Actg) (Add dy)
Norton H. Van Sicklen III	Col	1841A	SP	Assistant for Reserve Forces
Ralph J. Erickson	Col	AO 211986	N/R	Assistant to the Vice Commander
William T. Coleman	Lt Col	AO 885605	N/R	Air Adjutant General
Sheldon S. Brownton	Col	19083A	AO Med	Air Surgeon
Jerome Loewenberg	Lt Col	963A	N/R	Air Judge Advocate
Douglas Johnston	Col	122A	N/R	Inspector General
Woodrow B. Wilmot	Lt Col	3240A	SP	Air Inspector
John H. Droughn	Capt	AO 1304489	N/R	Air Provost Marshal
Albert F. Davis	Lt Col	2505A	N/R	Public Information Officer
George W. Johnson	Col	AO 286216	N/R	Comptroller
Francis S. Cartaglia	Lt Col	AO 297697	N/R	Asst Comptroller
Benjamin R. Richards	Maj	AO 904402	N/R	Director of Programs & Costs
Richard M. Kaplan	Capt	AO 337483	N/R	Director of Statistical Services
Lyle C. Grimes	Lt Col	2538A	N/R	Director of Budget
Felix C. Forshage	Capt	AO 690644	P	Director of Audits
Lawrence A. Boyd	Maj	AO 567410	N/R	Director of Finance

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters First Air Force, Mitchel AFB, NY Cont'd.

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NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Emory L. Bruns	Col	736A	N/R	Deputy for Personnel
Edward D. S. Sullivan	Maj	7442A	N/R	Asst Deputy for Personnel
Charles W. Marteney	Lt Col	18714A	N/R	Air Chaplain
James C. Huntley	Capt	9854A	N/R	Director of Personnel Planning & Management
Dwight W. Pratt	Maj	10614A	N/R	Director of Military Personnel
Dean E. Hess	Maj	AO 792400	P	Director of Military Personnel Procurement
Raymond F. Wisniewski	Maj	9650A	N/R	Director of Personnel Services
Kenneth W. Holbert	Lt Col	5200A	P	Director of Air Force ROTC
Robert M. Stillman	Col	1114A	SP	Deputy for Operations
William R. Purinton	Lt Col	3623A	SP	Assistant Deputy for Operations
Lester J. Krause, Jr.	Lt Col	8025A	P	Director of Operations & Training
William R. Purinton	Lt Col	3623A	SP	Director of Plans Organizations & Reqmts (Add dy)
Carroll S. Miller	Col	740A	N/R	Director of Communications & Electronics
Howard H. Symons	Capt	15884A	P	Director of Intelligence
Frederick P. Knoll	Col	AO 307428	N/R	Director of Air National Guard
Ernest H. Beverly	Col	1590A	SP	Deputy for Materiel
				Asst Deputy for Materiel
Lothar C. Maurer	Col	720A	N/R	Director of Materiel Planning (Actg - Add dy)
Robert T. Peel	Lt Col	2856A	N/R	Director of Maintenance Supply & Services
Lothar C. Maurer	Col	720A	N/R	Director of Installations
Dee W. Rains	Lt Col	AO 204701	N/R	Commanding Officer, Hq & Hq Sq, First AF

UNITS & STATIONS FIRST AIR FORCE	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
MITCHEL AIR FORCE BASE, N. Y.	Robert W. C. Wimsatt	P	Col	214A
2500th AB Gp	Robert W. C. Wimsatt	P	Col	214A
581st AF Band	Adam B. Shaffer, Jr.	N/R	CWO	AW 951154
2233d AFRTC	John W. Egan	SP	Col	882A
2243d WAF Sq	Elizabeth Ray	N/R	Capt	AL 80214
34th Comm Sq	Richard E. Higgs	P	Capt	6730A
42nd Comm Sq				

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters First Air Force, Mitchel AFB, NY,

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(Mil Pers)

Units & Stations, First Air Force, Cont'd.	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
DOW AIR FORCE BASE, ME.				
2264th Standby Base Sq	Joseph Myers	P	Lt Col	8661A
HANSCOM AIRPORT, MASS.				
2234th AFRTC	Melvin S. Hollidge	CP	Col	843A
FLOYD BENNETT NAVAL AIR STA, NY	Lance Call	CP	Col	AO 384510
ROSLYN, NY	Marvin J. McKinney	N/R	Col	281A
503rd AC&W Gp	Marvin J. McKinney	N/R	Col	281A
26th Air Div (Defense)	Russell J. Minty	CP	Col	224A
OTIS AIR FORCE BASE, MASS	Arthur C. Agan, Jr.	SP	Col	1759A
33d Ftr Wg.	Arthur C. Agan, Jr.	SP	Col	1759A
33d Ftr Gp	Charles H. MacDonald	SP	Col	1830A
33d M&S Gp	Joseph C. Smith	SP	Lt Col	3870A
33d AB Gp	Harold W. Scruggs	SP	Lt Col	4217A
33d Med Gp	Everett M. Chaulker	FS	Maj	030901
STEWART AIR FORCE BASE, NY	Hallock P. K. Walmsley	SP	Lt Col	1931A
4400th AB Gp	Hallock P. K. Walmsley	SP	Lt Col	1931A
32nd Air Div (Defense)	Fred T. Crimmins	SP	Col	1719A
540th AC&W Gp	Otto G. Quanrud	N/R	Lt Col	1000A
4400th WAF Sq				
GRENIER AIR FORCE BASE, NH				
2263d Standby Base Sq	Robert D. Brown	P	Maj	10061A

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Roster of Key Air Force Pers, ConAC Mitchel AFB, NY
Units & Stations First Air Force. Cont'd.

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	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
MCGUIRE AIR FORCE BASE, NJ	Edward C. Tates	SP	Col	1914A
52nd Ftr Wg (AW)	Edward C. Tates	SP	Col	1914A
52nd Ftr Gp (AW)	Oliver G. Cellini	SP	Col	1829A
52nd M&S Gp	Charles L. Perkins	N/R	Col	AO 560214
52nd AB Gp	David J. Kirby	P	Maj.	3171A
52nd Med Gp	Stephen P. Farraro	FS	Capt	AO 1718420
FORT DIX, NJ (ARMY)	Evan [illegible]. Houseman	N/R	Lt Col	017307
2225th ER Gp	Edward B. Roth	N/R	Lt Col	AO 484684
MURPHY GENERAL HOSPITAL, MASS				
2200th Hospital Sq	Wilford H. Kunz	N/R	Capt	AO 904272

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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FOURTH AIR FORCE
Headquarters Fourth Air Force, Hamilton Air Force Base, Calif

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
John E. Upston	M/Gen	49A	CP	Commanding General
Joseph P. Bailey	Col	195A	CP	Vice Commander (Actg)
William A. Lanford	Lt Col	8176A	SP	Assistant for Reserve Forces
Harold E. Todd	Lt Col	2096A	N/R	Assistant to the Vice Commander
Lee Q. Wasser	Col	259A	CP	Special Assistant to the Commanding General
Harold L. Fuller	Lt Col	2257A	N/R	Air Adjutant General
Clifton B. Hinkel	Maj	AO 403594	N/R	Director of Publications
William A. Eith	2nd Lt	AO 1849015	N/R	Director of Administration
Andrew W. Smith	Col	C5442	AO Med	Air Surgeon
Lotha A. Smith	Col	131A	CP	Inspector General
				Air Inspector
Miles A. Conner	Lt Col	AO 347376	N/R	Air Provost Marshal
James E. Johnson	Maj	AO 377487	N/R	Public Information Officer
Robert S. Macrum	Col	519A	CP	Comptroller
Delbert O. Watson	Maj	AO 357393	N/R	Assistant Comptroller
William W. Converse	Lt Col	4027A	N/R	Director of Programs & Costs
Raymond E. Brett	Maj	4729A	SP	Director of Statistical Services
Fred J. Held	Maj	AO 559909	N/R	Director of Budget
Delbert O. Watson	Maj	AO 357393	N/R	Director of Audits (Actg)
Ivan O. Miller	Capt	AO 1643882	N/R	Director of Finance
Cecil C. Williams	Lt Col	2383A	N/R	Deputy for Personnel
Robert M. Clark	Maj	4924A	N/R	Assistant Deputy for Personnel
Henry C. Pennington	Lt Col	8769A	N/R	Air Chaplain
Stewart S. Maxey	Col	913A	N/R	Air Judge Advocate
Beatrice Tarnoff	Capt	AL 80492	N/R	WAF Staff Director
John W. Watt, Jr.	Lt Col	3357A	P	Director of Personnel Planning & Management
Glenn B. Riggle	Maj	5176A	N/R	Director of Military & Civilian Personnel
Delwyn E. Silver	Lt Col	AO 436011	P	Director of Military Personnel Procurement
Henry C. Sanders	Capt	AO 583519	N/R	Director of Personnel Services
Stanley W. Tobiason	Lt Col	AO 424573	CP	Director of Air Force ROTC
Robert F. Harris	Col	2041A	SP	Deputy for Operations

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Hq Fourth Air Force, Hamilton AFB, Calif, Cont'd.

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NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Wallace P. Mace	Col	1929A	N/R	Director of Operations & Training
William H. Clark	Col	1002A	SP	Director of Plans Organizations & Romts
Gus B. Hoffman	Col	807A	N/R	Director of Communications & Electronics
William A. Larson	Maj	9466A	P	Director of Intelligence (Actg)
Melie J. Coutlee	Col	867A	SP	Deputy for Materiel
Albert L. Perry	Lt Col	AO 409080	N/R	Assistant Deputy for Materiel
William Teddords, Sr.	Maj	AO 583565	N/R	Director of Materiel Planning
John J. Traunicht	Lt Col	AO 252718	N/R	Director of Maint Supply & Services
Ivins L. Browne	Col	AO 473013	N/R	Director of Installations
T. J. Jackson, Jr.	Maj	AO 424485	SP	Commanding Officer, Hq & Hq Sq, Fourth AF

UNITS & STATIONS FOURTH AIR FORCE

	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
SILVER LAKE, WASHINGTON				
25th AD, (Defense)	Clinton D. Vincent	SP	Col	1213A
505th AC&W Gp	James R. McNitt	N/R	Col	1183A
LONG BEACH MUN AIRPORT, CALIF.				
2347th AFRTC	Claude E. Duncan	CP	Col	686A
LETTERMAN GEN HOSP, SAN FRANCISCO CALIF				
2209th Hosp Sq	George Danko	N/R	Capt	AO 517699
SAN FRANCISCO POE, FORT MASON, CALIF				
2349th AFORD (Det)	Carl N. McDonald	N/R	1st Lt	AO 582070
SEATTLE POE, SEATTLE, WASHINGTON				
2349th AFORD	Woodrow E. Alexander	N/R	Capt	10480A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourth Air Force, Cont'd

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HAMILTON AIR FORCE BASE, CALIF	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
	George L. Usher	CP	Col	120A
78th Ftr Wg	George L. Usher	CP	Col	120A
78th Ftr Gp	Brian O'Neill	SP	Col	1826A
78th M&S Gp	Alfred J. Yates	N/R	Lt Col	AO 300366
78th AB Gp	John L. Waugh	CP	Lt Col	AO 183961
78th Med Gp	Oscar H. Miller	N/R	Comdr	NO 122901
35th Comm Sq (Comd)	Eugene Allison	N/R	Capt	11135A
573rd AF Band	Elmer R. Bruna	N/R	WOJG	AW 2126091
2346th AFRTC	David B. Lancaster, Jr.	CP	Col	876A
2349th AFORD	Peter A. Blate	N/R	Lt Col	AO 900945
2351st WAF Sq	Beatrice Tarnoff (Actg)	N/R	Capt	AL 80492
11th Calib Unit	Jess W. Tarbell	P	Capt	AO 409060
28th Air Div Def	William A. Matheny	CP	Col	428A
542nd AC&W Gp	James M. Fielder	N/R	Maj	AO 561005
McCHORD AIR FORCE BASE, WASHINGTON				
62nd TC Wg	Fred C. Nelson	CP	Col	142A
62nd TC Gp	Andriel N. Williams	SP	Col	1970A
62nd M&S Gp	Lester W. Nicol	SP	Lt Col	AO 377225
62nd Med Gp	Hervey B. Porter	FS	Col	O 16976
62nd AB Gp	Kenneth R. Crosher	CP	Col	509A
PORTLAND, OREGON				
2343rd AFRTC	Jackson W. Lewis	SP	Lt Col	2116A
MADIGAN GEN HOSP, WASHINGTON				
2210th Hosp Sq	Joe Robutellini	N/R	Capt	AO 566555

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MOSES LAKE AIR FORCE BASE, WASHINGTON	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
325th Ftr Wg, All Weather	Thomas A. Bennett	CP	Col	1513A
325th Ftr Gp, All Weather	Walter C. Hearne	P	Lt Col	AO 432290
325th M&S Gp	William L. McDowell	SP	Col	1691A
325th AB Gp	Ernest G. Ford	SP	Col	1766A
325th Med Gp	Arthur G. Nugent	FS	Capt	19308A
2350th WAF Sq	Sarah Goldin	N/R	1st Lt	AL 80245
634th AC Sq	Kenneth H. Potter	P	Capt	AO 403740

WESTERN AIR DEFENSE FORCE

Headquarters Western Air Defense Force, Hamilton AF Base, Calif

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Hugo P. Rush	M/Gen	75A	CP	Commanding General
William M. Morgan	B/Gen	439A	CP	Vice Commander
William A. Bowie	Lt Col	3376A	SP	Director of Plans & Special Projects
Theodore R. Clinkscales	Lt Col	3627A	SP	Director of Civil Defense
Richard B. Atchison, Jr.	Capt	9879A	P	Chief, Joint Information Center
Stanley G. Sroga	Capt	AO 873097	N/R	Chief, Operations Communications
Thomas M. Carrigan	Maj	9247A	N/R	Executive Officer
Robert S. Isreal Jr.	Col	354A	CP	Deputy for Operations
Thomas M. Carrigan	Maj	9247A	N/R	Air Adjutant General
Theodore R. Clinkscales	Lt Col	3627A	SP	Public Information Officer (Add dy)
Edwin F. Carey, Jr.	Lt Col	4422A	SP	Director of Combat Operations
Homer M. Cox	Lt Col	2824A	SP	Director of Intelligence
John J. Hayes	Capt	AO 1001148	N/R	Commanding Officer, Hq Sq WADF

HAMILTON AF BASE, CALIF				
43d Comm Sq	John J. Hayes	N/R	Capt	AO 1001148 (Add dy)

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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NINTH AIR FORCE
Headquarters Ninth Air Force, Langley Air Force Base, Virginia

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Willis H. Hale	M/Gen	19A	CP	Commanding General
Harold W. Bowman	Col	486A	CP	Vice Commander
Charles A. Harrington	Col	321A	CP	Assistant for Reserve Forces
Wilford L. Baxter	Maj	AO 181054	N/R	Assistant to the Vice Commander
Erlath W. Zuehl	Lt Col	AO 258954	N/R	Air Adjutant General
David D. Porter	Lt Col	713A	N/R	Air Judge Advocate
Raymond T. Jenkins	Col	19154A	AO Med	Air Surgeon
Henry H. Waller, Jr.	Col	1404A	N/R	Inspector General
Loren Cornell	Lt Col	2193A	CP	Air Inspector
Thaddeus D. Harris	Maj	AO 565579	N/R	Air Provost Marshal
Daivd M. Ellis	Lt Col	AO 282887	N/R	Public Information Officer.
Harold J. Smith	Lt Col	AO 203428	N/R	Comptroller
Clarence J. McCall	Lt Col	2250A	N/R	Assistant Comptroller
Willard C. Blackwell	Capt	AO 560643	N/R	Director of Programs & Costs (Actg)
Blake P. Howard	Capt	AO 649063	N/R	Director of Statistical Services
Allen R. Myers	WOJG	AW 2120475	N/R	Director of Budget (Actg)
Jess E. Spicher	1st Lt	AO 2092192	P	Director of Audits
Charles J. Wrennick	1st Lt	AO 2029112	N/R	Director of Finance (Actg)
James W. Twitty	Col	2917A	N/R	Deputy for Personnel
Charles E. Clark	Lt Col	5275A	N/R	Assistant Deputy for Personnel
Floyd S. Smith	Lt Col	AO 338559	N/R	Air Chaplain
Virginia D. Harmon	Capt	AL 410531	N/R	WAF Staff Director
George G. Loring; Jr.	Capt	16167A	P	Director of Personnel Planning & Mgmt
Fred T. Hight	Lt Col	3233A	N/R	Director of Military Personnel
Robert E. Guay	Lt Col	AO 403894	P	Director of Military Personnel Procurement
Joseph H. Ullmer	1st Lt	AO 576555	N/R	Director of Personnel Services
Hugh H. Bledsoe	Lt Col	2870A	N/R	Director of Air Force ROTC
Charles A. Harrington	Col	321A	CP	Deputy for Operations
David E. Daniel	Lt Col	4308A	P	Assistant Deputy for Operations (Actg)
Milton F. Glessner	Lt Col	3375A		Director of Operations & Training

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Ninth Air Force, Langley AFB, Va., Cont'd.

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NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Bascome L. Neal	Lt Col	3234A	P	Director of Plans Organizations & Rqmts
Kenneth W. Klise	Lt Col	AO 441650	N/R	Director of Communications & Electronics
Edward F. McClenanhan	Lt Col	2809A	N/R	Director of Intelligence
Robert Morris	Col	1125A	N/R	Deputy for Materiel
Augustus E. Betschick	Lt Col	AO 277068	N/R	Assistant Deputy for Materiel
Carl R. Tankersley	Maj	7256A	N/R	Director of Materiel Planning
William W. Weldon	Maj	3664A	SP	Director of Maint Supply & Services
Frederick J. Baker	Maj	023732	N/R	Director of Installations
Walter H. Williamson	Lt Col	4395A	SP	Commanding Officer, Hq & Hq Sq, Ninth AF

UNITS & STATIONS NINTH AIR FORCE

LANGLEY AIR FORCE BASE, VA.

	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
	George F. Smith	CP	Col	380A
4th Ftr Interception W.	George F. Smith	CP	Col	380A
4th Ftr Gp	Albert L. Evans, Jr.	CP	Col	1675A
4th M&S Gp	Ulysses S. Nero	N/R	Lt Col	708A
4th AB Gp	Everett G. Finnell	N/P	Col	AO 264483
4th Med Gp	Raymond T. Jenkins	AO (Med)	Col	19154A
363rd Tac Recon Gp	Willis F. Chapman	SP	Col	1121A
363rd Recon Tech Sq	Floyd W. Brewer	N/R	Maj	AO 508265
564th AF Band	Elmer H. Reade	N/R	CWO	AW 902039
4412th WAF Sq	Alberta M. Courchene	N/R	1st Lt	AL 80080
29th Comm Sq (Comd)	Frederick G. Reinhard	N/R	Capt	AO 559328
7th Radar Calib Unit	Paul J. Fallon	P	Capt	AO 791295
12th Radar Calib Unit	George W. Criss	P	Maj	9814A
1st Shoran Beacon Unit	Gaillard M. Jackson	P	1st Lt	AO 754628
84th Bomb Sq (L)	George B. Thabault	P	Maj	6457A
85th Bomb Sq (L)	Benjamin J. Willis	P	Lt Col	3815A
2nd Liaison Flt	Eugene G. Budnik		Capt	14344A

GODMAN AIR FORCE BASE, KY

	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
2236th AFRTC	Harrison R. Christy	SP	Lt Col	4178A

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Headquarters Ninth AF, Units & Stations Ninth AF, Cont.

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	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
READING MUN AIRPORT, PA. 2237th AFRTC	Frederick C. Roberts, Jr.	SP	Lt Col	7423A
GREATER PITTSBURGH AIRPORT, PA 2239th AFRTC	William S. Pocock	CP	Col	5316A
CLEVELAND MUN AIRPORT, OHIO 2240th AFRTC	Charles A. Bassett	CP	Col	285A
ARMY MEDICAL CENTER, WASH, DC. 2201st Hosp Sq	Ira D. Cope	N/R	Maj	AO 235416
VALLEY FORGE GEN HOSPITAL, PA 2203rd Hosp Sq	Walter F. Gfeller	N/R	Maj	AO 406969

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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TENTH AIR FORCE
Headquarters Tenth Air Force, Selfridge Air Force Base, Michigan

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Harry A. Johnson	B/Gen	157A	CP	Commanding General (Actg)
Richard M. Wightman	Col	05267	N/R	Vice Commander (Actg)
Edwin A. Doss	Col	1898A	SP	Assistant for Reserve Forces
James M. Winterbottom	Maj	4323A	N/R	Assistant to the Vice Commander
Harold O. Allison	Col	847A	N/R	Air Adjutant General
Harold E. Schneider	Col	19028A	AO (Med)	Air Surgeon
William M. Houston	Lt Col	7940A	P	Inspector General (Actg)
William M. Houston	Lt Col	7940A	P	Air Inspector
John W. Bolyard	Capt	14071A		Director of Flying Safety
Michael N. Mikulak	Lt Col	3105A	N/R	Air Provost Marshal
Lawrence F. Krebs	Maj	7210A	SP	Public Information Officer
Richard Gimbel	Col	706A	N/R	Comptroller
John M. Cremin	Maj	AO 370254	N/R	Assistant Comptroller
Benjamin C. Bowman	Maj	AO 449564	N/R	Director of Programs & Costs
Paul H. Brown	Maj	AO 404083	N/R	Director of Statistical Services
Milton J. Scott	1st Lt	AO 2076775	N/R	Director of Budget
Herman Strasheim	Maj	AO 379485	N/R	Director of Audits
John L. Frederick	**Capt**	**0 47721**	N/R	Director of Finance
Walter Urbach	Col	919A	N/R	Deputy for Personnel
Bennie R. Leach	Lt Col	AO 324488	N/R	Assistant Deputy for Personnel
Clement A. Siwinski.	Lt Col	18762A	N/R	Air Chaplain
William L. Doolan	Col	AO 185578	N/R	Air Judge Advocate
Gerald M. Spurlock	Lt Col	3397A		Director of Military Personnel
Robert L. Brown	Capt	9041A	N/R	Director of Personnel Services
Hariet M. Fivenson	Capt	AL 80099	N/R	WAF Staff Director
Robert D. Montagne	Lt Col	AO 417836	P	Director of Military Personnel Procurement
Roger A. Synnes	Lt Col	4196A	N/R	Director of Personnel Planning & Mgmt
Vember D. Taylor	Capt	AO 735627	N/R	Director of Publications
Victor R. Russelavage	CWO	AW 2108106	N/R	Director of Administration
Thomas Sturm - Civilian				Director of Historical Services
Milton M. Johnson	Lt Col	4472A	P	Director of Air Force ROTC

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Tenth Air Force, Selfridge AF Base, Mich.

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NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Cecil E. Henry	Col	711A	C/P	Deputy for Operations
Michael J. Gordon	Lt Col	5419A	SP	Assistant Deputy for Operations
Joseph L. Laughlin	Lt Col	4484A	SP	Director of Operations & Training
Peter D. Green	Lt Col	AO 428215	N/R	Director of Communications & Electronics
Harry S. Dennis, Jr.	Maj	9321A	P	Director of Intelligence
Nathaniel S. Cobb	Lt Col	AO 484466	N/R	Deputy for Materiel (Actg)
Nathaniel S. Cobb	Lt Col	AO 484466	N/R	Assistant Deputy for Materiel
Nathaniel S. Cobb	Lt Col	AO 484466	N/R	Director of Materiel Planning (Add dy)
Gilbert F. Noakes	Lt Col	5291A	SP	Director of Maintenance Supply & Services
Paul M. Ellman	Col	762A	N/R	Director of Installations
James L. Webster	Lt Col	2997A	N/R	Commanding Officer, Hq & Hq Sq, Tenth AF

UNITS & STATIONS TENTH AIR FORCE

	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
O'HARE INTERNATIONAL AIRPORT, ILL.				
2471st AFRTC	Victor H. Strahm	CP	Col	130A
FAIRFAX FLD, KANSAS				
2472nd AFRTC	Richard A. Moorehouse	SP	Col	799A
MARSHALL AIR FORCE BASE, KANSAS	Everett K. Jenkins Jr.	P	Maj	3045A
4406th AB Sq	Everett K. Jenkins Jr.	P	Maj	3045A
OFFUTT AIR FORCE BASE, NEBRASKA				
2473rd AFRTC	Allen H. Wood	P	Lt Col	3850A
SCOTT AIR FORCE BASE, ILLINOIS				
2469th AFRTC	James W. Bennett	SP	Lt Col	4028A
ATTERBURY AIR FORCE BASE, IND				
2466th AFRTC	James A. Ronin	CP	Col	508A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Tenth Air Force, Cont'd.

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WOLD-CHAMBERLAIN FLD, MINN	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
2465th AFRTC	Don L. Wilhelm, Jr.	SP	Col	1538A
SHERMAN AIR FORCE BASE, KANSAS				
4405th AB Sq	Ormond J. Mosman	CP	Lt Col	5916A
SELFRIDGE AIR FORCE BASE, MICH				
56th Ftr Wg	James R. Gunn	SP	Col	1216A
56th Ftr Gp	Francis S. Gabreski	P	Lt Col	4761A
56th AB Gp	Roy L. Bowlin	P	Maj	9806A
56th M&S Gp	Morris Farber	N/R	Maj	2806A
56th Med Gp	Russell S. Leone	AO (Med)	Col	018293
2242nd AFRTC	Howard W. Gray	SP	Col	1792A
541st AC&W Gp	Robert M. Myers	SP	Maj	5381A
BENJAMIN HARRISON AIR FORCE BASE, IND.	Roger E. Lee	N/R	Lt Col	AO 289696
2463rd AB Gp	Roger E. Lee	N/R	Lt Col	AO 289696
36th Comm Sq (Comd)	Nathaniel J. Heffernan	N/R	1st Lt	AO 1342272
691st AF Band	Ernest W. Greer	N/R	WOJG	AW 950646
2475th WAF Sq	Doris D. Diamant	N/R	1st Lt	AL 80109
PERCY JONES GEN HOSPITAL, MICH				
2204th Hosp Sq	Alvin Lloyd		Maj	AO 456003
OSCODA AIR FORCE BASE, MICH				
2476th BS Sq				
FITZSIMONS GEN HOSP, COLO				
2208th Hosp Sq	Nicholas L. Randolph		Maj	AO 289280

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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TWELFTH AIR FORCE
Headquarters Twelfth Air Force, Brooks Air Force Base, Texas

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Alden R. Crawford	M/Gen	64A	CP	Commanding General
Michael F. Davis	Col	96A	CP	Vice Commander (Actg)
Michael F. Davis	Col	96A	CP	Assistant for Reserve Forces
Richards M. Bristol	Col	902A	P	Assistant to the Vice Commander
John C. Hadley	Lt Col	7462A	N/R	Air Adjutant General
Neely G. Mashburn	Col	8336A	FS	Air Surgeon
Fred D. Stevers	Col	1757A	CP	Inspector General
John H. Hill	Lt Col	3366A	N/R	Air Inspector
John R. Gee	Lt Col	2223A	N/R	Air Provost Marshal
Gregory T. Carpenter	Maj	AO 429358	P	Public Information Officer
Edward O. Gwynn	Lt Col	2168A	N/R	Comptroller
George L. Colley	Maj	AO 649026	N/R	Assistant Comptroller
Fred J. Whittle	Maj	5840A	N/R	Director of Programs & Costs (Add dy)
John P. Kelly	Capt	AO 649366	N/R	Director of Statistical Services
Max T. Leyendecker	Capt	5515A	N/R	Director of Budget
Edward O. Gwynn	Lt Col	2168A	N/R	Director of Audits (Add dy)
Edward H. Hoffman	Maj	AO 1280003	N/R	Director of Finance
Luther B. Matthews	Lt Col	2802A	SP	Deputy for Personnel
Robert T. Engle	Lt Col	7611A	N/R	Assistant Deputy for Personnel
Robert D. Coward	Capt	AO 520934	N/R	Air Chaplain
Thomas N. Tappy	Col	AO 205096	N/R	Air Judge Advocate
John L. Hood	Maj	AO 906899	N/R	Director of Personnel Planning & Mgmt
Phillip C. Musgrave	Maj	2898A	SP	Director of Military Personnel
Michael N. Allisandro	Maj	AO 559995	N/R	Director of Military Personnel Proc
Alpha A. Adams	Maj	AL 80021	N/R	Director of Personnel Services
John W. Bialock	Maj	6043A	P	Director of Air Force ROTC
Charles B. Harvin	Col	1158A	CP	Deputy for Operations
Broadus B. Tyler	Lt Col	1833A	SP	Assistant Deputy for Operations
George F. Keene, Jr.	Lt Col	2305A	SP	Director of Operations & Training
Charles R. Meyers, Jr.	Lt Col	9112A	SP	Director of Plans Organizations & Rqmts
Frederick W. Shipe	Lt Col	5401A	N/R	Director of Communications & Electronics

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Twelfth Air Force, Brooks AFB, Texas Cont'd.

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NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
George M. Sander	Maj	2885A	N/R	Director of Intelligence
Charles W. Sullivan	Col	162A	CP	Deputy for Materiel
Edward W. Angle	Lt Col	AO 255332	N/R	Assistant Deputy for Materiel
Edward W. Angle	Lt Col	AO 255332	N/R	Director of Materiel Planning (Add dy)
Charles L. Nelson	Maj	11455A	N/R	Director of Maintenance Supply & Services
Jack B. Marshall	Maj	AO 275815	N/R	Director of Installations
John E. Pryer	Maj	AO 801381	P	Commanding Officer, Hq & Hq Sq, Twelfth AF

UNITS & STATIONS TWELFTH AIR FORCE

BIGGS AIR FORCE BASE, TEXAS	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
2602nd Tow Target Sq	Leonard Kaufman	P	Maj	9225A
1st Liaison Flt	Clarence M. Nunneley	P	Capt	13145A
CAMP LE ROY JOHNSON, LA				
2594th AFORD 751st AF Band	Edward D. Meyer	N/R	Maj	AO 309411
HENSLEY FLD, TEXAS				
2596th AFRTC	Sam C. Gribi	CI	Lt Col	2114A
FT SAM HOUSTON, TEXAS				
2206th Hosp Sq	Charles W. Bucy	N/R	Capt	AO 559647
EL PASO, TEXAS				
2207th Hosp Sq	Tracy B. Watson	N/R	Capt	AO 564575
TINKER AIR FORCE BASE, OKLA.				
2592nd AFRTC	F. H. LeFebre	P	Lt Col	9088A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Twelfth Air Force, Cont'd.

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(Mil Pers)

HOT SPRINGS, ARKANSAS	NAME	AERONAUTICAL RATING	CO'S GRADE	SN
2205th Hosp Sq	L. I. Stephens	N/R	1st Lt	AO 2023228
KIRTLAND AIR FORCE BASE, NM				
81st Ftr Wg	Thomas W. Blackburn	CP	Col	156A
81st Ftr Gp	Gladwyn E. Pinkston	SP	Col	1828A
81st AB Gp	Thomas L. Wiper	SP	Lt Col	4029A
81st M&S Gp	Arthur F. Reinhart	SP	Lt Col	2186A
81st Med Gp	Cecil P. Jone	N/R	Capt	O 1786644
690th AC&W Sq	Charles F. Striplin, Jr.	N/R	Lt Col	2806A
BROOKS AIR FORCE BASE, TEXAS	Ezekiel W. Napier	CP	Col	568A
2595th AB Gp	Ezekiel W. Napier	CP	Col	568A
579th AF Band	Clyde C. Owens	N/R	CWO	AW 902066
40th Comm Sq (Comd)	William A. Werber	P	Capt	AO 863933
2597th Air Police Sq	Albert Feldman	N/R	Maj	AO 1994904
2213th WAF Sq	Alpha A. Adams	N/R	Maj	AL 80021

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

RCS-AF-SC-P4M
(Mil Pers)

FOURTEENTH AIR FORCE
Headquarters Fourteenth Air Force, Robins Air Force Base, Georgia

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
Joseph H. Davidson	B/Gen	121A	CP	Commanding General (Actg)
Cortlandt S. Johnson	Col	161A	CP	Vice Commander
Daniel P. McLean	Maj	8484A	P	Assistant for Reserve Forces
George D. Hastings	Lt Col	2161A	N/R	Assistant to Vice Commander
Horace P. Bonnewitz	Col	AO 251930	N/R	Air Adjutant General
Thomas J. Barnhart	Lt Col	AO 247694	N/R	Assistant Air Adjutant General
John E. Carmac	Lt Col	5928A	SP	Inspector General
Percie J. Larrick	Maj	8261A	SP	Assistant to the Inspector General
Jeffory O. Wellborn	Maj	7795A	P	Air Inspector
John F. Mulligan	Lt Col	2202A	N/R	Air Provost Marshal
Clifford P. Michael	Col	020383	N/R	Air Surgeon
Robert D. Lawrence	Maj	AO 353560	N/R	Public Information Officer
				Assistant Public Information Officer
Kennard W. Gephart	Col	AO 301343	N/R	Comptroller
Oliver P. Shaffer	Maj	AO 259809	N/R	Assistant Comptroller
Frank O. Hay	Maj	6472A	P	Director Programs & Costs
Harold A. Benner	Maj	AO 564789	N/R	Director of Statistical Services
Benjamin L. Gregory	Capt	AO 1296850	N/R	Director of Budget
Frank O. Hay	Maj	6472A	P	Director of Audits (Actg)
Ralph E. Johnstone	Capt	AO 1281127	N/R	Director of Finance
Robert A. Rollison	Col	747A	N/R	Deputy for Personnel
Herman L. Fagley	Lt Col	AO 461556	N/R	Assistant Deputy for Personnel (Actg)
Eugene J. Graebner	Lt Col	AO 345930	N/R	Air Chaplain
Claire D. Wallace	Lt Col	AO 271331	N/R	Air Judge Advocate
				WAF Staff Director
Eugene H. Taylor	Lt Col	AO 334705	N/R	Director of Personnel Planning & Mgmt
Herman L. Fagley	Lt Col	AO 461556	N/R	Director of Military Personnel
Robert H. Richey	Maj	9068A	P	Director of Military Personnel Proc
				Director of Civilian Personnel
Earl W. Lewis	Lt Col	2288A	N/R	Director of Personnel Services
William E. Byerts	Lt Col	4324A	P	Director of Air ROTC

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Fourteenth Air Force, Robins AFB, Ga., Cont'd.

RCS-AF-SC-P4M
(Mil Pers)

NAME	GRADE	SN	AERONAUTICAL RATING	STAFF POSITION
George R. Bickell	Col	4160A	P	Deputy for Operations
Bishop P. Parrish	Lt Col	2183A	SP	Assistant Deputy for Operations
John C. Watson	Lt Col	4967A	P	Director of Operations & Training
John C. Watson	Lt Col	4967A	P	Director of Plans Organizations & Rqmts
Ernest O. Bonham	Maj	AO 899026	N/R	Director of Communications & Electronics
Walter B. Magness	Lt Col	2205A	N/R	Director of Intelligence
Robert Whelchel	Lt Col	2316A	N/R	Deputy for Materiel
Nathaniel R. Voss	Maj	5898A	N/R	Assistant Deputy for Materiel
Claude K. Rupert	Maj	2890A	N/R	Director of Materiel Planning
Floyd M. Johnson	Lt Col	AO 370079	N/R	Director of Maintenance Supply & Services
Stephan F. Noonan	Maj	6380A	N/R	Director of Installations
Burton T. Poole	Capt	AO 578897	N/R	Commanding Officer Hq & Hq Sq, 14th AF

UNITS & STATIONS OF FOURTEENTH AIR FORCE

ROBINS AIR FORCE BASE, GEORGIA	NAME	CO'S GRADE	AERONAUTICAL RATING	SN
769th AF Band	Edwin H. Sanford	CWO	N/R	AW 902033
37th Communication Sq, Command	Wiley S. Adams, Jr.	Capt	N/R	AO 425453
SHAW AIR FORCE BASE, SUMTER, SC	P. K. Morrill, Jr.	Col	CP	474A
20th Fighter-Bomber Wing	P. K. Morrill, Jr.	Col	CP	474A
20th Fighter-Bomber Group	Charles W. Lasko	Maj	P	12169A
20th Maintenance & Supply Gp	Cecil B. Guile	Col	CP	AO 108633
20th Air Base Group	Gerhard J. Schriever	Col	SP	2043A
20th Medical Group	David W. Clotfelter	Lt Col	FS	19095A
30th Motor Transport Sq	James C. Stanley	Capt	N/R	AO 367975
606th Acft Control & Warning Sq	Joseph Barr	Capt	P	AO 729304
161st TAC Recon Sq (Photo Jet)	Richard R. Coursey, Jr.	Maj	P	10118A

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourteenth AF, Cont'd.

	NAME	CO'S GRADE	AERONAUTICAL RATING	SN
TURNER AIR FORCE BASE, ALBANY, GEORGIA	Eugene H. Snavely	Col	SP	1750A
31st Fighter-Bomber Wing	Eugene H. Snavely	Col	SP	1750A
31st Fighter-Bomber Group	Earl H. Dunham	Col	SP	3451A
31st Maint & Supply Group	Charles A. Gayle	Lt Col	SP	2047A
31st Air Base Group	Albert V. Kanig	Lt Col	N/R	AO 463191
31st Medical Group	Paul V. Davis	Maj	FS	057380
607th Acft Control & Warning Squadron	Edwin D. Connell	Capt	P	AO 430921
SMYRNA AIR FORCE BASE, SMYRNA, TENNESSEE	Hoyt L. Prindle	Col	CP	334A
314th Troop Carrier Wing	Hoyt L. Prindle	Col	CP	334A
314th Troop Carrier Group	Richard W. Henderson	Col	CP	995A
314th Maint & Supply Group	Bruce R. Ferrell	Lt Col	N/R	AO 447767
314th Air Base Group	Charlie M. Ross	Col	SP	AO 388915
314th Medical Group	Clark B. Proctor	Lt Col	FS	0 295886
316th Troop Carrier Group	Edgar W. Hampton	Col	SP	1805A
2601st Assault Squadron	Theo R. Diltz	Lt Col	SP	7832A
POPE AIR FORCE BASE, FORT BRAGG, N. C.				
2600th Air Base Sq	Richard G. Herbine	Lt Col	SP	2077A
8th Air Division (Defense)	Willard R. Wolfinbarger	B/Gen	CP	317A
9th Air Division (Defense)	Gilbert L. Meyers	Col	SP	1958A
934 Sig Bn Separate	Milton H. Gray (Actg)	Maj	N/R	AO 473567
502d Tactical Control Gp	Arthur L. Logan	Lt Col	SP	2303A
4410 Bomb Disposal Unit	Frank L. Dunham	1st Lt	N/R	AO 1579592
2d Radio Relay	James O. Netherland	Capt	P	10514A
4th Liaison Flight	Lonnie W. Hicks	Capt	P	11573A
5th Helicopter Flt	Walter J. Hodgson	1st Lt	P	AO 2069019
5th Radar Cal Unit	Pascal J. Corritorie	Capt	P	13207A
LAWSON AIR FORCE BASE, GEORGIA				
4408th Air Base Sq	Richard O. Johnson	Maj	P	AO 433689
3d Liaison Flight	Donald F. Dixon	1st Lt	P	AO 834973

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourteenth AF, Cont'd.

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	NAME	CO'S GRADE	AERONAUTICAL RATING	SN
MEMPHIS MUNICIPAL AIRPORT, TENN				
2584th AF Reserve Training Center	Preston C. Newton	Lt Col	SP	4220A
MIAMI INTERNATIONAL AIRPORT, FLA.				
2585th AF Reserve Training Center	John V. Hart	Colonel	CP	179A
BIRMINGHAM MUNICIPAL AIRPORT, ALA.				
2587th AF Reserve Training Center	Leslie R. Bratton	Lt Col	SP	3620A
MARIETTA AIR FORCE BASE, GEORGIA				
2589th AF Reserve Training Center	George H. Kneen, Jr.	Lt Col	P	4015A
OLIVER GENERAL HOSPITAL, AUGUSTA, GA.				
2202d Hospital Squadron	William L. Mitchell, Jr	Capt	N/R	AO 583416

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Roster of Key Personnel

31 March 1950

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Roster of Key USAF Personnel

Continental Air Command

Mitchel Air Force Base, New York

as of 31 March 1950

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Roster of Key Air Force Pers, ConAC Mitchel AFB, N.Y.

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CONTINENTAL AIR COMMAND
Headquarters Continental Air Command, Mitchel Air Force Base, New York

NAME	GRADE	SN	AERO RTG	STAFF POSITIONS
Ennis C. Whitehead	L/Gen	9A	CP	Commanding General
Charles T. Myers	M/Gen	37A	CP	Vice Commander
Willard W. Irvine	M/Gen	O 5538	N/R	Army & Navy Liaison Officer
William C. Warren	Col	878A	N/R	Assistant to the Vice Commander
Edward H. Nigro	Lt Col	4889A	SP	Chief, Manpower Evaluation Board
Neal J. O'Brien	Col	824A	N/R	Air Adjutant General
Vance E. Murphy	Lt Col	2246A	N/R	Assistant Air Adjutant General
James C. Barlow	Lt Col	2224A	N/R	Director of Publications
William P. Mullins	Lt Col	3885A	SP	Director of Administration
Jacob J. Lichman	Civilian	–		Director of Historical Services
John W. Hargreaves	M/Gen	233A	AC Med	Air Surgeon
Charles E. Thomas	M/Gen	192A	CP	Inspector General
Edgar T. Selzer	Col	699A	CP	Air Inspector
August A. Webb	Maj	9736A	P	Flying Safety
Robert B. Dunns	Col Col	AO 438059	N/R	Air Provost Marshal
Max D. Hampton	Maj	AO 568482	N/R	Public Information Officer
Robert C. Candee	B/Gen	100A	CP	Comptroller
Earl B. Cook	Col	3629A	SP	Assistant Comptroller
Tom M. Taylor	Lt Col	5041A	N/R	Director of Programs & Costs
Jack L. [illegible]ert	Lt Col	2671A	N/R	Director of Statistical Services
Earl H. Butler	Maj	8217A	N/R	Director of Budget (Actg)
Joseph V. Matella	Capt	AO 308615	N/R	Director of Audits
Elmer A. Gude	Col	837A	N/R	Director of Finance
Reuben Kyle Jr	Col	306A	CP	Deputy for Personnel
Richard W. Fellows	Col	1334A	SP	Assistant Deputy for Personnel
Roy F. Reynolds	Col	AO 279860	N/R	Air Chaplain
Desmond O'Keefe	Col	125A	N/R	Air Judge Advocate
Marjorie O. Hunt	Maj	AL 80049	N/R	WAF Staff Director

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Hq ConAC, Mitchel AFB, NY, Cont'd

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(Mil Pers)

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Richard A. Yudkin	Lt Col	4480A	N/R	Director of Personnel Planning & Mangmt
John C. McCurnin	Col	AO 299162	N/R	Director of Military Personnel
Frederick . Shipley Jr.	Lt Col	AO 426989	N/R	Director of Military Personnel Procurement
Frederick . Taylor	Civilian			Director of Civilian Personnel
Burgess Gradwell	Maj	10203A	P	Director of Personnel Services
Dexter L. Hedge	Lt Col	8185A	P	Director of Air Force ROTC
Edmund J. Evans	Maj	AO 475070	N/R	Ground Safety
Herbert B. Thatcher	B/Gen	634A	SP	Deputy for Operations
George S. Brown	Col	4090A	P	Assistant Deputy for Operations
John C. Kilborn	Col	562A	CP	Director of Civil Air Defense
Dolf E. Muehleisen	Col	1144A	CP	Director of Operations & Training
Bruce K. Holloway	Col	1336A	SP	Director of Plans Organizations & Remts
Hobart R. Yeager	Col	200A	CP	Director of Communications & Electronics
Ernest J. White, Jr.	Lt Col	8947A	P	Director of Intelligence (Actg)
Signa A. Gilkey	Col	305A	CP	Deputy for Materiel
Robert C. McBride	Col	1441A	P	Assistant Deputy for Materiel
Robert L. Petit	Lt Col	5213A	P	Director of Materiel Planning
Marion G. Ferguson, Jr.	Col	2497A	N/R	Director of Maintenance Supply & Services
Ward T. Abbott	Col	862A	N/R	Director of Installations
Robert M. Lee	M/Gen	590A	CP	Deputy for Tactical Air Operations (Add dy)
Riley N. Whittington	Maj	6193A	P	Commanding Officer, Hq & Hq Sq, ConAC

UNITS ASSIGNED TO HQ ConAC

	NAME	AERO RTG	CO'S GRADE	SN
28th Communications Sq, AF Mitchel AF Base, N.Y.	Robert J. McCleary	N/R	Maj	6684
2220th Extension Group Benjamin Harrison AF Base, IND	E. A. Taylor	N/R	Col	AO 245565

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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EASTERN AIR DEFENSE FORCE
Mitchel Air Force Base, New York

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Robert M. Webster	M/Gen	21A	CP	Commanding General
George R. Acheson	B/Gen	335A	CP	Vice Commander
Joseph H. Cunningham	Col	2054A	SP	Director of Combat Operations
Frederick E. Rosier	WgCmdr	37425	P	Chief, AC & W Operations Division
Frederick E. Rosier	WgCmdr	37425	P	Chief, Fighters Operations Division
William C. Moore	Maj	10125A	P	OIC Operations (Information Center)
James C. Averill	Col	1848A	SP	Director, Plans & Special Projects
John B. F. Dice	Col	899A	N/R	Liaison Officer
Edward O. McComas	Lt Col	4832A	SP	Chief Special Projects Division
Robert [illegible] Wood	Capt	AO 2034652	N/R	Director of Civil Defense (Actg)
Bruce K. Baumgardner	Maj	7451	SP	Director of Intelligence

TACTICAL AIR COMMAND (Operational)
Headquarters Tactical Air Command, Langley Air Force Base Virginia

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Robert M. Lee	M/Gen	590A	CP	Commanding General, Deputy for Tactical Air Operations, ConAC (Add dy)
Ernest K. Warburton	Col	407A	CP	Vice Commander
James W. Townsend	Lt Col	2629A	N/R	Asst to the Vice Commander
Robert H. Thom	Lt Col	AO 301102	N/R	Air Adjutant General
Leon Booth	Lt Col	2321A	N/R	Public Information Officer
Francis R. Valentine	Col	199A	CP	Deputy for Operations
Arthur P. Hurr	Lt Col	9850A	P	Director of Training
Francis R. Valentine	Col	199A	CP	Director of Intelligence (Add dy)
Frank H. Mears	Col	1879A	CP	Director of Joint Operations Center
William M. Gross	Col	663A	CP	Deputy for Requirements
Harry B. Young	Col	1571A	SP	Director of Aircraft Requirements
Woodrow T. Merrill	Lt Col	6446A	P	Director of Equipment Requirements
Henry Viccellio	Col	1728A	SP	Deputy for Plans

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, N.Y.

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NAME	GRADE	SN	AERO RTG	STAFF POSITION
George M. Brooking	Lt Col	8071A	P.	Director of Policy & Doctrine
Loren G. McCollom	Col	1632A	P	Director of Field Exercise Plans
David M. Jones	Col	1811A	SP	Director of War Plans
				Deputy for Communications
Edwin T. Keith	Capt	AO 572233	N/R	Director of Communications Systems
				Director of Special Projects
James H. Stover	Capt	AO 811153	P	Director of Electronics Systems
Arthur M. Gray	1st Lt	16649A	SP	Commanding Officer, Hq & Hq Sq, TAC

FIRST AIR FORCE
Headquarters First Air Force, Mitchel Air Force Base, New York

NAME	GRADE	SN	AERO RATING	STAFF POSITION
Glenn O. Barcus	M/Gen	87A	CP	Commanding General
Joseph A. Bulger	Col	379A	CP	Vice Commander
Frederick P. Knell	Col	379A	CP	Assistant for Reserve Forces (Actg) (Add dy)
Ralph J. Erickson	Col	AO 211986	N/R	Assistant to the Vice Commander
Edwin C. Foster	Col	AO 470508	N/R	Air Adjutant General
Sheldon S. Brownton	Col	19083A	AO Med	Air Surgeon
Jerome Loewenberg	Lt Col	963A	N/R	Air Judge Advocate
Douglas Johnston	Col	122A	N/R	Inspector General
Woodrow B. Wilmot	Lt Col	3240A	SP	Air Inspector
George H. Cushman	Maj	10870A	N/R	Air Provost Marshal
Albert F. Davis	Lt Col	2505A	N/R	Public Information Officer
George W. Johnson	Col	AO 286216	N/R	Comptroller
Francis S. Cartaglia	Lt Col	AO 297697	N/R	Asst Comptroller
Benjamin R. Richards	Maj	AO 904402	N/R	Director of Programs & Cost
Richard J. Bigney	1st Lt	AO 818512	N/R	Director of Statistical Services (Act)(Add dy)
Lyle C. Crimes	Lt Col	2538A	N/R	Director of Budget
Francis S. Cartaglia	Lt Col	AO297697	N/R	Director of Audits (Add dy)
Lawrence A. Boyd	Maj	AO 567410	N/R	Director of Finance

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Roster of Key Air Force Pers, Con C, Mitchel AFB, NY
Headquarters First Air Force, Mitchel AFB, NY Cont'd.

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NAME	GRADE	SN	AERO RTG	STAFF POSITION
Emory L. Bruns	Col	736A	N/R	Deputy for Personnel
Edward D. S. Sullivan	Maj	7442A	N/R	Asst Deputy for personnel
Ellis R Veatch	Maj	AO 422441	N/R	Air Chaplain (Add dy)
Raymond F. Wisniewski	Maj	9650A	N/R	Director of Personnel Planning & Mgmt
Dwight . Pratt	Maj	10614A	N/R	Director of Military Personnel
Charles D. Morat	Maj	6417A	P	Director of Military Personnel Procuremt
Dorothy Cooper	Maj	AL 80466	N/R	Director of Personnel Service (Actg)(Add dy)
Kenneth . Holbert	Lt Col	5200A	P	Director of Air Force ROTC
Robert M. Stillman	Col	1114A	SP	Deputy for Operations
Lester J. Krause, Jr.	Lt Col	8025A	P	Assistant Deputy for Operations
William R. Purinton	Lt Col	3623A	SP	Director of Operations & Training
Carroll S. Miller	Col	740A	N/R	Director of Plans Org & Regmts (Add dy)
Howard H. Symons	Capt	15884A	P	Director of Comm & Electronics
Frederick P. Knoll	Col	AO 367428	N/R	Director of Intelligence
Ernest H. Beverly	Col	1590	SP	Director of Air National Guard
Lothar C. Maurer	Col	720A	N/R	Deputy for Materiel
Robert P. Peel	Lt Col	2856	N/R	Asst Deputy for Materiel
Lothar C. Maurer	Col	720A	N/R	Director of Materiel Plng (Actg-Add dy)
Doe . Mains	Lt Col	AO 204701	N/R	Director of Maintenance Supply & Services
				Director of Installations
				Commanding Officer, Hq & Hq Sq, First AF

UNITS & STATIONS FIRST AIR FORCE

	NAME	AERO RTG	COMD GRADE	SN
MITCHEL AIR FORCE B.S., N.Y.	Robert W. C. Wimsatt	P	Col	214A
2500th AB Gp	Robert W. C. Wimsatt	P	Col	214A
581st AF Band	Edwin B. Shaffer, Jr.	N/R	CWO	W 951154
2233rd AFRTC	Norton H. Van Sicklen III	SP	Col	1841A
2243 WAF Sq	Elizabeth Ray	N/R	Capt	AL 80214
34th Comm Sq	Richard E. Higgs	P	Capt	6730A
42 Comm Sq	Antonio Federico	N/R	Capt	AO 568098

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters First Air Force, Mitchel AFB, NY

Units & Stations, First Air Force, Cont'd	NAME	AERO RTG	CUR'T GRADE	SN
HANSCOM AIRPORT, MASS				
2234th AFRTC	Melvin J. Hollidge	CP	Col	843A
FLOYD BENNETT NAVAL AIR STA, NY				
2230th AFRTC	Lance Call	CP	Col	AO 384510
ROSLYN, NY	Marvin J. McKinney	N/R	Col	281A
503rd AC&W Gp	Marvin J. McKinney	N/R	Col	281A
26th Air Div (Defense)	Russell J. Minty	CP	Col	224A
OTIS AIR FORCE BASE, MASS				
33rd Ftr Wg	Arthur C. Agan Jr	SP	Col	1759A
. 33d Ftr Gp	Arthur C. Agan Jr	SP	Col	1759A
33d Maint Gp	Charles H. MacDonald	SP	Col	1830A
. 33d AB Gp	Joseph C. Smith	SP	Lt Col	3870A
.33d Med Gp	Harold . Scruggs	SP	Lt Col	4217A
	Everett . Chaulker	FS	Maj	O 30901
STEWART AIR FORCE BASE, NY	Hallock P. K. Walmsley	SP	Lt Col	1931A
4000th AB Gp	Hallock P. K. Walmsley	SP	Lt Col	1931A
32d Air Div (Defense)	Fred F. Crimmins	SP	Col	1719A
541th AC&W Gp	Otto . Quanrud	N/R	Lt Col	1000A
4400th AAF Sq	Dorothea L. McLaughlin	N/R	2nd Lt	L 1905511

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Roster of Key Air Force Pers, ConAC Mitchel AFB, NY
Units & Stations First Air Force, Cont'd.

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	Name	AERO RTG	CURR GRADE	SN
McGUIRE AIR FORCE BASE, NJ	Edward C. Tates	SP	Col	1914A
52nd Ftr Wg (AW)				
52nd Ftr Gp (AW)	Edward C. Tates	SP	Col	1914A
52nd M&S Gp	Oliver G. Cellini	SP	Col	1829A
52nd AB Gp	Charles L. Perkins	N/R	Col	AO 560214
52nd Med Gp	David J. Kirby	P	Maj	3171A
	Stephen P. Farrar	FS	Capt	AO 1718420
FORT DIX, NJ (ARMY)	Evan M. Housman	N/R	Lt Col	O17307
2225th OR Gp	Edward B. Roth	N/R	Lt Col	AO 484684
MURPHY GENERAL HOSPITAL, MASS				
2200th Hospital Sq	Milford F. Kunz	N/R	Capt	AO 904272

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

RCS-AF-C-P41
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FOURTH AIR FORCE

Headquarters Fourth Air Force, Hamilton Air Force Base Calif

NAME	GRADE	SN	RATING	STAFF POSITION
John E. Upston	M/Gen	49A	CP	Commanding General
Joseph H. Davidson	B/Gen	121A	CP	Vice Commander
William A. Lanford	Lt Col	8176A	SP	Assistant for Reserve Forces
Harold B. Todd	Lt Col	2096A	N/R	Assistant to the Vice Commander
Lee Q. Wasser	Col	259A	CP	Special Assistant to the Commanding General
Harold L. Fuller	Lt Col	2257A	N/R	Air Adjutant General
Lloyd G. Mutter	Capt	AO 813233	P	Director of Publications
James W. Watson	Maj	9724A	N/R	Director of Administration
Andrew W. Smith	Col	05442	AO Med	Air Surgeon
Landon E. McConnell	Lt Col	3136A	SP	Air Inspector General
				Air Inspector
Miles A. Conner	Lt Col	AO 347376	N/R	Air Provost Marshal
James E. Johnson	Maj	AO 377487	N/R	Public Information Officer
Robert S. Macrum	Col	519A	CP	Comptroller
Delbert O. Watson	Maj	AO 357393	N/R	Assistant Comptroller
William A. Converse	Lt Col	4027A	N/R	Director of Programs & Costs
Raymond S. Brett	Maj	4729A	SP	Director of Statistical Services
Fred J. Held III	Maj	AO 559909	N/R	Director of Budget
Francis C. Wibom	Capt	AO 564618	N/R	Director of Audits
				Director of Finance
Lothar A. Smith	Col	131A	CP	Deputy for Personnel
Robert H. Clark	Maj	4924A	N/R	Assistant Deputy for Personnel
Henry C. Pennington	Lt Col	8769A	N/R	Air Chaplain
Stewart S. Maxey	Col	913A	N/R	Air Judge Advocate
Beatrice Tarnoff	Capt	AL 80492	N/R	WAF Staff Director
John W. Watt, Jr.	Lt Col	3357A	P	Director of Personnel Planning & Management
Glenn B. Riggle	Maj	5176A	N/R	Director of Military & Civilian Personnel
Delwyn E. Silver	Lt Col	AO 436011	P	Director of Military Personnel Procurement
Charles J. Thelsen	Capt	AO 728036	P	Director of Personnel Services
Stanley W. Robinson	Lt Col	AO 424573	CP	Director of Air Force ROTC
Joseph P. Bailey	Col	195A	CP	Deputy for Operations
Robert F. Harris	Col	2041A	SP	Assistant Deputy for Operations

Roster of Key Air Force Pers, ConAC, Mitchel AFB, N.Y.
Hq Fourth Air Force, Hamilton AFB, Calif, Cont'd

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NAME	GRADE	SN	AERO RTG	STAFF POSITION
Wallace-P. Mace	Col	1929A	N/R	Director of Operations & Training
William H. Clark	Col	1002A	SP	Director of Plans Organizations & Rqmts
Gus B. Hoffman	Col	807A	N/R	Director of Communications & Electronics
William A. Larson	Maj	9466A	P	Director of Intelligence (Actg)
Molie J. Coutlee	Col	867A	SP	Deputy for Materiel
Albert L. Perry	Lt Col	AO 409080	N/R	Assistant Deputy for Materiel
Keith F. Siegfried	Maj	AO 1703783	N/R	Director of Materiel Planning
John J. Traunicht	Lt Col	AO 252718	N/R	Director of Maint Supply & Services
Ivins L. Browne	Col	AO 473013	N/R	Director of Installations
T. J. Jackson, Jr.	Maj	AO 424485	SP	Commanding Officer, Hq & Hq Sq, Fourth AF

UNITS & STATIONS FOURTH AIR FORCE

	NAME	AERO RTG	CO'S GRADE	SN
SILVER LAKE, WASHINGTON				
25th AD, (Defense)	Clinton D. Vincent	SP	Col	1213A
505th AC&W Gp	James R. McNitt	N/R	Col	1183A
LONG BEACH MUN AIRPORT, CALIF				
2347th AFRTC	Claude E. Duncan	CP	Col	686A
LETTERMAN GEN HOSP, SAN FRANCISCO CALIF				
2209th Hosp Sq	George Danko	N/R	Capt	AO 517699
SAN FRANCISCO POE, FORT MASON, CALIF				
2349th AFORD (Det)	Carl N. McDonald	N/R	1st Lt	AO 582070
SEATTLE POE, SEATTLE, WASHINGTON				
2349th AFORD	Woodrow E. Alexander	N/R	Capt	10480A

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourth Air Force, Con'd

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	NAME	AERO RT	CO'S GRADE	SN
HAMILTON AIR FORCE BASE, CALIF	George L. Usher	CP	Col	120
78th Ftr Wg	George L. Usher	CP	Col	120
78th Ftr Gp	Brian O'Neill	SP	Col	1826
78th M&S Gp	Alfred J. Yates	N/R	Lt Col	AO 300366
78th AB Gp	Robert [illegible]. Williams	N/R	Lt Col	AO 288999
78th Med Gp	Branco P. Lelich	N/R	Lt Col	19191
35th Comm Sq (Comd)	Eugene Allison	N/R	Capt	11135
573rd AF Band	Elmer [illegible]. Bruna	N/R	CWO	2126091
2346th AFRTC	David [illegible]. Lancaster, Jr.	CP	Col	876
2349th AFRTC	Peter [illegible]. Blate	N/R	Lt Col	AO 900945
2351st WAF Sq	Beatrice Tarnoff (Actg)	N/R	Capt	LI 80492
11th Calib Unit	Jess [illegible]. Tarbell	P	Capt	AO 409060
28th Air Div Def	William A. Anthony	CP	Col	428
542nd AC&W Gp	Allan A. Lathan	P	Lt Col	8050
667th AC&W Sq	Victor [illegible]. I[illegible]gerson	P	Capt	AO442285
668th AC&W Sq	Allan A. Lathan	P	Lt Col	8050
McCHORD AIR FORCE BASE, WASHINGTON				
62nd TC Wg	Fred C. Nelson	CP	Col	142
62nd TC Gp	Andriel [illegible]. Williams	SP	Col	1970
62nd M&S Gp	Lester [illegible]. Nicol	SP	Lt Col	O 377225
62nd Med Gp	Harvey [illegible]. Porter	FS	Col	O 16976
62nd AB Gp	Peral Moundy	N/R	Lt Col	AO 166128
PORTLAND, OREGON				
2343rd AFRTC	Jackson [illegible]. Lewis	SP	Lt Col	2116
MADIGAN GEN HOSP, WASHINGTON				
2210th Hosp Sq	Joe Robutellini	N/R	Capt	AO 566555

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ROSTER OF Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourth Air Force, Cont'd

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MOSES LAKE AIR FORCE BASE, WASHINGTON

	NAME	AERO RTG	COMS GRADE	SN
325th Ftr Wg, All Weather	Thomas A. Bennett	CP	Col	1513A
325th Ftr Gp, All Weather	Kermit A. Tyler	SP	Lt Col	3216A
325th M&S Gp	William L. McDowell	SP	Col	1691A
325th AB Gp	George . Prentice	SP	Col	1477A
325th Med Gp	Arthur G. Nugent	FS	Capt	19308A
2350th WAF Sq	Sarah Goldin	N/R	1st Lt	AL 80245
637th AC&W Sq	Edwin L. Murrill	N/R	Maj	AO 244605

WESTERN AIR DEFENSE FORCE
Headquarters Western Air Defense Force, Hamilton AF Base, Calif

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Hugo P. Rush	M/Gen	75A	CP	Commanding General
William M. Morgan	B/Gen	439A	CP	Vice Commander
William . Bowie	Lt Col	3376A	SP	Director of Plans & Special Projects
Theodore R. Clinkscales	Lt Col	3627A	SP	Director of Civil Defense
Richard B. Atchison, Jr.	Capt	9879A	P	Chief, Joint Information Center
Stanley . Crogan	Capt	AO 873097	N/R	Chief, Operations Communications
Thomas M. Carrigan	Maj	9247A	N/R	Executive Officer
Robert S. Isreal Jr.	Col	354A	CP	Deputy for Operations
Thomas M. Carrigan	Maj	9247A	N/R	Air Adjutant General
Theodore R. Clinkscales	Lt Col	3627A	SP	Public Information Officer (Add dy)
Edwin F. Carey, Jr.	Lt Col	4422A	SP	Director of Combat Operations
Homer . Cox	Lt Col	2824A	SP	Director of Intelligence
John J. Hayes	Capt	AO 1001148	N/R	Commanding Officer, Hq Sq WADF

HAMILTON AF BASE, CALIF

43[illegible] Comm Sq	John J. Hayes	N/R	Capt	AO 1001148

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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NINTH AIR FORCE
Headquarters Ninth Air Force, Langley Air Force Base, Virginia

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Willis H. Hale	M/Gen	19	CP	Commanding General
Harold [illegible]. Bowman	Col	486	CP	Vice Commander
Charles A. Harrington	Col	321	CP	Assistant for Reserve Forces
Wilford L. Baxter	Maj	AO 181054	N/R	Assistant to the Vice Commander
Erlath [illegible]. Zuehl	Lt Col	AO 258954	N/R	Air Adjutant General
David D. Porter	Lt Col	713	N/R	Air Judge Advocate
Raymond T. Jenkins	Col	19154A	MO Med	Air Surgeon
Henry H. [illegible]ller, Jr.	Col	1404	N/R	Inspector General
Loren Cornell	Lt Col	2193	CP	Air Inspector
Thaddeus D. Harris	Maj	AO 565579	N/R	Air Provost Marshal
David [illegible]. Ellis	Lt Col	AO 282887	N/R	Public Information Officer
Harold J. Smith	Lt Col	AO 203428	N/R	Comptroller
Willard C. Blackwell	Capt	AO 560643	N/R	Assistant Comptroller (Actg)
Willard C. Blackwell	Capt	AO 560643	N/R	Director of Programs & Costs (Actg)
Blake P. Howard	Capt	AO 649063	N/R	Director of Statistical Services
Allen [illegible]. Myers	WOJG	W 2120475	N/R	Director of Budget (Actg)
Jess [illegible]. [illegible]picher	1st Lt	AO 2092192	P	Director of Audits
Charles J. [illegible]rennick	1st Lt	AO 2029112	N/R	Director of Finance (Actg)
James [illegible]. Twitty	Col	2917	N/R	Deputy for Personnel
Charles [illegible]. Clark	Lt Col	5275	N/R	Assistant Deputy for Personnel
Floyd [illegible]. Smith	Lt Col	AO 338559	N/R	Air Chaplain
Virginia D. Harmon	Capt	AL 410531	N/R	WAF Staff Director
Frederick I. Lindtner	Lt Col	AO 909196	N/R	Director of Personnel Planning & Mgmt
Fred T. Hight	Lt Col	3233	N/R	Director of Military Personnel
Robert [illegible]. [illegible]oist	Maj	5678	N/R	Director of Military Personnel Procurement
Joseph H. Ullmer	1st Lt	AO 576555	N/R	Director of Personnel Services
Hugh H. Bledsoe	Lt Col	2870A	N/R	Director of Air Force ROTC
Charles A. Harrington	Col	321	CP	Deputy for Operations
David [illegible]. Daniel	Lt Col	4308A	P	Assistant Deputy for Operations
Milton F. Glessner	Lt Col	3375A	CP	Director of Operations & Training

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Ninth Air Force, Langley AFB, VA., Cont'd

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NAME	GRADE	SN	AERO RTG	STAFF POSITION
Bascome L. Neal	Lt Col	3234A	P	Director of Plans Organizations & Rqmts
Kenneth . Klise	Lt Col	AO 4 1650	N/R	Director of Communications & Electronics
Edward F. McClenanhan	Lt Col	2809A	N/R	Director of Intelligence
Robert Morris	Col	1125A	N/R	Deputy for Materiel
Augustus E. Betschick	Lt Col	AO 277068	N/R	Assistant Deputy for Materiel
Carl A. Tankersley	Maj	7256A	N/R	Director of Materiel Planning
William W. Weldon	Maj	3664A	SP	Director of Maint Supply & Services
Frederick J. Baker	Maj	19991A	N/R	Director of Installations
Walter H. Williamson	Lt Col	4395A	SP	Commanding Officer, Hq & Hq Sq, Ninth AF

UNITS & STATIONS NINTH AIR FORCE

	NAME	AERO RTG	CO'S GRADE	SN
LANGLEY AIR FORCE BASE, VA.	George F. Smith	CP	Col	380A
4th Ftr Interception Wg	George F. Smith	CP	Col	380A
4th Ftr Gp	Albert L. Evans, Jr.	CP	Col	1675A
4th MBS Gp	Bela A. Harcos	P	Col	3220A
4th AB Gp	Everett G. Finnell	N/R	Col	AO 264483
4th Med Gp	Raymond T. Jenkins	O Med	Col	19154A
363rd Tac Recon Gp	Willis F. Chapman	SP	Col	1121A
363rd Recon Tech Sq	Floyd . Brewer	N/R	Maj	AO 508265
5 4th AF Band	Elmer H. Rende	N/R	CWO	W 902039
4412th AF Sq	Albert . Courchene	N/R	Capt	AL 80000
29th Comm Sq (Comd)	Frederick G. Reinhard	N/R	Capt	AO 559323
7th Radar Calib Unit	Paul J. Fallon	P	Capt	AO 791295
12th Radar Calib Unit	George . Criss	P	Maj	9814A
1st Shoran Beacon Unit	Gaillard . Jackson	P	1st Lt	AO 754628
84th Bomb Sq (L)	George B. Thabault	P	Maj	6457A
85th Bomb Sq (L)	Benjamin J. Willis	P	Lt Col	3815A
2nd Liaison Flt	Eugene G. Budnik	P	Capt	14344A
GODMAN AIR FORCE BASE, KY				
2236th AFRTC	Harrison . Christy	SP	Lt Col	4178A

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Ninth AF, Units & Stations Ninth AF, Cont'd

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	NAME	AERO RTG	CO'S GRADE	SN
READING MUN AIRPORT, PA. 2237th AFRTC	Frederick C. Roberts, Jr.	SP	Lt Col	7423A
GREATER PITTSBURGH AIRPORT, PA 2239th AFRTC	William S. Pocock	CP	Col	5316A
CLEVELAND MUN AIRPORT, OHIO 2240th AFRTC	Charles A. Bassett	CP	Col	265A
ARMY MEDICAL CENTER, WASH, DC 2201st Hosp Sq	Ira D. Cope	N/A	Maj	[illegible]0 235416
VALLEY FORGE GEN HOSPITAL PA 2203rd Hosp Sq	Walter F. Pfeller	N/A	Maj	[illegible]0 406969

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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TENTH AIR FORCE
Headquarters Tenth Air Force, Selfridge Air Force Base, Michigan

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Harry A. Johnson	B/Gen	157	CP	Commanding General (Actg)
Richard [illegible] Lightman	Col	05267	N/R	Vice Commander (Actg)
Edwin A. Doss	Col	1398	ST	Assistant for Reserve Force
James M. Winterbottom	Maj	4323	N/R	Assistant to the Vice Commander
Harold C. Allison	Col	347	N/R	Air Adjutant General
Harold [illegible] Schneider	Col	19028	MO ([illegible])	Air Surgeon
William M. Houston	Lt Col	7940	P	Inspector General (Actg)
William M. Houston	Lt Col	7940	P	Air Inspector
John [illegible] Bolyard	Capt	14071	P	Director of Flying Safety
Michael N. Mikulak	Lt Col	3105	N/R	Air Provost Marshal
Lawrence F. Krebs	Maj	7210	SP	Public Information Officer
Richard Gimbel	Col	706	N/R	Comptroller
John [illegible] Cronin	Maj	AO 370254	N/R	Assistant Comptroller
Benjamin C. Bowman	Maj	AO 449564	N/R	Director of Programs & Costs
Paul H. Brown	Maj	AO 404083	N/R	Director of Statistical Services
Milton J. Scott	1st Lt	AO 2076775	N/R	Director of Budget
Herman Strasheim	Maj	O 379435	N/R	Director of Audits
John L. Frederick	Capt	O 47721	N/R	Director of Finance
Walter Urbach	Col	919	N/R	Deputy for Personnel
Bonnie [illegible] Leach	Lt Col	AO 324488	N/R	Assistant Deputy for Personnel
Clement A. Mirinski	Lt Col	18762	N/R	Air Chaplain
William L. Doolan	Col	AO 185578	N/R	Air Judge Advocate
Gerald [illegible] Spurlock	Lt Col	3397	N/R	Director of Military Personnel
Robert L. Brown	Capt	9041	N/R	Director of Personnel Services
Hariet [illegible] Fivenson	Capt	AL 80099	N/R	WAF Staff Director
Robert D. Montagne	Lt Col	AO 417836	P	Director of Military Personnel Procurement
Roger A. Symmes	Lt Col	4196	N/R	Director of Personnel Planning & Mgt
Vember D. Taylor	Capt	AO 735627	N/R	Director of Publications
Victor [illegible] Musselavage	CWO	AW 2108106	N/R	Director of Administrations
Thomas Sturm	Civilian			Director of Historical Services
Milton M. Johnson	Lt Col	4472	P	Director of Air Force ROTC

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
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Headquarters Tenth Air Force, Selfridge AF Base, Mich.

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Cecil [illegible]. Henry	Col	711A	CP	Deputy for Operations
Michael J. Gordon	Lt Col	54194	SP	Assistant Deputy for Operations
Joseph L. L[illegible]u[illegible]lin	Lt Col	4484	CP	Director of Operations & Training
Peter D. Green	Lt Col	AO 428215	N/R	Director of Communications & Electronics
Harry [illegible]. Dennis, Jr.	Maj	9321A	P	Director of Intelligence
Nathaniel [illegible]. Cobb	Lt Col	AO 484466	N/R	Deputy for Materiel (actg)
Nathaniel [illegible]. Cobb	Lt Col	AO 484466	N/R	Assistant Deputy for Materiel
Nathaniel [illegible]. Cobb	Lt Col	AO 484466	N/R	Director of Materiel Planning (add dy)
Gilbert F. [illegible]onkes	Lt Col	5291A	SP	Director of Maintenance Supply & Services
Paul [illegible]. Ell[illegible]n	Col	762A	N/R	Director of Installations
James L. [illegible]ebster	Lt Col	2997A	N/R	Commanding Officer, Hq & Hq Sq, Tenth AF

UNITS & STATIONS TENTH AIR FORCE

	NAME	AERO RTG	CO'S GRADE	SN
O'HARE INTERNATIONAL AIRPORT, ILL. 2471st AFRTC	Victor H. Strahm	CP	Col	130A
FAIRFAX FLD, KANSAS 2472nd AFRTC	Richard A. Moorehouse	SP	Col	799A
MARSHALL AIR FORCE BASE, KANSAS 4406th AB Sq	Everett K. Jerkins Jr.	P	Maj	3045A
	Everett K. Jerkins Jr.	P	Maj	3045A
OFFUTT AIR FORCE BASE, NEBRASKA 2473rd AFRTC	Allen H. [illegible]ood	P	Lt Col	3850A
SCOTT AIR FORCE BASE, ILLINOIS 2469th AFRTC	James [illegible]. Bennett	SP	Lt Col	4028A
ATTERBURY AIR FORCE BASE, IND 2466th AFRTC	James [illegible]. [illegible]onin	CP	Col	508A

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Roster of Key Air Force Pers, Con C, Mitchel AFB, NY
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Units & Stations Tenth Air Force, Cont'd

	NAME	[illegible]	COMD GRADE	SN
WOLD-CHAMBERLAIN FLD, MINN				
2465th AFRTC	Don L. Wilhelm, Jr.	SP	Col	1538
SELFRIDGE AIR FORCE BASE, MICH				
4405th AB Sq	Ormond J. Mosman	CP	Lt Col	5916
SELFRIDGE AIR FORCE BASE, MICH				
56th Ftr Wg	James A. Gunn	SP	Col	1216
56th Ftr Gp	Francis S. Gabreski	P	Lt Col	4761
56th AB Gp	Roy L. Bolin	P	Maj	9806
56th M&S Gp	Morris Farber	N/R	Maj	2806
56th Med Gp	Russell S. Leone	MO (Med)	Col	018293
2242nd AFRTC	Howard . Gray	SP	Col	1792
541st AC&W Gp	Robert M. Myers	SP	Maj	5381
BUNKER HILL NAVAL AIR FORCE BASE, IND	Homer E. Lee	N/R	Lt Col	0 289696
2463rd Standby Base Sq	Roger E. Lee	N/	Lt Col	0 289696
30th Comm Sq (Comd)	Nathaniel J. Heffernan	N/R	1st Lt	0 1342272
691st AF Band	Ernest W. Greer	N/R	WOJG	W 950646
2475th AF Sq	Doris D. Diamant	N/R	Capt	L 80109
PERCY JONES GEN HOSPITAL, MICH				
2204th Hosp Sq				
OSCODA AIR FORCE BASE, MICH				
2476th BS Sq				
FITZSIMONS GEN HOSP, COLO				
2208th Hosp Sq	Alvin Lloyd.		Maj	0 456003

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TWELFTH AIR FORCE
Headquarters Twelfth Air Force, Brooks Air Force Base, Texas

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Alden . Crawford	M/Gen	64	CP	Commanding General
Ezekiel . Napier	Col	568	CP	Vice Commander
Michael F. Davis	Col	96	CP	Assistant for Reserve Forces
Richard . Bristol	Col	902	P	Assistant to the Vice Commander
John C. Hadley	Lt Col	7462	N/R	Air Adjutant General
Neely G. Washburn	Col	8836A	FS	Air Surgeon
Fred D. Stevers	Col	1757	CP	Inspector General
John H. Hill	Lt Col	3366	N/R	Air Inspector
John R. Gee	Lt Col	2223	N/R	Air Provost Marshal
Gregory T. Carpenter	Maj	AO 429358	P	Public Information Officer
Edward C. Gwynn	Lt Col	2168	N/R	Comptroller
George L. Colley	Maj	AO 649026	N/R	Assistant Comptroller
Fred J. Whittle	Maj	5940	N/R	Director of Programs & Costs (add dy)
John P. Kelly	Capt	AO 649366	N/R	Director of Statistical Services
Max T. Leyendecker	Capt	5515	N/R	Director of Budget
Edward C. Gwynn	Lt Col	2168	N/R	Director of Audits (Add dy)
Edward H. Hoffman	Maj	AO 1280003	N/R	Director of Finance
Robert T. Engle	Lt Col	7611	N/R	Deputy for Personnel
				Assistant Deputy for Personnel
Robert D. Coward	Capt	AO 520934	N/R	Air Chaplain
Elnora L. Clarke	Capt	L 80511	N/R	WAF Staff Director
John L. Hood	Maj	AO 906899	N/R	Director of Personnel Planning & Mgmt
John L. Harris	Maj	2978	N/R	Director of Military Personnel
Michael N. Allisandro	Maj	AO 559995	N/R	Director of Military Personnel Proc
Alpha . Adams	Maj	I 80021	N/R	Director of Personnel Services
John . Blalock	Maj	6043	P	Director of Air Force ROTC
Charles . Marvin	Col	1158	CP	Deputy for Operations
Broadus B. Taylor	Lt Col	1633	SP	Assistant Deputy for Operations
George F. Keens, Jr.	Lt Col	2305	SP	Director of Operations & Training
Charles . Meyers, Jr.	Lt Col	9112A	SP	Director of Plans Organizations & Rqmts
Frederick . Shipe	Lt Col	5401	N/R	Director of Communications & Electronics

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
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Headquarters Twelfth Air Force, Brooks AFB, Texas Cont'd

NAME	GRADE	SN	AERO RTG	STAFF POSITION
George H. Sander	Maj	2885A	N/R	Director of Intelligence
Charles [illegible]. Sullivan	Col	162A	CP	Deputy for Materiel
Edward [illegible]. Angle	Lt Col	AO 255332	N/R	Assistant Deputy for Materiel
Edward [illegible]. Angle	Lt Col	AO 255332	N/R	Director of Materiel Planning (Add dy)
Charles L. Nelson	Maj	11455A	N/R	Director of Maintenance Supply & Services
Jack B. Marshall	Maj	AO 275815	N/R	Director of Installations
John E. Fryer	Maj	AO 801381	P	Commanding Officer, Hq & Hq Sq, Twelfth AF

UNITS & STATIONS TWELFTH AIR FORCE

BIGGS AIR FORCE BASE, TEXAS	NAME	AERO RTG	CO'S GRADE	SN
2602nd Tow Target Sq	Leonard Kaufman	P	Maj	9225A
1st Liaison Flt	Clarence [illegible] Nunneley	P	Capt	13145A
CAMP LE ROY JOHNSON, LA				
751st AF Band				
HENSLEY FLD, TEXAS				
2596th AFRTC	Sam C. Gribi	CP	Lt Col	2114A
FT SAM HOUSTON, TEXAS				
2206th Hosp Sq	Charles [illegible]. Lucy	N/R	Capt	O 559647
EL PASO, TEXAS				
2207th Hosp Sq	Tracy B. Watson	N/R	Capt	O 564575
TINKER AIR FORCE BASE, OKLA				
2592nd AFRTC	F. H. LeFebre	P	Lt Col	9058A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Twelfth Air Force, Cont'd

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HOT SPRINGS, ARKANSAS	NAME	AERO RTG	COMD GRADE	SN
2205th Hosp Sq	L. I. Stephens	N/R	1st Lt	AO 202328
KIRTLAND AIR FORCE BASE, NM				
81st Ftr Wg	Thomas [illegible] Blackburn	CP	Col	156A
81st Ftr Gp	Gladwyn E. Pinkston	SP	Col	1523A
81st AB Gp	Thomas L. Piper	SP	Lt Col	4029A
81st M&S Gp	Arthur [illegible] Reinhart	SP	Lt Col	2186A
81st Med Gp	Cecil P. Jones	N/R	Capt	0 1786644
690th AC&W Sq	Charles F. Striplin, Jr.	N/R	Lt Col	2806A
BROOKS AIR FORCE BASE, TEXAS	Luther P. Matthews	SP	Lt Col	2802A
2595th AB Gp	Luther P. Matthews	SP	Lt Col	2802A
579th AF Band	Clyde C. Owens	N/R	CWO	W 902066
40th Comm Sq (Comd)	William [illegible] Gerber	P	Capt	AO 863933
2597th Air Police Sq	Albert Feldman	N/R	Maj	0 1994904
2213th WAF Sq	Elmer L. Clarke	N/R	Capt	AL 80511

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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FOURTEENTH AIR FORCE
Headquarters Fourteenth Air Force, Robins Air Force Base, Georgia

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Ralph F. Stearley	M/Gen	59	CP	Commanding General
Cortlandt S. Johnson	Col	161	CP	Vice Commander
Daniel F. McLean	Maj	8484	P	Assistant for Reserve Forces
George D. Hastings	Lt Col	2161	N/A	Assistant to Vice Commander
Horace F. Bonnewitz	Col	AO 251930	N/R	Air Adjutant General
Thomas J. Barnhart	Lt Col	AO 247694	N/R	Assistant Air Adjutant General
John S. Carmac	Lt Col	5928	SP	Inspector General
Percie J. Larrick	Maj	8261	SP	Assistant to the Inspector General
Jeffory O. Wellborn	Maj	7795	P	Air Inspector
John F. Mulligan	Lt Col	2202	N/A	Air Provost Marshal
Clifford F. Michael	Col	020383	N/A	Air Surgeon
Robert D. Lawrence	Maj	AO 353560	N/R	Public Information Officer
				Assistant Public Information Officer
Kennard W. Gephart	Col	AO 301343	N/R	Comptroller
Oliver F. Shaffer	Maj	AO 259809	N/R	Assistant Comptroller
Frank O. Hay	Maj	6472	P	Director Programs & Cost
Harold A. Benner	Maj	AO 564789	N/R	Director of Statistical Services
Benjamin L. Gregory	Capt	AO 1296850	N/R	Director of Budget
Frank O. Hay	Maj	6472	P	Director of Audits (Actg)
Ralph J. Johnstone	Capt	AO 1281127	N/R	Director of Finance
Robert [illegible]. Rollison	Col	747	N/A	Deputy for Personnel
				Assistant Deputy for Personnel
Eugene J. Graebner	Lt Col	AO 345930	N/R	Air Chaplain
Claire D. Wallace	Lt Col	AO 271331	N/R	Air Judge Advocate
				WAF Staff Director
Herman L. Fagley	Lt Col	AO 461556	N/R	Director of Personnel Planning & Mgmt
Thomas H. Holbrook	Lt Col	194	SP	Director of Military Personnel
Robert H. Richey	Major	9068	P	Director of Military Personnel Proc
				Director of Civilian Personnel
Earl [illegible]. Lewis	Lt Col	2288	NR	Director of Personnel Service

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Roster of Key Air Force Pers, Con C, Mitchel AFB, N.Y.
[illegible] Fourteenth Air Force, Robins AFB, Ga., Cont'd

RCS-AF-C-P4[illegible]
(Mil Pers)

NAME	GRADE	SN	AERO RTG	STAFF POSITION
William [illegible]. Byerts	Lt Col	4324	P	Director of Air ROTC
George A. Bickell	Col	4160	P	Deputy for Operations
Bishop P. Parrish	Lt Col	2183	SP	Assistant Deputy for Operations
John C. Watson	Lt Col	4967	P	Director of Operations & Training
John C. Watson	Lt Col	4967	P	Director of Plans Organizations & Reqmts
Ernest C. [illegible]onham	Maj	AO 899026	N/R	Director of Communications & Electronics
Edward [illegible]. Daugherty	Maj	AO 905062	N/R	Director of Intelligence
Robert [illegible]helchel	Lt Col	2316	N/P	Deputy for Materiel
Nathaniel [illegible]. Voss	Maj	5898	N/R	Assistant Deputy for Materiel
Claude [illegible]. Rupert	Maj	2590	N/R	Director of Materiel Planning
Floyd [illegible]. Johnsen	Lt Col	AO 370079	N/R	Director of Maintenance Supply & Service
Stephen [illegible]. [illegible]eenan	Maj	6380	N/R	Director of Installations
Burton [illegible]. Poole	Capt	AO 573897	N/R	Commanding Officer Hq & Hq Sq, 14th AF

UNITS [illegible]

	NAME	CO'S GRADE	AERO RTG	SN
769th AF Band	Edwin H. [illegible]nford	CWO	N/A	AO 902033
37th Communication Sq, Command	Riley [illegible]. Adams, Jr.	Capt	N/R	AO 425453
[illegible] AIR FORCE BASE, [illegible]	P. K. Morrill, Jr.	Col	CP	474A
20th Fighter Bomber Wing	P. K. Morrill, Jr.	Col	CP	474A
20th Fighter-Bomber Group	John [illegible]. Dunnin[illegible]	Col	SP	1355
20th Maintenance & Supply Gp	Cecil B. Guile	Col	CP	AO 108633
20th Air Base Group	Gerhard J. Schriever	Col	SP	2043
20th Medical Group	David [illegible]. Clotfelter	Lt Col	FS	19095
30th Motor Transport Sq				
606th Acft Control & Warning Sq	Horace [illegible]. McWhirter	Maj	SP	4898
161st TAC Recon Sq (Photo Jet)	William O. Jackson Jr.	Lt Col	P	5078A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourteenth AF, Cont'd

RCS-AF-SC-P4
(Mil Pers)

	NAME	CO'S GRADE	AERO RTG	SN
TURNER AIR FORCE BASE, ALBANY, GEORGIA	Eugene H. Snavely	Col	SP	1750
31st Fighter-Bomber Wing	Eugene H. Snavely	Col	SP	1750
31st Fighter-Bomber Group	Earl H. Dunham	Col	SP	3451
31st Maint & Supply Group	Charles W. Gayle	Lt Col	SP	2047
31st Air Base Group	Albert J. Kenig	Lt Col	N/R	AO 462191
31st Medical Group	Paul V. Davis	Maj	MS	057380
607th Acft Control & Warning Squadron	Edwin D. Connell	Capt	P	AO 430921
SEWART AIR FORCE BASE, SMYRNA, TENNESSEE	Hoyt L. Prindle	Col	CP	334
314th Troop Carrier Wing	Hoyt D. Prindle	Col	CP	334
314th TroopCarrier Group	Richard W. Henderson	Col	CP	995
314th Maint & Supply Group	Bruce E. Ferrell	Lt Col	N/R	AO 447767
314th Air Base Group	Charlie H. Moss	Col	SP	AO 338915
314th Medical Group	Clark F. Proctor	Lt Col	P	O 295086
316th Troop Carrier Group	Edgar . Hampton	Col	SP	1805
2601st Assault Squadron	Theo A. Diltz	Lt Col	SP	7832
POPE AIR FORCE BASE, FORT BRAGG, N.C.				
2600th Air Base Sq	Richard G. Herbine	Lt Col	SP	2077
8th Air Division (Defense)	Willard R. Wolfinbarger	B/Gen	CP	317
9th Air Division (Defense)	Gilbert L. Meyers	Col	SP	1958
934th Sig Bn Separate	Milton H. Gray (Actg)	Maj	N/R	AO 473567
502d Tactical Control Gp	Arthur L. Logan	Lt Col	SP	2303
4410th Bomb Disposal Unit	Frank L. Dunham	1st Lt	N/	AO 1579592
2d Radio Relay Sq	James C. Netherland	Capt	P	10514
4th Liaison Flight	Lonnie . Hicks	Capt	P	11573
5th Helicopter Flt	Walter J. Hodgson	1st Lt	P.	AO 2069019
5th Radar Cal Unit	Pascal J. Corritorie	Capt	P.	13207
LAWSON AIR FORCE BASE, GEORGIA				
4403th Air Base Sq	Richard G. Johnson	Maj	P.	AO 433689
3d Liaison Flight	Donald F. Dixon	1st Lt	P	AO 834973

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourteenth AF, Cont'd

CS-AF-C-4
(Mil Pers)

	NAME	COMD GRADE	AERO RTG	SN
MEMPHIS MUNICIPAL AIRPORT, TENN				
2584th AF Reserve Training Center	Preston C. Newton	Lt Col	[illegible]	4220
MIAMI INTERNATIONAL AIRPORT, FLA.				
2585th AF Reserve Training Center	John V. Hart	Col	CP	179
BIRMINGHAM MUNICIPAL AIRPORT, ALA.				
2587th AF Reserve Training Center	Leslie [illegible]. Britton	Lt Col	SP	3620
MARIETTA AIR FORCE BASE, GEORGIA				
2589th AF Reserve Training Center	George H. [illegible], Jr.	Lt Col	P	4015
OLIVER GENERAL HOSPITAL, AUGUSTA, GA				
2202d Hospital Squadron	William L. Mitchell, Jr.	Capt	M/	0 583416

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ConAC

Roster of Key Personnel

31 May 1950

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Roster of Key USAF Personnel
Continental Air Command
Mitchel Air Force Base, New York
as of 31 May 1950

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Roster of Key Air Force Pers, ConAC Mitchel AFB, N.Y.

RCS-AF-P41
(Mil Pers)

CONTINENTAL AIR COMMAND
Headquarters Continental Air Command, Mitchel Air Force Base, New York

NAME	GRADE	SN	AERO RTG	STAFF POSITIONS
Ennis C. Whitehead	L Gen	9A	CP	Commanding General
Charles T. Myers	M Gen	37A	CP	Vice Commander
Willard W. Irvine	M Gen	0 5[illegible]38	N/R	Army & Navy Liaison Officer
William C. Warren	Col	678A	N/R	Assistant to the Vice Commander
William [illegible]. Lanford	Lt Col	[illegible]76	SP	Chief, Manpower Evaluation Board
Neal J. O'Brien	Col	824A	N/R	Air Adjutant General
Vance E. Murphy	Lt Col	2246A	N/R	Assistant Air Adjutant General
James C. Barlow	Lt Col	2224A	N/R	Director of Publications
William P. Mullins	Lt Col	3885A	SP	Director of Administration
Jacob J. Lichman	Civilian			Director of Historical Services
John M. Hargreaves	B Gen	233A	MO Med	Air Surgeon
Charles E. Thomas	M Gen	192A	CP	Inspector General
Edgar T. Selzer	Col	699A	CP	Air Inspector
August E. Weil	Maj	9736A	P	Flying Safety
Robert B. Deans	Col	AO 438059	N/R	Air Provost Marshal
Max D. Hampton	Maj	AO 568482	N/R	Public Information Officer
Robert C. Candee	B Gen	100A	CP	Comptroller
Earl B. Cook	Col	3629A	SP	Assistant Comptroller
Tom R. Taylor	Lt Col	5041A	N/R	Director of Programs & Costs
Jack E. Wert	Lt Col	2671A	N/R	Director of Statistical Services
Edward T. [illegible]	Maj	14091A	N/R	Director of Budget
Joseph V. [illegible]	Capt	AO 308615	N/R	Director of Audits
Elmer [illegible]. Cude	Col	837A	N/R	Director of Finance
Reuben Kyle Jr.	Col	306A	CP	Deputy for Personnel
Richard [illegible]. Fellows	Col	1334A	SP	Assistant Deputy for Personnel
Roy F. Reynolds	Col	AO 279860	N/R	Air Chaplain
Desmond O'Keefe	Col	125A	N/R	Air Judge Advocate
Marjorie O. Hunt	Maj	L 80049	N/R	WAF Staff Director

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Hq ConAC, Mitchel AFB, NY, Cont'd

RCS-AF-SC-P4[illegible]
(Mil Pers)

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Richard [illegible]. Yudkin	Lt Col	4480A	N/R	Director of Personnel Planning & Mangmt
John C. McCurnin	Col	AO 299162	N/R	Director of Military Personnel
Frederick W. Shipley Jr.	Lt Col	AO 426989	N/R	Director of Military Personnel Procurement
Frederick R. Taylor	Civilian			Director of Civilian Personnel
Burgess Gradwell	Maj	10203A	P	Director of Personnel Pervices
Dexter L. Hodge	Lt Col	8185A	P	Director of Air Force ROTC
Edmund J. Evans	Maj	AO 475070	N/R	Ground Safety
Herbert B. Thatcher	B Gen	634A	SP	Deputy for Operations
George S. Brown	Col	4090A	P	Assistant Deputy for Operations
John C. Kilborn	Col	562A	CP	Director of Civil Air Defense
Dolf E. Muehleisen	Col	1144A	CP	Director of Operations & Training
James H. Price	Col	1152A	CP	Director of Plans Organizations & Rqmts
Robert R. Yeager	Col	200A	CP	Director of Communications & Electronics
Ernest J. White, Jr.	Lt Col	8947A	P	Director of Intelligence (Actg)
Signa A. Gilkey	Col	305A	CP	Deputy for Materiel
Robert C. McBride	Col	1441A	P	Assistant Deputy for Materiel
Robert L. Petit	Lt Col	5213A	P	Director of Materiel Planning
Marion G. Ferguson, Jr.	Col	2497A	N/R	Director of Maintenance Supply & Services
Ward T. Abbott	Col	362A	N/R	Director of Installations
Robert M. Lee	M Gen	590A	CP	Deputy for Tactical Air Operations (Add dy)
Riley N. Whittington	Maj	6193A	P	Commanding Officer, Hq & Hq Sq, ConAC

UNITS ASSIGNED TO HQ CONAC

Mitchel AF Base New York

	NAME	AERO RTG	CO'S GRADE	SN
28th Communications Sq, AF	Robert J. McCleary	N/R	Maj	6684A
42nd Communications Sq,				
[illegible] AFB, IND.	[illegible].A. Taylor	N/R	Col	AO 245565
2220th Field Printing Sq.	[illegible].A. Taylor	N/R	Col	AO 245565

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

RCS-AF-P4M
(Mil Pers)

EASTERN AIR DEFENSE FORCE
Mitchel Air Force Base, New York

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Robert M. Webster	M Gen	21A	CP	Commanding General
George R. Acheson	B Gen	335A	CP	Vice Commander
Joseph A. Cunningham	Col	2054A	SP	Director of Combat Operations
John J. Mullen	Lt Col	3545A	SP	Chief AC & W Operations Division
Frederick [illegible]. Rosier	WgCmdr	37425	P	Chief, Fighters Operations Division
William C. Moore	Maj	10125A	P	OIC Operations (Information Center)
James C. Averill	Col	1848A	SP	Director, Plans & Special Projects
John B. F. Dice	Col	899A	N/R	Liaison Officer
Arthur L. Logan	Lt Col	2303A	SP	Chief Special Projects Division
Robert A. Wood	Capt	AO 2034652	N/R	Director of Civil Defense (Actg)
Bruce K. Baumgardner	Maj	7451A	SP	Director of Intelligence
Theodore [illegible]nsley	Maj	5734A	N/R	Air Adjutant General

TACTICAL AIR COMMAND (Operational)
Headquarters Tactical Air Command, Langley Air Force Base Virginia

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Robert M. Lee	M Gen	590A	CP	Commanding General Deputy for Tactical Air Operations, ConAC (Add Dy)
Homer L. Sanders	Col	411A	CP	Vice Commander
James [illegible]. Townsend	Lt Col	2629A	N/R	Asst to the Vice Commander
Robert H. [illegible]hom	Lt Col	AO 301102	N/R	Air Adjutant General
Leon Booth	Lt Col	2321A	N/R	Public Information Officer
Ernest K. Warburton	Col	407A	CP	Deputy for Operations
John J. Thornhill	Lt Col	3570A	P	Director of Training
Francis B. Valentine	Col	199A	CP	Director of Intelligence
Frank H. Mears	Col	1879A	CP	Director of Joint Operations Center
William H. Gross	Col	663A	CP	Deputy for Requirements

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

PC[illegible]-AF-P4M
(Mil Pers)

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Harry [illegible]. Young	Col	1871A	SP	Director of Aircraft Requirements Director of Equipment Requirements
Henry Viccellio	Col	1728A	SP	Deputy for Plans
George [illegible]. Brooking	Lt Col	[illegible]0711A	P	Director of Policy & Doctrine
Loren G. McCollom	Col	1632A	P	Director of Field Exercise Plans
David M. Jones	Col	1811A	SP	Director of War Plans
Ira F. Stinson	Col	AO 455523	N/R	Deputy for Communications
Edwin T. Keith	Capt	AO 572233	N/R	Director of Communications Systems
Joseph V. Ulrich	Lt Col	AO 472431	N/R	Director of Special Projects
James H. Stover	Capt	AO 811153	P	Director of Electronics Systems
Arthur M. Gray	1st Lt	16649A	SP	Commanding Officer, Hq & Hq Sq, TAC

FIRST AIR FORCE
Headquarters First Air Force, Mitchel Air Force Base N.Y.

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Glenn O. Barcus	M Gen	87A	CP	Commanding General
Joseph A. Bulger	Col	379A	CP	Vice Commander
Frederick P. Knoll	Col	AO 367428	CP	Assistant for Reserve Forces
Ralph J. Erickson	Col	AO 211986	N/R	Assistant to the Vice Commander
Leland P. [illegible]lland	Maj	9572A	P	Manpower Evaluation Board
Edwin C. Foster	Col	AO 470508	N/R	Air Adjutant General
Sheldon S. Brownton	Col	19083A	[illegible]O Med	Air Surgeon
Jerome Loewenberg	Lt Col	963A	N/R	Air Judge Advocate
Douglas Johnston	Col	122A	N/R	Inspector General
Francis L. [illegible]evard	Col	1272A	SP	Air Inspector
Benjamin [illegible]. Royal	Maj	5373A	N/R	Air Provost Marshal
Charles P. Christie	Maj	7588A	P	Public Information Officer (Actg)
George W. Johnson	Col	AO 286216	N/R	Comptroller
Francis S. Cartaglia	Lt Col	AO 297697	N/R	Asst Comptroller
Douglas [illegible]. Blackford	Maj	AO 567383	N/R	Director of Programs & Cost
Richard J. Gibney	1st Lt	AO 818512	N/R	Director of Statistical Services

Roster of Key Air Force Pers, ConAC, Mitchel AFB, N.Y.

RCS-AF-[illegible]
(Mil Pers)

NAME	GRADE	SN	AERO-RTG	STAFF POSITION
Lyle C. Grimes	Lt Col	2538A	N/R	Director of Budget
[illegible]	Capt	[illegible]	N/R	Director of Audits
Lawrence [illegible]. Boyd	Maj	AO 567410	N/R	Director of Finance
Emory L. Bruns	Col	736A	N/R	Deputy for Personnel
Edward D. S. Sullivan	Maj	7442A	N/R	Asst Deputy for personnel
Charles M. Marteney	Lt Col	1[illegible]714A	N/R	Air Chaplain
James [illegible]. Huntley	Capt	[illegible]	N/R	Director of Personnel Planning & Mgmt
Dwight M. Pratt	Maj	10614A	N/R	Director of Military Personnel
Charles D. Horst	Maj	6417A	P	Director of Military Personnel Procuremt
Dorothy Cooper	Maj	AL 80466	N/R	Director of Personnel Service (Actg)(Add dy)
Kenneth W. Holbert	Lt Col	5200A	P	Director of Air Force ROTC
Robert M. Stillman	Col	1114A	SP	Deputy for Operations
George O. Commenator	Lt Col	5152A	P	Assistant Deputy for Operations (Actg)
Lester J. Krause, Jr.	Lt Col	8025A	P	Director of Operations & Training
Fred L. Heene	Maj	5954A	N/R	Director of Plans Org & Reqmts
Carroll S. Miller	Col	740A	N/R	Director of Comm & Electronics
Howard H. Symons	Capt	15884A	P	Director of Intelligence
Robert [illegible]. C. Wimsatt	Col	214A	CP	Deputy for Materiel
Ernest H. Beverly	Col	1590A	SP	Asst Deputy for Materiel
Robert [illegible]. [illegible]	Lt Col	[illegible]	N/R	Director of Materiel Plng (Actg)(Add Dy)
Joseph [illegible]	Lt Col	[illegible]	P	Director of Maintenance Supply & Service
Lothar C. Maurer	Col	720A	N/R	Director of Installations
Dee W. Rains	Lt Col	AO 204701	N/R	Commanding Officer, Hq Hq Sq, First AF

UNITS & STATIONS FIRST AIR FORCE

	NAME	AERO RTG	COM GRADE	SN
MITCHEL AIR FORCE BASE, N.Y.	[illegible]	CP	Col	843A
2500th AB Gp	[illegible]	CP	Col	843A
581st AF Band	Adam S. Shaffer, Jr.	N/R	CWO	AW 951154
2233rd AFRTC	Norton H. Van Sicklen III	SP	Col	1841A
2243rd WAF Sq	Elizabeth Ray	N/R	Maj	AL 80214

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters First Air Force, Mitchel AFB, NY

Units & Stations, First Air Force, Cont'd	NAME	AERO RTG	COM'S GRADE	NS
2234th AFRTC	John R. Propst	SP	Lt Col	4736A
FLOYD BENNETT NAVAL AIR STA, NY				
2230th AFRTC	Lance Call	CP	Col	AO 384510
ROSLYN, NY	Marvin J. McKinney	N/R	Col	281A
503rd AC&W Gp	Marvin J. McKinney	N/R	Col	281A
Group Executive Officer				
Group Operations Officer	Richard F. Dutcher	N/R	Maj	6073A
Group Radar Officer	Robert E. Dougal	N/R	Maj	5754A
Group Signal Supply Officer	Norman G. Howard	N/R	WOJG	A 951619
645th Aircraft Control & Warning Sq	Jay J. Weester	P	1st Lt	AO 7799532
646th Aircraft Control & Warning Sq	Neal B. Dunbar	N/R	Capt	AO 440337
Operations Officer	Hugh T. Halbert	P	Capt	AO 401166
647th Aircraft Control & Warning Sq	Sidney R. Davis	N/R	Capt	AO 1994585
648th Aircraft Control & Warning Sq	Gordon S. Lugenbeel	N/R	1st Lt	AO 580943
26th Air Division (Defense)	Russell J. Minty	CP	Col	224A
Deputy Commander				
Air Adjutant General	Armistead B. Gordon	N/R	1st Lt	AO 568339
Public Information Officer	Thomas W. Mucci	N/R	1st Lt	AO 560509
Statistical Services Officer	Sylvester L. Toumey	N/R	1st Lt	AO 582523
Director of Operations & Training	Harold L. McNeely	P	Lt Col	7990A
Director of Personnel	Gordon C. Reddall	N/R	Capt	12297A
Director of Materiel & Supply	Cliffton H . Jett	N/R	Maj	AO 242317
OTIS AIR FORCE BASE, MASS	Arthur C. Agan Jr.	SP	Col	1759A
33rd Ftr Wg	Arthur C. Agan Jr	SP	Col	1759A
Executive Officer	William M. Banks	SP	Lt Col	3775A
33rd Ftr Gp	Charles H. McDonald	SP	Col	1830A
58th Ftr Inter Sq	Wilbur J. Grumble	SP	Lt Col	4686A
59th Ftr Inter Sq	Oscar H. Coen	P	Lt Col	8746A
60th Ftr Inter Sq	Glenn T. Eagleston	P	Lt Col	9433A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters First Air Force, Mitchel AFB, NY

Units & Stations, First Air Force, Cont'd.	NAME	AERO RTG	CO'S GRADE	SN
33rd H&S Gp	Joseph C. Smith	SP	Lt Col	3870A
33rd AB Gp	Harold [illegible]. Scruggs	SP	Lt Col	4217A
33rd Med Gp	Everett H. Chaulker	FS	Maj	0 30901
STEWART AIR FORCE BASE, NY	Hallock P. K. Walmsley	SP	Lt Col	1931A
4000th AB Gp	Hallock P. K. Walmsley	SP	Lt Col	1931A
32nd Air Div (Defense)	Fred T. Crimmins	SP	Col	1719A
Deputy Commander	Edward G. Miller	SP	Lt Col	5691A
Chief of Staff	Otto G. Quanrud	NR	Lt Col	1000A
Air Adjutant General	William O. Spiker	P	1st Lt	14970A
Inspector General				
Public Information Officer	Kenneth B. Joyce	N/R	Capt	AO 575148
Statistical Services Officer				
Cost Control Reporting Officer	Oscar W. Fulton	N/R	Maj	2827A
Chief Personnel & Administration Div	Blake G. Miller	N/R	Lt Col	2758A
Chief, Operations & Training Division	Edward G. Hillery	SP	Lt Col	5691A
Chief, Communications & Electronics Div	Irving H. Gravin	N/R	Maj	5626A
Chief, Supply & Materiel Division	Oecar W. Fulton	N/R	Maj	2927A
540th AC&W Gp	Otto G. Quanrud	N/R	Lt Col	1000A
Executive Officer	Blake G. Miller	N/R	Lt Col	2758A
Operations Officer	Edward P. Langebartel	P	Maj	AO 754434
Group Radar Officer	Lloyd C. Willis	P	Maj	2828A
Group Signal Supply Officer	George L. Dubois	N/R	Capt	AO 508682
563rd Aircraft Control & Warning Sq				
Electronics Officer	John [illegible]rona	P	1st Lt	AO 504267
Operations Officer	Emil Novac[illegible]	P	Capt	AO 660134
654th Aircraft control & Warning Sq				
Electronics Officer	Malcolm C. Pickering	P	1st Lt	AO 694179
Operations Officer	James C. Cooper	P	Maj	7004A
655th Aircraft control & Warning Sq				
Electronics Officer	John Gagliard	P	1st Lt	AO 751298
Operations Officer	John P. Byrne	P	Capt	12218A

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters First Air Force, Mitchel AFB, NY

RCS-AF-P4
(Mil Pers)

Units & Stations, First Air Force, Cont'd

4400th WAF Sq	Dorothea L. McLaughlin	N/R	2nd Lt	AL 1908811
McGUIRE AIR FORCE BASE, N.J.				
52nd Ftr Wg (AW)	Edward C. Tates	SP	Col	1914A
Executive Officer	Edward C. Tates	SP	Col	1914A
52nd Ftr Gp AW	Edward W. Szaniawski	SP	Lt Col	3785A
2nd Ftr Sq AW	Oliver G. Cellini	SP	Col	1829A
5th Ftr Sq AW	Caroll C. Smith	SP	Maj	7624A
52nd M&S Gp	John M. Konosky	SP	Maj	4982A
52nd AB Gp	Charles L. Perkins	N/R	Col	AO 560214
52nd Med Gp	David J. Kirby	P	Maj	3171A
	Stephen P. Farraro	FS	Capt	AO 1718420
FORT DIX, NJ (ARMY)				
2225th OR Gp	Evan M. Houseman	N/R	Lt Col	017307
2225th Assy & Proc Sq	Edward B. Roth	N/R	Lt Col	AO 484684
MURPHY GENERAL HOSPITAL, MASS	William E. Silvers	P	1st Lt	AO 810593
2230th Hospital Sq	Wilford H. Kunz	N/R	Capt	AO 904272

FOURTH AIR FORCE

Headquarters Fourth Air Force, Hamilton Air Force Base Calif

NAME	GRADE	SN	AERO RTG	STAFF POSITION
John E. Upston	M Gen	49A	CP	Commanding General
Joseph H. Davidson	B Gen	121A	CP	Vice Commander
Lotha A. Smith	Col	131A	CP	Assistant for Reserve Forces
Harold E. Todd	Lt Col	2096A	N/R	Assistant to the Vice Commander
Lee Q. Wasser	Col	259A	CP	Special assistant to the Commanding General
Harold L. Fuller	Lt Col	2257A	N/R	Air Adjutant General
Lloyd G. Rutter	Capt	AO 813233	P	Director of Publications
James W. Watson	Maj	9724A	N/R	Director of Administration
Robert A. Reimer	Capt	19272A	N/R	Air Surgeon (Actg)

Roster of Key Air Force Pers, ConAC, Mitchel AFB, N.Y.
Hq Fourth Air Force, Hamilton AFB, Calif, Cont'd

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Landon E. McConnell	Lt Col	3136A	SP	Air Inspector General
				Air Inspector
Miles A. Conner	Lt Col	AO 347376	N/R	Air Provost Marshal
James E. Johnson	Maj	AO 377487	N/R	Public Information Officer
Robert S. Macrum	Col	519A	CP	Comptroller
Delbert O. Watson	Maj	AO 357393	N/R	Assistant Comptroller
William W. Converse	Lt Col	4027A	N/R	Director of Programs & Costs
Raymond E. Brett	Maj	4729A	SP	Director of Statistical Services
Fred J. Held III	Maj	AO 559909	N/R	Director of Budget
Francis C. Wibom	Capt	AO 564618	N/R	Director of Audits
				Director of Finance
Thomas B. White	Col	282A	N/R	Deputy for Personnel
Robert M. Clark	Maj	4924A	N/R	Assistant Deputy for Personnel
Edward A. Rein	Col	AO 284037	N/R	Air Chaplain
Stewart S. Maxey	Col	913A	N/R	Air Judge Advocate
Beatrice Arnoff	Capt	AL 80492	N/R	WAF Staff Director
John W. Mact, Jr.	Lt Col	3357A	P	Director of Personnell Planning & Management
Glenn B. Riggle	Maj	5176A	N/R	Director of Military & Civilian Personnel
Delwyn E. Silver	Lt Col	AO 436011	P	Director of Military Personnel Procurement
Charles J. Thelsen	Capt	AO 728036	P	Director of Personnel Service
Stanley W. Tobiason	Lt Col	AO 424573	CP	Director of Air Force ROTC
Joseph P. Bailey	Col	195A	CP	Deputy for Operations
Robert F. Harris	Col	2041A	SP	Assistant Deputy for Operations
Wallace P. Mace	Lt Col	1929A	N/R	Director of Operations & Training
William H. Clark	Col	1002A	SP	Director of Plans Organizations & Reqmts
Gus B. Hoffman	Col	807A	N/R	Director of Communications & Electronics
William A. Larson	Maj	9466A	P	Director of Intelligence
Melie J. Coutlee	Col	867A	SP	Deputy for Materiel
Albert L. Perry	Lt Col	AO 409080	N/R	Assistant Deputy for Materiel
Keith P. Siegfried	Maj	AO 17[illegible]3783	N/R	Director of Materiel Planning
John J. Traunicht	Lt Col	AO 252718	N/R	Director of Maint Supply & Services
Ivins L. Browne	Col	AO 473013	N/R	Director of Installations
T. J. Jackson, Jr.	Maj	AO 424485	SP	Commanding Officer, Hq & Hq Sq, Fourth AF

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, N.Y.
Hq Fourth Air Force, Hamilton AFB, Calif, Cont'd

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(Mil Pers)

Units & Stations Fourth Air Force

	NAME	AERO RTG	COMS GRADE	SN
SILVER LAKE, WASHINGTON				
25th AD, (Defense)	Clinton D. Vincent	SP	Col	1213A
505th AC&W Gp	James [illegible] McNitt	N/R	Col	1183A
LONG BEACH MUN AIRPORT, CALIF				
2347th AFRTC	Claude [illegible] Duncan	CP	Col	686A
LETTERMAN GEN HOSP, SAN FRANCISCO CALIF				
2209th Hosp Sq	George Danko	N/R	Capt	AO 517699
SAN FRANCISCO POE, FORT MASON, CALIF				
2349th AFORD (Det)	Carl N. McDonald	N/R	1st Lt	AO 582070
SEATTLE POE, SEATTLE, WASHINGTON				
4349th AFORD	Woodrow [illegible] Alexander	N/R	Capt	10480A
HAMILTON AIR FORCE BASE, CALIF	George H. Steel	CP	Col	237A
78th Ftr Wg	George H. Steel	CP	Col	237A
78th Ftr Gp	Brian O'Neill	SP	Col	1926A
78th M&S Gp	Alfred J. Yates	N/R	Lt Col	AO 300366
78th AB Gp	Robert E. Williams	N/R	Lt Col	AO 288999
78th Med Gp	Branco P. Lelich	N/R	Lt Col	19191A
35th Comm Sq (Comd)	Thomas [illegible] Larsen	N/R	Capt	AO 2046651
573rd AF Band	Elmer R. Bruna	N/R	CWO	AW2126091
2346th AFRTC	David B. Lancaster, Jr.	CP	Col	876A
2351st WAF Sq	Beatrice Tarnoff (Actg)	N/R	Capt	AL 80492
11th Calib Unit	Jess W. Tarbell	P	Capt	AO 409060
28th Air Div Def	William A. Matheny	CP	Col	428A
542nd AC&W GP	Troy Keith	SP	Col	[illegible]523A
667th AC&W Sq	Victor A. Lagerson	P	Capt	AO 442285
43rd Comm Sq (Comd)	James A. Warner	P	Capt	12741A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourth Air Force, Cont'd.

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668th AC&W Sq	Arden [illegible]. Cowgill	SP	Maj	5416A
McCHORD AF BASE, Washington				
62nd TC Wg	Fred C. Nelson	CP	Col	142A
Executive Officer				
62nd TC Gp	Adriel N. Williams	SP	Col	1970A
62nd M&S Gp	Lester [illegible]. Nicol	SP	Lt Col	AO 377225
62nd Med Gp	Harvey [illegible]. Porter	FS	Col	AO 16776
62nd AB Gp	Peral Roundy	N/R	Lt Col	AO 166128
325th Ftr Wg (All Wea)	T. Allan Bennett	CP	Col	1513A
Executive Officer				
325th Ftr Gp (All Wea)	Kermit [illegible]. Tyler	SP	Lt Col	3216A
325th M&S Gp	William L. McDowell	SP	Col	1691A
325th AB Gp	George [illegible]. Prentice	SP	Col	1477A
325th Med Gp	Arthur G. Nugent	FS	Capt	19308A
MOSES LAKE AF BASE, Washington				
81st Ftr Wg	Thomas [illegible]. Blackburn	CP	Col	156A
Executive Officer				
81st Ftr Gp	Gladwyn [illegible]. Pinkston	SP	Col	1828A
81st AB Gp	Thomas L. [illegible]iper	SP	Lt Col	4029A
81st M&S Gp	Arthur F. Reinhart	SP	Lt Col	2186A
81st Med Gp	Cecil P. Jones	N/R	Capt	O 1786644
2350th WAF Sq	Sarah Goldin	N/R	1st Lt	AL 80245
637th AC&W Sq	Edwin L. Murill	N/R	Maj	AO 244605
PORTLAND, Oregon				
2343rd AFRTC	Jackson [illegible]. Lewis	SP	Lt Col	2116A
CAMP STONEMAN, Calif.				
2349th AFORD	Cecil C. Williams	N/R	Lt Col	2383A
MADIGAN GENERAL HOSPITAL, Washington				
2210th Hospital Sq	Joe Robutellini	N/R	Capt	AO 566555

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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(Mil Pers)

WESTERN AIR DEFENSE FORCE
Headquarters Western Air Defense Force, Hamilton AF Base, Calif

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Hugo P. Rush	M Gen	75A	CP	Commanding General
William M. Morgan	B Gen	439A	CP	Vice Commander
William A. Bowie	Lt Col	3376A	SP	Director of Plans & Special Projects
Theodore R. Clinkscales	Lt Col	3627A	SP	Director of Civil Defense
Richard B. Atchison, Jr.	Capt	9879A	P	Chief; Joint Information Center
Stanley G. Sroga	Capt	AO 873097	N/R	Chief, Operations Communications
Thomas M. Carrigan	Maj	9247A	N/R	Executive Officer
Robert S. Isreal Jr.	Col	354A	CP	Deputy for Operations
Thomas M. Carrigan	Maj	9247A	N/R	Air Adjutant General
Theodore R. Clinkscales	Lt Col	3627A	SP	Public Information Officer (Add dy)
Edwin F. Carey, Jr.	Lt Col	4422A	SP	Director of Comat Operations
---				Director of Intelligence
John J. Hayes	Capt	AO 1001148	N/R	Commanding Officer, Hq &Hq Sq WADF

NINTH AIR FORCE
Headquarters Ninth Air Force, Langley Air Force Base Virginia

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Willis H. Hale	M Gen	19A	CP	Commanding General
Harold W. Bowman	Col	486A	CP	Vice Commander
Frederick Lindner	Lt Col	AO 909196	N/R	Chief Manpower Evaluation Board
Wilford L. Baxter	Maj	AO 181054	N/R	Assistant to the Vice Commander
Erlath W. Zuehl	Lt Col	AO 258954	N/R	Air Adjutant General
David D. Porter	Lt Col	713A	N/R	Air Judge Advocate
Leonard A. West	Lt Col	AO 194969	N/R	Air Surgeon

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Ninth Air Force, Langley AFB, Va., Cont'd

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Henry H. Waller, Jr.	Col	1404A	N/R	Inspector General
Loren Cornell	Lt Col	2193A	CP	Air Inspector
Thaddeus D. Harris	Maj	AO 565579	N/R	Air Provost Marshal
Harry P. Kelliher	Maj	AO 901550	N/R	Public Information Officer
Harold J. Smith	Lt Col	AO 203428	N/R	Comptroller
Willard C. Blackwell	Capt	AO 560643	N/R	Assistant Comptroller (Actg)
Earl L. Hammack	Maj	AO 923282	N/R	Director of Programs & Costs
Edwin [illegible] Minerd	Capt	AO 350333	SP	Director of Statistical Services (Actg)
Allan R. Myers	WOJG	AW 2120475	N/R	Director of Budget (Actg)
Jess E. Spicher	1st Lt	AO 2092192	P	Director of Audits
Charles J. Wrennick	1st Lt	AO 2029112	N/R	Director of Finance (Actg)
James W. Twitty	Col	2917A	N/R	Deputy for Personnel
Charles E. Clark	Lt Col	5275A	N/R	Assistant Deputy for Personnel
Floyd S. Smith	Lt Col	AO 338559	N/R	Air Chaplain
Virginia D. Harmon	Capt	AL 410531	N/R	WAF Staff Director
Samuel L. Crosthwait	Lt Col	AO 229373	N/R	Director of Personnel Planning & Magmt.
Milton B. McClure	Maj	AO 3721000	N/R	Director of Military Personnel (Actg)
Robert E. Moist	Maj	5678A	N/R	Director of Military Personnel Procurement
Joseph H. Ullmer	1st Lt	AO 576555	N/R	Director of Personnel Services
Hugh H. Bledsoe	Lt Col	2870A	N/R	Director of Air Force ROTC
Charles A. Harrington	Col	321A	CP	Deputy for Operations
David E. Daniel	Lt Col	4308A	P	Assistant Deputy for Operations
Milton F. Glessner	Lt Col	3375A	CP	Director of Operations & Training
Carroll H. Wright	Maj	7555A	SP	Director of Plans Organization & Rqmts
Kenneth W. Klise	Lt Col	AO 481650	N/R	Director of Communications & Electronics
Edward F. McClenanhan	Lt Col	2809A	N/R	Director of Intelligence
Robert Morris	Col	1125A	N/R	Deputy for Materiel
Carl R. Tankersley	Maj	7256A	N/R	Assistant Deputy for Materiel (Actg)
David B. Hamilton	Maj	AO 280088	N/R	Director of Meteriel Services
Carl R. Tankersley	Maj	7256A	N/R	Director of Materiel Planning
William W. Weldon	Maj	3664A	SP	Director of Maint Supply & Services
Frederick J. Baker	Maj	19991A	N/R	Director of Installations
Walter H. Williamson	Lt Col	4395A	SP	Commanding Officer, Hq & Hq Sq, Ninth AF

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Ninth Air Force

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LANGLEY AIR FORCE BASE, VA.	Willis F. Chapman	CP	Col	1121A
4th Ftr Interception Wg	Willis F. Chapman	CP	Col	1121A
4th Ftr Gp	Albert L. Evans, Jr	CP	Col	1675A
334th Ftr Intcp Sq	John A Carey	P	Lt Col	8091A
335th Ftr Intcp Sq	Harvey L. Case, Jr.	P	Lt Col	5010A
336th Ftr Intcp Sq	Bruce H . Hinton	SP	Maj	4523A
2nd Liaison Flt	Eugene G. Budnik	P	Capt	14344A
7th Rad Cal Unit	Paul J. Fallow	P	Capt	AO 791295
12th Rad Cal Unit	George W. Criss, Jr	P	Maj	9814A
162nd Tac Trc Sq	Earl [illegible]. Cummungs	SP	Maj	9299A
1st Shoran Beacon Unit	Chester L. Brown	P	1st Lt	AO 669447
84th Bomb Sq	George B. Thabault	P	Maj	6457A
85th Bomb Sq	Benjamin J. Willis	P	Lt Col	3815A
4th M&S Gp	Bela A. Harcos	P	Col	3220A
4th AB Gp	Everett G. Finnell	N/R	Col	AO 264483
4th Med Gp	Leonard A. West	N/R	Lt Col	AO 194969
363rd Tac Recon Gp	Willis F. Chapman	SP	Col	1121A
363rd Recon Tech Sq	Herbert G. Stees	N/R	Capt	AO 514189
564th AF Band	Elmer H. Reade	N/R	CWO	AW 902039
4412th WAF Sq	Alberta M. Courchene	N/R	Capt	AL 80080
29th Comm Sq (Comd)	Frederick G. Reinhard	N/R	Capt	AO 559328
GODMAN AIR FORCE BASE, KY				
2236th AFRTC	Harrison R. Christy	SP	Lt Col	4178A
READING MUN AIRPORT, PA.				
2237th AFRTC	Frederick C. Roberts, Jr	SP	Lt Col	7423A
GREATER PITTSBURGH AIRPORT, PA.				
2239th AFRTC	William S. Pocock	CP	Col	5316A
CLEVELAND MUN AIRPORT, OHIO				
2240th AFRTC	Charles A. Bassett	CP	Col	285A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Ninth AF, Cont'd

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ARMY MEDICAL CENTER, WASH, DC				
2201st Hosp Sq	Ira D. Cope	N/R	Maj	AO 235416
VALLEY FORGE GEN HOSPITAL PA				
2203rd Hosp Sq	Walter F. Gfeller	N/R	Maj	AO 406969

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

TENTH AIR FORCE
Headquarters Tenth Air Force, Selfridge Air Force Base, Michigan

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Harry A. Johnson	M/Gen	157A	CP	Commanding General
Cecil . Henry	Col	711A	CP	Vice Commander
Edwin A. Doss	Col	1898A	SP	Assistant for Reserve Force
Richard M. Lightman	Col	O 5267	N/R	Assistant to the Vice Commander
Harold O. Allison	Col	847A	N/R	Air Adjutant General
Harold E. Schneider	Col	19028A	AO (Med)	Air Surgeon
Harlan T. McCormick	Col	204A	CP	Inspector General
William M. Houston	Lt Col	7940	P	Air Inspector
				Director of Flying Safety
Michael N. Mikulak	Lt Col	3105A	N/R	Air Provost Marshal
Lawrence F. Krebs	Maj	7210A	SP	Public Information Officer
Richard Gimbel	Col	706A	N/R	Comptroller
John M. Cremin	Maj	AO 370254	N/R	Assistant Comptroller
Benjamin C. Bowman	Maj	AO 449564	N/R	Director of Programs & Cost
Allen J. V. Scholz	1st Lt	AO 714500	N/R	Director of Statistical Services
Milton J. Scott	1st Lt	AO 2076775	N/R	Director of Budget
Herman Strasheim	Maj	AO 379485	N/R	Director of Audits
John L. Frederick	Capt	AO 47721	N/R	Director of Finance
Walter Urbach	Col	919A	N/R	Deputy for Personnel
Bennie R. Leach	Lt Col	AO 324488	N/R	Assistant Deputy for Personnel
Clement A. Siwinski	Lt Col	18762A	N/R	Air Chaplain
William L. Doolan	Col	AO 185578	N/R	Air Judge Advocate
Gerald M. Spurlock	Lt Col	3397A	N/R	Director of Military Personnel
Robert L. Brown	Capt	9041A	N/R	Director of Personnel Services
Hariet M. Fivenson	Capt	A1 80099	N/R	WAF Staff Director
Robert D. Montagne	Lt Col	AO 417836	P	Director of Military Personnel Procuremen
Roger A. Synnes	Lt Col	4196A	N/R	Director of Personnel Planning & Mgmt
Vember D. Taylor	Capt	AO 735627	N/R	Director of Publications
Victor R. Russelavage	CWO	AW 2108106	N/R	Director of Administrations
Robert Ferris	Civilian			Director of Historical Services

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, N.Y. RCS-AF-SC-P4M
Headquarters Tenth Air Force, Selfridge AF Base, Mich. (Mil Pers)

Milton M. Johnson	Lt Col	4472A	P	Director of Air Force ROTC
Cecil E. Henry	Col	711A	CP	Deputy for Operations
Michael J. Gordon	Lt Col	5419A	SP	Assistant Deputy for Operations
Joseph L. Laughlin	Lt Col	4484A	SP	Director of Operations & Training
Peter D. Green	Lt Col	AO 428215	N/R	Director of Communications & Electronics
John J. Hoffman	Lt Col	AO 350908	N/R	Director of Plans Orgn & Reqmts
Harry S. Dennis, Jr.	Maj	9321A	P	Director of Intelligence
John [illegible] Egan	Col	882A	CP	Deputy for Materiel
Nathaniel S. Cobb	Lt Col	AO 484466	N/R	Assistant Deputy for Materiel
Nathaniel S. Cobb	Lt Col	AO 484466	N/R	Director of Materiel Planning (Add Dy)
Gilbert F. Noakes	Lt Col	5291A	SP	Director of Maintenance Supply & Services
Paul M. Ellman	Col	762A	N/R	Director of Installations
James L. Webster	Lt Col	2997A	N/R	Commanding Officer, Hq & Hq Sq, Tenth AF

UNITS & STATIONS TENTH AIR FORCE

	NAME	AERO RTG	CO'S GRADE	SN
O'HARE INTERNATIONAL AIRPORT, ILL 2471st AFRTC	Victor H. Strahm	CP	Col	130A
FAIRFAX FLD, KANSAS 2472nd AFRTC	Richard A. Moorehouse	SP	Col	799A
MARSHALL AIR FORCE BASE, KANSAS	Everett K. Jerkins Jr.	P	Maj	3045A
4406th AB Sq	Everett K. Jerkins Jr.	P	Maj	3045A
OFFUTT AIR FORCE BASE, NEBRASKA 2473rd AFRTC	Allen H. Wood	P	Lt Col	3850A
SCOTT AIR FORCE BASE, ILLINOIS 2469th AFRTC	James W. Bennett	SP	Lt Col	4028A
ATTERBURY AIR FORCE BASE, IND. 2466th AFRTC	James A. Ronin	CP	Col	508A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Tenth Air Force, Cont'd

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WORLD CHAMBERLAIN FLED, MINN				
2465th AFRTC	Don L. Wilhelm, Jr.	SP	Col	1538A
SHERMAN AIR FORCE BASE, KANSAS				
4405th AB Sq	James [illegible]. [illegible]urrow Jr	P	Capt	AO 639490
SELFRIDGE AIR FORCE BASE, MICH				
56th Ftr Wg	James R. Gunn	SP	Col	1216A
Executive Officer	Burton E. MCKenzie	SP	Lt Col	2022A
56th Ftr Gp	Francis S. Gabreski	P	Lt Col	4761A
61st Ftr Int Sq	Albert S. Kelly	SP	Maj	5082A
62nd Ftr Int Sq	Charles E. Parson	SP	Lt Col	4490A
63rd Ftr Int Sq	William B. Howkins Jr.	P	Maj	8110A
Executive Officer				
541st AC&W Gp				
Group Operations Off	William J. Jordan	P	Capt	AO 793509
Radar Off	Raymond J. Fowler	N/R	Capt	AO 439837
Sig Sup Off	Sherman R. Cummings	N/R	1st Lt	AO 1647514
660th AC&W Sq				
Electronic Off				
Operations Off	George G. Palinkas	N/R	Capt	AO 575832
661st AC&W Sq				
Electronic Off	James E. Naren	P	1st Lt	AO 2100674
Operations Off	Albert F. Smith, Jr.	P	Capt	AO 737879
662nd AC&W Sq				
Electronic Off				
Operations Off				
664th AC&W Sq				
Electronic Off				
Operations Off				

Roster of Key Air Force, Pers, ConAC, Mitchel AFB, NY
Units & Stations Tenth Air Force, Cont'd

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56th AB Gp	William W. Imrenhutt	SP	Lt Col	1722A
56th M&S Gp	Roger W. Taylor	SP	Lt Col	3525A
56th Med Gp	Russell S. Leone	AO (Med)	Col	018293
2242nd AFRTC	Howard W. Gray	SP	Col	1792A
541st AC&W Gp	Harry A. French	P	Col	1981A
30th Air Division	James A. Burwell	CP	Col	[illegible]
Executive Off.	Robert M. Myers	SP	Maj	5311A
BENJAMIN HARRISON AIR FORCE BASE, IND	Roger E. Lee	N/R	Lt Col	AO 289696
2463rd Standby Base Sq	Roger E. Lee	N/R	Lt Col	AO 289696
36th Comm Sq (Commd	Frank A. Papcun	N/R	Capt	AO 1635191
691st AF Band	Thomas L. Bond	P	1st Lt	AO 807987
2475th WAF Sq	Doris D. Diamant	N/R	Capt	AL 80109
PERCY JONES GEN HOSPITAL, MICH				
2204th Hosp Sq	Edward F. Honig	N/R	1st Lt	1545194
OSCODA AIR FORCE BASE, MICH				
2476th BS Sq	George W. Orr	P	Maj	9480A
FITZSIMONS GEN HOSP, COLO				
2208th Hosp Sq	Alvin Lloyd		Maj	AO 456003

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

RCS-AF-SC-P4M
(Mil Pers)

TWELFTH AIR FORCE
Headquarters Twelfth Air Force, Brooks Air Force Base, Texas

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Alden R. Crawford	M Gen	64A	CP	Commanding General
Ezekiel W. Napier	Col	568A	CP	Vice Commander
				Assistant for Reserve Forces
Richard M. Bristol	Col	902A	P	Assistant to the Vice Commander
Guy H. Gale	Col	683A	CP	Chief Manpower Eval Board
John C. Hadley	Lt Col	7462A	N/R	Air Adjutant General
Neely G. Mashburn	Col	8836A	FS	Air Surgeon
Fred D. Stevers	Col	1757A	CP	Inspector General
William C. Adams	Lt Col	3723A	SP	Air Inspector
John R. Gee	Lt Col	2223A	N/R	Air Provost Marshal
Gregory T. Carpenter	Maj	AO 429358	P	Public Information Officer
Edward O. Gwynn	Lt Col	2168A	N/R	Comptroller
George L. Colley	Maj	AO 649026	N/R	Assistant Comptroller
Fred J. Whittle	Maj	5840A	N/R	Director of Programs & Costs (Add dy)
John P. Kelly	Capt	AO 649366	N/R	Director of Statistical Services
Max T. Levendecker	Maj	5515A	N/R	Director of Budget
Edward O. Gwynn	Lt Col	2168A	N/R	Director of Audits (Add dy)
Edward H. Hoffman	Maj	AO 1280003	N/R	Director of Finance
Robert T. Engle	Lt Col	7611A	N/R	Deputy for Personnel
John L. Harris	Maj	2978A	N/R	Assistant Deputy for Personnel
Joseph T. O'Brien	Lt Col	18705A	N/R	Air Chaplain
Thomas N. Tappy	Col	AO 205096	N/R	Air Judge Advocate
Alpha A. Adams	Maj	AL 80021	N/R	WAF Staff Director
John L. Hood	Maj	AO 906899	N/R	Director of Personnel Planning & Magmt
				Director of Military Personnel
Michael N. Allisandro	Maj	AO 559995	N/R	Director of Military Personnel Proc
Alpha A. Adams	Maj	AL 80021	N/R	Director of Personnel Services
John W. Blalock	Maj	6043A	P	Director of Air Force ROTC
G.R.Woodward Jr.	Capt	AO 579719	N/R	Director of Civilian Personnel

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Twelfth Air Force, Brooks AFB, Texas Cont'd

RCS-AF-SC-P4M
(Mil Pers)

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Charles B. Harvin	Col	1158A	CP	Deputy for Operations
[illegible]	Lt Col	[illegible]	SP	Assistant Deputy for Operations
George F. Keene, Jr.	Lt Col	2305A	SP	Director of Operations & Training
Charles R. Meyers, Jr.	Lt Col	9112A	SP	Director of Plans Organizations & Rqmts
Frederick W. Shipe	Lt Col	5401A	N/R	Director of Communications & Electronics
George M. Sander	Maj	2885A	N/R	Director of Intelligence
Charles W. Sullivan	Col	162A	CP	Deputy for Materiel
Charles W. Haas	Col	896A	CP	Assistant Deputy for Materiel
Charles W. Haas	Col	896A	CP	Director of Materiel Planning (Add dy)
Charles L. Nelson	Maj	11455A	N/R	Director of Maintenance Supply & Services
Jack B. Marshall	Maj	AO 275815	N/R	Director of Installations
John E. Pryer	Maj	AO 801381	P	Commanding Officer, Hq & Hq Sq, Twelfth AF

UNITS & STATIONS TWELFTH AIR FORCE

BIGGS AIR FORCE BASE, TEXAS	NAME	AERO RTG	CO'S GRADE	SN
2602nd Tow Target Sq	Roy B. Caviness	SP	Lt Col	4823A
1st Liaison Flt	[illegible]	P	Capt	[illegible]
CAMP LE ROY JOHNSON, LA				
751st AF Band				
HENSLEY FLD, TEXAS				
2596th AFRTC	[illegible]	[illegible]	Lt Col	[illegible]
FT SAM HOUSTON, TEXAS				
2206th Hosp Sq	Charles W. Bucy	N/R	Capt	AO 559647
EL PASO, TEXAS				
2207th Hosp Sq	Tracy B. Watson	N/R	Capt	AO 564575

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Twelfth Air Force, Cont's

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	NAME	AERO RTG	CO'S GRADE	SN
TINKER AIR FORCE BASE, OKLA				
2592nd AFRTC	F. H. LeFebre	P	Lt Col	9088A
HOT SPRINGS, ARKANSAS				
2205th Hosp Sq	L. I. Stephens	N/R	1st Lt	AO 202328
KIRTLAND AIR FORCE BASE, NM				
690th AC&W Sq	Charles F. Striplin, Jr.	N/R	Lt Col	2806A
BROOKS AIR FORCE BASE, TEXAS	Luther B. Matthews	SP	Lt Col	2802A
2595th AB Gp	Luther B. Matthews	SP	Lt Col	2802A
579th AF Band	Clyde C. Owens	N/R	CWO	AW 902066
40th Comm Sq (Comd)	William A. Werber	P	Capt	AO 863933
2597th Air Police Sq	Albert Feldman	N/R	Maj	AO 1994904
2213th WAF Sq	Elmera L. Clarke	N/R	Capt	AL 80511

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY

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(Mil Pers)

FOURTEENTH AIR FORCE
Headquarters Fourteenth Air Force, Robins Air Force Base, Georgia

NAME	GRADE	SN	AERO RTG	STAFF POSITION
Ralph F. Stearley	M Gen	59A	CP	Commanding General
Cortlandt S. Johnson	Col	161A	CP	Vice Commander
Daniel P. McLean	Maj	8484A	P	Assistant for Reserve Forces
George D. Hastings	Lt Col	2161A	N/R	Assistant to Vice Commander
Horace P. Donnewitz	Col	AO 251930	N/R	Air Adjutant General
Thomas J. Barnhart	Lt Col	AO 247694	N/R	Assistant Air Adjutant General
John E. Carmac	Lt Col	5928A	SP	Inspector General
Percie J. Larrick	Maj	8261A	SP	Assistant to the Inspector General
Jeffory O. Wellborn	Maj	7795A	P	Air Inspector
John P. Mulligan	Lt Col	2202A	N/R	Air Provost Marshal
Clifford P. Michael	Col	020383	N/R	Air Surgeon
Robert D. Lawrence	Maj	AO 353560	N/R	Public Information Officer
				Assistant Public Information Officer
Kennard W. Gephart	Col	AO 301343	N/R	Comptroller
Oliver P. Shaffer	Maj	AO 259809	N/R	Assistant Comptroller
Frank O. Hay	Maj	6472A	P	Director Programs & Cost
[illegible]	1st Lt			Director of Statistical Services
Benjamin L. Gregory	Capt	AO 1296850	N/R	Director of Budget
Frank O. Hay	Maj	6472A	P	Director of Audits (Actg)
[illegible]	[illegible]	[illegible]	N/R	Director of Finance
Robert A. Rollison	Col	747A	N/R	Deputy for Personnel
				Assistant Deputy for Personnel
Eugene J. Graebner	Lt Col	AO 345930	N/R	Air Chaplain
Claire D. Wallace	Lt Col	AO 271331	N/R	Air Judge Advocate
				WAF Staff Director
Samuel A. McDowell Jr	Capt	AO 563713	N/R	Director of Personnel Planning & Mgmt
Thomas H. Holbrook	Lt Col	194A	SP	Director of Military Personnel
Robert H. Richey	Maj	9068A	P	Director of Military Personnel Proc
				Director of Civilian Personnel
Earl W. Lewis	Lt Col	2288A	N/R	Director of Personnel Service

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Headquarters Fourteenth Air Force, Robins AFB, Ga., Cont'd

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NAME	RANK	SN	AERO RTG	STAFF POSITION
William E. Byerts	Lt Col	4324A	P	Director of Air ROTC
George R. Bickell	Col	4160A	P	Deputy for Operations
Bishop P. Parrish	Lt Col	2183A	SP	Assistant Deputy for Operations
Lawrence J. Strickley	Lt Col	34252A	P	Director of Operations & Training
Charles W. Haskor	Maj	12169A	P	Director of Plans Organizations & Rqmts
Ernest C. Bonham	Maj	AO 899026	N/R	Director of Communications & Electronics
Walter B. Magness	Lt Col	2205A	N/R	Director of Intelligence
Robert Whelchel	Lt Col	2316A	N/R	Deputy for Materiel
Nathaniel R. Voss	Maj	5898A	N/R	Assistant Deputy for Materiel
Claude K. Rupert	Maj	2890A	N/R	Director of Materiel Planning
Floyd M. Johnson	Lt Col	AO 370079	N/R	Director of Maintenance Supply & Services
Stephan F. Noonan	Maj	6380A	N/R	Director of Installations
David D. Nesler	1st Lt	AO 878196	N/R	Commanding Officer Hq & Hq Sq, 14th AF

UNITS & STATIONS OF FOURTEENTH AIR FORCE

	NAME	CO'S GRADE	AERO RTG	SN
769th AF Band	Edwin H. Sanford	CWO	N/R	AW 902033
37th Communications Sq, Command	Wiley S. Adams, Jr.	Capt	N/R	AO 425453
SHAW AIR FORCE BASE, SUMTER, SC	P. K. Sanford	Col	CP	474A
20th Fighter Bomber Wing	P. K. Sanford	Col	CP	474A
Executive Officer	Walter I. Wheeler	Col	CP	732A
20th Fighter-Bomber Group	John A. Dunning	Col	SP	1855A
55th Ftr Sq	William L. Mitchel Jr.	Lt Col	P	4063A
77th Ftr Sq	Dean Davenport	Lt Col	CP	5172A
79th Ftr Sq	Delynn E. Anderson	Maj	P	8034A
20th Maintenance & Supply Gp	Cecil B. Guile	Col	CP	AO 108633
20th Air Base Group	William P. Litton	Col	SP	2024A
20th Medical Group	David M. Clotfelter	Lt Col	FS	19095A

Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourteenth AF, Cont'd

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	NAME	CO'S GRADE	AERO RTG	SN
30th Motor Transport Sq	James C. Stanley	Capt	N/R	AO 367975
606th Acft Control & Warning Sq	Horace B. McWhirter	Maj	SP	4898A
161st TAC Recon Sq (Photo Jet)	Willie O. Jackson Jr.	Lt Col	P	5078A
TURNER AIR FORCE BASE ALBANY, GEORGIA	Eugene H. Snavely	Col	SP	1750A
31st Fighter-Bomber Wing	Eugene H. Snavely	Col	SP	1750A
Executive Officer	Bascom H. Brooks	Lt Col	SP	3340A
31st Fighter-Bomber Group	Earl H. Dunham	Col	SP	3451A
307th Ftr Sq	Elmer G. Darasa	Maj	SP	2977A
308th Ftr Sq	Ray M. Hilliard	Maj	P	AO 430812
309th Ftr Sq	William R. Young	Maj	P	8359A
31st Maint & Supply Group	Charles A. Gayle	Lt Col	SP	2047A
31st Air Base Group	Albert V. Kanig	Lt Col	N/R	AO 469191
31st Medical Group	Paul V. Davis	Maj	FS	057380
607th Acft Control & Warning Squadron	Edwin D. Connell	Capt	P	AO 430921
SEWART AIR FORCE BASE, SMYRNA, TENNESSEE	Hoyt L. Prindle	Col	CP	334A
314th Troop Carrier Wing	Hoyt D. Prindle	Col	CP	334A
Executive Officer	Austin L. Berry	Lt Col	P	4464A
314th Troop Carrier Group	Richard W. Henderson	Col	CP	995A
50th Troop Carr Sq	Elmer C. B laha	Lt Col	P	3051A
61st Troop Carr Sq	William P. Delacey	Lt Col	SP	[illegible]321A
62nd Troop Carr Sq	Harold Sommers	Maj	P	12999A
35th Troop Carr Sq	William D. Keller	Lt Col	P	3544A
37th Troop Carr Sq	Harry N. Towers	Lt Col	SP	AO 388945
314th Maint & Supply Group	Bruce R. Ferrell	Lt Col	N/R	AO 447767
314th Air Base Group	Charlie M. Ross	Col	SP	AO 388915
314th Medical Group	Clark R. Proctor	Lt Col	FS	AO 295886
316th Troop Carrier Group	Edgar W. Hampton	Col	SP	1805A
2601st Assault Squadron	Theo A. Diltz	Lt Col	SP	7832A

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Roster of Key Air Force Pers, ConAC, Mitchel AFB, NY
Units & Stations Fourteenth AF, Cont'd

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POPE AIR FORCE BASE, FORT BRAGG, N.C.	NAME	COLS GRADE	AERO RTG	SN
2600th Air Base Sq	Richard G. Herbine	Lt Col	SP	2077A
8th Air Division (Defense)	Willard R. Wolfin barger	B Gen	CP	317A
9th Air Division (Defense)	Gilbert L. Meyers	Col	SP	1958A
934th Sig Bn Separate	Milton H. Gray (Actg)	Maj	N/R	AO 473567
502d Tactical Control Gp	William [illegible] McBride	Lt Col	P	[illegible]
4410th Bomb Disposal Unit	Frank L. Dunham	1st Lt	N/R	AO 1579592
2d Radio Relay Sq	John H. [illegible]	1st Lt	N/R	
4th Liaison Flight	Lonnie W. Hicks	Capt	P	11573A
5th Helicopter Flt	Walter J. Hodgson	1st Lt	P	AO 2069019
5th Radar Cal Unit	Pascal J. Corritorie	Capt	P	13207A
LAWSON AIR FORCE BASE, GEORGIA				
4408th Air Base Sq	Richard O. Johnson	Maj	P	AO 433689
3d Liaison Flight	Donald F. Dixon	1st Lt	P	AO 834973
MEMPHIS MUNICIPAL AIRPORT, TENN				
2584th AFRTC	Preston C. Newton	Lt Col	SP	4220A
MIAMI INTERNATIONAL AIRPORT, FLA				
2585th AFRTC	John V. Hart	Col	CP	179A
BIRMINGHAM MUNICIPAL AIRPORT, ALA.				
2587th AFRTC	Leslie R. Bratton	Lt Col	SP	3620A
MARIETTA AIR FORCE BASE, GEORGIA				
2589th AFRTC	John C. [illegible] . . .	Lt Col	P	[illegible]
OLIVER GENERAL HOSPITAL, AUGUSTA, GA.				
2202d Hospital Squadron	William L. Mitchell, Jr.	Capt	N/R	AO 583416

419.271-1
30 Nov. 1949

HISTORICAL DIVISION
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Roster of Combat Officers
30 Nov. 49

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Roster of Code Officers

30 Nov. 49

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ROSTER OF OFFICERS

HEADQUARTERS CONTINENTAL AIR COMMAND
HEADQUARTERS EASTERN AIR DEFENSE FORCE

Mitchel Air Force Base, New York

As of November 30, 1949

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Director of Personnel Planning &
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NAME	RANK	SECTION	PHONE
Abbott, Ward T.	Col	Director of Installations	5112
Abdalah, Ernest G.	Lt Col	Air Judge Advocate	6147
Abrams, Laurel G.	Capt	Director of Statistical Services	TDY
Acheson, George R.	B Gen	Eastern Air Defense Force	6101
Adams, Thomas E. Jr.	Major	Chaplain	4138
Alford, Wilburn E.	1st Lt	Director of Operations & Training	5256
Ammon, Robert H.	Capt	Director of Materiel Planning	5124
Anderson, Alfred I.	Capt	Director of Maint Supply & Services	5228
Anderson, John B.	Capt	Hq Sq ConAC	3116
Andrews, John A. C.	Major	Director of Air ROTC & Air Scouts	3230
Armbruster, Walter N.	Major	Air Adjutant General	4147
Armes, Ira W., Jr.	1st Lt	Director of Personnel Services	2202
Ashkins, Milton A.	Col	Eastern Air Defense Force	5244
Aszman, Burton H.	Major	Eastern Air Defense Force	4247
Avery, Clark	Lt Col	Perm Duty Station, Washington D.C.	
Barron, John B.	Capt	Public Information Office	TDY
Bates, Eldridge C.	Major	Eastern Air Defense Force	5244
Baydala, Edward T.	Major	Director of Budget	7112
Beahan, Willard J.	Major	Director of Military Personnel	3250
Beam, Howard E.	Major	Director of Communications & Electronics	3126
Beamer, Harry R.	Major	Eastern Air Defense Force	6202
Bell, Lawrence D.	Lt Col	Air Judge Advocate	1154
Bernhardt, Henry A.	Capt	Director of Budget	7243
Best, Jack R.	Major	Director of Intelligence	4248
Bills, Arthur P.	Major	Director of Maint Supply & Services	5151
Black, Peter P.	Major	Director of Installations	2152
Black, Virgil W.	1st Lt	Director of Operations & Training	5142
Blaum, Joseph	Major	Director of Operations & Training	7247
Boing, William F. Jr.	Capt	Hq Sq ConAC	4120
Bond, Charles R. Jr.	Col	Director of Plans Organizations & Req	3247
Boughner, Kenneth T.	Lt Col	Director of Plans Organizations & Req	3247
Bradspies, Katherine F.	Capt	Director of Military Personnel	3206
Brady, Michael J.	Major	Director of Materiel Planning	7127
Branstetter, Lawrence R.	Lt Col	Director of Operations & Training	5142
Brinson, Shelden S.	Lt Col	Director of Operations & Training	1244
Brown, George S.	Col	Deputy for Operations	1239
Brown, John V.	Col	Director of Statistical Services	5132
Buckingham, Howard G.	CWO	Director of Budget	7114
Buckland, Elmer W.	Capt	Provost Marshal	3204
Buel, Joseph G.	Major	Director of Communications & Electronics	7202
Burke, Harold G.	CWO	Director of Plans Organizations & Req	6132
Burke, Samuel C.	Lt Col	Director of Maintenance Supply & Serv	6102
Butler, Earl H.	Major	Director of Budget	7243
Byrnes, John W.	CWO	Director of Intelligence	5101
Callan, John P.	Major	Director of Installations	4132
Cameron, Donald N.	Lt Col	Director of Plans Organizations & Req	2143
Cameron, Harold D.	Capt	Air Inspector	2115
Campbell, Frederick A Jr	Major	Director of Plans Organizations & Req	TDY
Candee, Robert C.	B Gen	Comptroller	3140
Carpenter, Hervey B.	Major	Director of Communications & Electronics	6112
Chaffin, Andrew A.	Lt Col	Air Inspector	3234
Cheyney, Sam W.	Col	Air Inspector	6240
Choate, Richard I.	Major	Director of Installations	6113
Clark, Wallace N.	Capt	Air Judge Advocate	6147
Clendenin, Albert I.	1st Lt	Director of Pers Plan & Management	2158
Cole, Lawrence E.	Col	Director of Plans Organizations & Req	7244
Compton, William B.	Major	Director of Programs & Costs	4250
Cook, Earl B.	Col	Comptroller	7111
Costello, John A.	Capt	Director of Maintenance Supply & Serv	1136
Cote, Narcisse L.	Col	Perm Duty Station, Washington D. C.	
Cox, Ralph L.	Major	Director of Operations & Training	5256
Crisp, Dennis	Major	Director of Operations & Training	5256
Cumiskey, William T.	Major	Director of Plans Organizations & Req	4145
Cunningham, Joseph A.	Col	Eastern Air Defense Force	2104
Cycon, Michael E.	WOJG	Air Inspector	2115
Dabezies, Clement H.	Major	Director of Air ROTC & Air Scouts	6123-1216
Dalton, Richard W.	CWO	Director of Maintenance Supply & Serv	2120
D'Annibale, Vincent J.	Major	Director of Maintenance Supply & Serv	2121

NAME	RANK	SECTION	PHONE
Dart, Roy W.	Lt Col	Director of Plans Organizations & Req	2143
Dash, Lawrence P.	Lt Col	Director of Military Personnel	4227
DeFord, Earl H.	Col	Perm Duty Station, San Antonio, Texas	
Dellinger, Olin E.	Lt Col	Director of Finance	5116
Dempster, Kenneth C.	Lt Col	Director of Operations & Training	6136
Dice, John B. F.	Col	Eastern Air Defense Force	5244
Dietrich, LeRoy S.	Capt	Director of Budget	1181
Dingeldein, Robert	1st Lt	Director of Pers Plan & Management	3209
Donkin, Peter L.	Wg Cmd	Director of Operations & Training	6136
Donneson, Arthur J.	Capt	Surgeon	6225
Dooley, Benedict J.	Capt	Director of Air ROTC & Air Scouts	3230
Douthwaite, William T.	Major	Director of Operations & Training	4248
Draper, Robert W.	1st Lt	Director of Statistical Services	1204
Dustin, Roland L.	Major	Director of Maintenance Supply & Serv	1124
Eckley, Paul W. Jr.	Capt	Air Inspector	1101
Egan, William B.	CWO	Eastern Air Defense Force	4247
Elling, Milfred O.	Major	Director of Military Personnel & Proc	1246
Emery, Guy C.	Lt Col	Director of Communications & Electronics	6108
Evans, Edmund J.	Major	Ground Safety	4111
Evans, Merton S.	Capt	Director of Operations & Training	5256
Fass, Maurice I.	Major	Provost Marshal	7141
Fellows,Richard W.	Col	Director of Personnel Planning & Man	1130
Ferguson, Marion G. Jr	Col	Director of Maintenance Supply & Serv	1186
Ferrill, Harlan B.	Lt Col	Director of Plans Organizations & Req	1149
Finnegan, Terrehce P.	Lt Col	Chaplain	4138
Fischer, John J.	Lt Col	Deputy for Operations	3233
Fleming, John W.	Major	Director of Operations & Training	1249
Floyd, George P.	1st Lt	Director of Military Personnel	5114
Forchtner, Frank	Major	Director of Personnel Services	2128
Foster, Francis F.	Capt	Director of Maintenance Supply & Serv	1206
Frazin, Irwin D.	1st Lt	Director of Statistical Services	6222
Frear, Carl R. Jr.	2nd Lt	Director of Programs & Costs	4250
Friant, Robert S.	1st Lt	Provost Marshal	1297
Friedman, Frank	Capt	Director of Programs & Costs	1140
Frink, Earl E.	Major	Director of Plans Organizations & Req	2231
Furie, William W.	Major	Director of Military Personnel	6246
Futral, Allen A.	Lt Col	Director of Installations	5122
Gee, Howard S.	Major	Eastern Air Defense Force	5244
Gemmel, Bruce H.	Capt	Air Adjutant General	5240
Gerhard, Frederick W Jr	Capt	Air Adjutant General	4147
Gilbert, Willard R.	Major	Air Inspector	3132
Gilkey, Signa A.	Col	Deputy for Materiel	1133
Gillmore, Lawrence J.	Major	Perm Duty Station, Washington D. C.	
Giuli, John F.	1st Lt	Director of Finance	4228
Goodson, Angus C.	Capt	Director of Maintenance Supply & Serv	5255
Gorton, Robert W.	Capt	Eastern Air Defense Force	7118
Gradwell, Burgess	Major	Director of Personnel Services	5125
Gray, Jay O.	Major	Deputy for Personnel	7207
Grey, Philip A.	Capt	Director Personnel Planning & Management	6228
Griffin, Claude K.	Capt	Director of Budget	7102
Gude, Elmer W.	Col	Director of Finance	3151
Habeck, Carl W.	Capt	Director of Operations & Training	6136
Hamilton, Richard L.	Capt	Air Inspector	3132
Hampton, Max D.	Major	Public Information Office	1241-1242
Hargreaves, John W.	B Gen	Surgeon	5234-6225
Harlow, Paul N.	Capt	Director of Intelligence	7231
Harrell, William H.	Major	Air Inspector	2115
Harris, Shelby J.	Major	Director of Air ROTC & Air Scouts	1107
Hartbrodt, Fred V.	Lt Col	Director of Plans Organizations & Req	5221
Haydon, Frank P.	Major	Air Inspector	4241
Heflin, Charles S.	Major	Director of Installations	2152
Helvey, Hazen D.	Capt	Director of Statistical Services	1203
Henderson, William D.	Major	Director of Intelligence	4248
Hill, John M.	Major	Air Inspector	TDY
Hillery, Edward G.	Lt Col	Director of Operations & Training	6136
Himes, Wilfred D.	Capt	Director of Installations	2213

NAME	RANK	SECTION	PHONE
Hinchey, Francis K.	Major	Director of Personnel Services	7134
Hodge, Dexter L.	Lt Col	Director of Air ROTC & Air Scouts	6123-1216
Hof, Robert T.	Capt	Director of Communications & Elect	6112
Hoffman, Agnes M.	Major	Deputy for Materiel	1100
Hoffman, George E.	Capt	Director of Maintenance Supply & Serv	4136
Holloway, Bruce K.	Col	Director of Plans Organizations & Req	2143
Hope, Thomas A.	Capt	Director of Operations & Training	1249
Horowitz, Harry W.	Major	Director of Installations	2152-4243
Horton, William W.	Lt Col	Director of Maintenance Supply & Serv	2113
Howe, Everett B.	Lt Col	Provost Marshal	3204
Hunsucker, George E.	Major	Director of Communications & Electronics	6108
Hunt, Marjorie O.	Major	WAF Staff Director	7109
Huntsman, James M.	Major	Director of Operations & Training	5256
Imig, Paul J.	Major	Director of Plans Organizations & Req	TDY
Ingalls, Roy M.	Capt	Provost Marshal	7131
Irons, Clement I.	1st Lt	Director of Air ROTC & Air Scouts	3214
Irvine, Willard W.	B Gen	Army & Navy Liaison	3121
Irwin, Fred A.	Major	Air Inspector	4135
Jakway, Clyde C.	Col	Director of Maintenance Supply & Serv	5238-6102
James, Fred A.	Major	Director of Maintenance Supply & Serv	3217
Jess, Frank N.	Major	Air Judge Advocate	6147
Joachim, Charles W.	Major	Director of Plans Organizations & Req	2231
Johnston, Ralph C.	Major	Air Inspector	4135
Jones, Auzie J.	WOJG	Director of Military Personnel	5114
Jones, Frank G.	Lt Col	Deputy for Materiel	TDY
Jones, Robert H.	1st Lt	Director of Operations & Training	2201
Joye, Kenneth E.	Capt	Director of Military Personnel	1130
Karr, James R.	Lt Col	Surgeon	1132
Kellams, Clinton M.	Capt	Director of Maintenance Supply & Serv	6102
Kellogg, Robert E.	Capt	Director of Personnel Services	5125
Kellum, Edwin G.	1st Lt	Commanding General	4119
Kemp, James D.	Lt Col	Air Inspector	3234
Kilborn, John C.	Col	Tact Liasion Officer	1113
Kirkpatrick, Harry F.	Major	Director of Installations	7203
Klotzbach, Lewis E.	Capt	Director of Programs & Costs	1219
Knutson, Reginald K.	Major	Director of Installations	7203
Kolpin, Shirely A.	Major	Perm Duty Station, Phoneixville, Penna.	
Korotkin, Louis	Capt	Director of Maintenance Supply & Serv	1136
Kosh, Peter J.	CWO	Director of Military Personnel	7117
Krauss, Arthur J.	CWO	Director of Military Personnel	5134
Kronberg, Edward	1st Lt	Director of Communications & Electronics	4157
Kyle, Reuben Jr.	Col	Assistant for Reserve Forces	1145
Lake, James	Major	Director of Personnel Planning & Man	6228
Lanitola, Pasquale M.	Capt	Director of Plans Organizations & Req	2231
Landon, Charles R.	Col	Deputy for Personnel	1102-03
Larkin, William T.	Capt	Surgeon	5111
Lauder, Edmund	Capt	Air Adjutant General	5240
Lavin, Clement M.	Capt	Director of Budget	7243
Lee, Frank A.	1st Lt	Director of Operations & Training	5256
Lee, Joseph D.	Col	Director of Plans Organizations & Req	1147
Lewie, Adrain E.	Capt	Eastern Air Defense Force	7229
Lewis, Dwight F.	Major	Director of Plans Organizations & Req	4292
Lewis, Kirk R.	Major	Director of Maintenance Supply & Serv	1124
Libbey, Richard B.	Capt	Director of Operations & Training	2201
Linton, John H.	Capt	Deputy for Materiel	TDY
Livingston, Robert P.	Major	Director of Military Personnel	7117
Lucas, Ruth	Capt	Director of Military Personnel	1296
Lugo, Frank M.	Capt	Director of Statistical Services	7240
Lund, Harold G.	Lt Col	Director of Operations & Training	5142
MacNeill, Edward H.	Major	Director of Operations & Training	6136
Mahoney, Ralph T.	CWO	Director of Maintenance Supply & Services	1128
Makowski, Bernard A.	Capt	Director of Operations & Training	5142
Manfrin, Eugene R.	Capt	Director of Intelligence	3154
Marsden, Bernard	Major	Director of Communications & Electronics	6108
Marshall, Leonard S.	Major	Director of Operations & Training	TDY

NAME	RANK	SECTION	PHONE
Matella, Joseph V.	Capt	Director of Audits	6226
Mather, William A.	Major	Administrative Evaluation Board	7136
Mathison, John G.	Sq Ldr	Director of Communications & Elect	6108
McBride, Robert C.	Col	Director of Materiel Planning	5124
McCaslin, Orval H.	Lt Col	Inspector General	4241
McComas, Edward O.	Lt Col	Eastern Air Defense Force	2104
McCurnin, John C.	Col	Director of Military Personnel	4227
McDaniel, Armour G.	Major	Air Inspector	3132
McDuffee, Clyde B.	Major	Director of Communications & Elect	6112
McHale, Robert V.	Major	Director of Operations & Training	7226
McKeever, Daniel L.	Major	Director of Maintenance Supply & Serv	4136
McClean, William E.	Capt	Director of Maintenance Supply & Serv	3217
Meador, John W.	Major	Director of Intelligence	1131
Meraviglia, John M.	1st Lt	Public Information Office	4210
Merrick, Louis M.	Col	Physical Evaluation Board	
Mesaris, Paul T.	CWO	Assistant for Reserve Forces	1145
Miknus, Charles	Capt	Director of Military Personnel	1237
Miller, Joseph E., Jr.	Capt	Director of Operations & Training	3138
Mims, Thurman O.	Capt	Director of Statistical Services	1204
Monroe, Henry S.	Lt Col	Director of Maintenance Supply & Serv	1025
Mooney, Joseph F.	Lt Col	Director of Programs & Costs	1153
Moore, William C.	Major	Eastern Air Defense Force	4247
Morgan, Chester H.	Lt Col	Director of Operations & Training	3139
Morgan, McPherson	Lt Col	Director of Maintenance Supply & Serv	1205
Morrill, Byron L.	Capt	Director of Air ROTC & Air Scouts	3214
Morrison, Harry J.	Major	Director of Military Personnel	5134
Mouckerezi, C. C.	Capt	Director of Communications & Electronics	7209
Moynihan, William L.	Major	Director of Maintenance Supply & Serv	5151
Muehleisen, Dolf E.	Col	Director of Operations & Training	1230
Muhl, James H.	Capt	Director of Operations & Training	7247
Murdock, Richard W.	Major	Director of Statistical Services	5105
Murphy, Milton M.	Col	Perm Duty Station, Phonexville, Penna.	
Murphy, Vance E.	Lt Col	Air Adjutant General	3136
Myers, Charles T.	M Gen	Vice Commander	1234
Myers, James E.	Major	Director of Installations	2213
Nash, John F., Jr.	Capt	Director of Materiel Planning	5124
Newcomer, Luther P.	Capt	Director of Personnel Planning & Man	7206
Nichols, Howard F.	Col	Director of Operations & Training	1230
Niemi, Roy R. R.	Capt	Director of Personnel Planning & Man	TDY
Nigro, Edward H.	Lt Col	Administrative Evaluation Board	7136
Norton, Leslie M.	Major	Director of Intelligence	1131
O'Brien, Genevieve K.	Capt	Public Information Office	1242
O'Brien, James F.	1st Lt	Director of Operations & Training	7247
O'Brien, Neal J.	Col	Air Adjutant General	3136
O'Connor, Joseph J.	Capt	Director of Plans Organizations & Req	6132
O'Keefe, Desmond	Col	Air Judge Advocate	1154
O'Rourke, John B.	Major	Director of Military Personnel	3242
Ostrem, Roy E.	Capt	Hq Sq ConAC	7295
Parker, John L.	Lt Col	Director of Operations & Training	1244
Parkes, Joel R.	Major	Director of Intelligence	5101
Parlavecchia, Patrick J	1st Lt	Director of Personnel Planning & Man	7146
Parsons, Raymond N.	Capt	Director of Statistical Services	6220
Pastor, Ralph	Major	Director of Installations	7203
Pate, Joe	1st Lt	Director of Intelligence	2250
Payne, John D.	Lt Col	Director of Installations	4156
Peck, George S.	Capt	Director of Intelligence	7110
Pedigo, Henry N.	Capt	Director of Maintenance Supply & Serv	7245
Petit, Robert L.	Lt Col	Director of Materiel Planning	7127
Pexton, George M.	Capt	Director of Installations	5122
Phippen, Daniel K.	Major	Air Inspector	4135
Praul, Charles L.	Major	Director of Plans Organizations & Req	5210
Price, James H.	Col	Director of Plans Organizations & Req	7244
Prichard, Lester A.	Col	Air Judge Advocate	6147
Prouty, Leroy F.	Major	Director of Air ROTC & Air Scouts	3230

NAME	RANK	SECTION	PHONE
Quigley, Walter F.	Capt	Director of Maintenance Supply & Serv	3217
Rasmessen, Edward B.	Lt Col	Director of Plans Organizations & Req	6125
Ratcliffe, Lamar C.	Lt Col	Army & Navy Liaison	3121
Reeves, Kenneth G.	Capt	Director of Programs & Costs	4250
Reichenbach, Joseph V.	1st Lt	Director of Budget	7219
Remillard, Robert L.	Capt	Director of Personnel Services	2202
Renny, William P.	Capt	Eastern Air Defense Force	1112
Reynolds, Roy F.	Col	Chaplain	4112
Rhode, John E.	Capt	Director of Intelligence	1131
Rhodes, Vincent J.	Major	Director of Maintenance Supply & Serv	5255
Richardson, Zaccheus	Capt	Hq Sq ConAC	6132
Ridgell, James M. Jr.	Major	Director of Materiel Planning	5124
Rodewald, Donald L.	Major	Director of Plans Organizations & Req	3220
Roper, Frank A.	Lt Col	Director of Military Personnel	1236
Rosenwald, Theodore Jr.	Major	Director of Intelligence	4248
Rosier, Frederick E.	Wg Cmd	Eastern Air Defense Force	5244
Rotz, Dale A.	Major	Director of Communications & Electronics	7209
Ruehlman, William E.	Lt Col	Director of Military Personnel & Proc	1245
Rushforth, Robert G.	Capt	Dierctor of Communications & Electronics	6108
Salter, Richard D.	Major	Director of Maintenance Supply & Serv	1124
Sanford, Raymond P.	Major	Director of Military Personnel & Proc	1246
Sanichas, John C.	Major	Eastern Air Defense Force	TDY
Schaaf, Robert A.	Capt	Vice Commander	3213
Schult, Harold G.	Major	Surgeon	5131
Schultz, Arthur V.	Major	Hq Sq ConAC	4150
Schumacher, Howard G.	1st Lt	Director of Maintenance Supply & Serv	5255
Schumm, Frank W.	Lt Col	Provost Marshal	7131
Sedlak, Henry A.	Capt	Director of Finance	4228
Sekerewitz, Herbert S.	1st Lt	Hq Sq ConAC	5232
Sellers, Coleman	Major	Director of Personnel Services	2202
Selzer, Edgar T.	Col	Air Inspector	2138
Shane, Robert A.	Major	Director of Programs & Costs	1219
Shaub, Harry L.	CWO	Deputy for Personnel	6142
Sheppard, William H.	Capt	Air Inspector	3132
Sherrard, Wright J.	Lt Col	Director of Operations & Training	3138
Sherrill, Estes B.	Capt	Commanding General	TDY
Shipley, Frederick Jr.	Lt Col	Director of Military Personnel & Proc	1245
Simpson, William G.	Capt	Commanding General	4119
Sizemore, Robert	1st Lt	Inspector General	4241
Skalak, Rudolph	Capt	Director of Operations & Training	7247
Smith, Henry J.	WOJG	Air Judge Advocate	6146
Smith, James W.	Capt	Air Adjutant General	4113
Stachura, Walter	Capt	Eastern Air Defense Force	7229
Stalnaker, George W.	Lt Col	Director of Intelligence	TDY
Stephany, Robert C.	Major	Director of Installations	4144
Stevens, Donald E.	WOJG	Hq Sq ConAC	3116
Stewart, Charles N.	Capt	Director of Plans Organizations & Req	4145
Swerely, William R.	Col	Perm Duty Station, San Francisco, Calif.	
Swan, Clinton D.	Capt	Eastern Air Defense Force	7118
Symmes, Roderick O.	Capt	Director of Statistical Services	5150
Talbot, William M.	Col	Eastern Air Defense Force	7118-7143
Tanner, Archiblad E.	Lt Col	Provost Marshal	5230
Tattini, Leno	Major	Director of Maintenance Supply & Serv	5228
Taylor, Tom R.	Lt Col	Director of Programs & Costs	1140
Tedder, Irby V.	Lt Col	Air Inspector	3132
Thatcher, Herbert B.	B Gen	Deputy for Operations	1220
Thomas, Charles E., Jr.	B Gen	Inspector General	4241
Thompson, John W.	Lt Col	Director of Installations	6113
Tichenor, Lawrence W.	Capt	Director of Communications & Electronics	3156
Tucker, Henry T.	Major	Director of Operations & Training	TDY
Turner, Otis C.	WOJG	Air Adjutant General	6141
Tyler, Charles B.	Col	Director of Maintenance Supply & Serv	4253
Urban, Theodore J.	Capt	Hq Sq ConAC	7108

NAME	RANK	SECTION	PHONE
Velebny, Samuel Jr.	Major	Director of Air ROTC & Air Scouts	3153
Vlcek, Donald H.	Capt	Director of Plans Organizations & Req	3220
Von Kaenel, Gottlieb F.	1st Lt	Director of Military Personnel	3206
Waldman, Herbert	Major	Director of Programs & Costs	2251
Walton, Leslie C.	Capt	Director of Maintenance Supply & Serv	4136
Wansley, Theodore	Major	Eastern Air Defense Force	TDY
Warren, William C.	Colonel	Vice Commander	1235
Weart, George S.	Major	Director of Plans Organizations & Req	6125
Webb, Lynn H.	Lt Col	Director of Installations	2152
Webster, Robert M.	M Gen	Eastern Air Defense Force	1111
Weems, Woodrow	Major	Director of Military Personnel	5235
Weil, August E.	Major	Air Inspector	1101
Wells, George L.	Major	Director of Operations & Training	3138
Wert, Jack E.	Lt Col	Director of Statistical Services	5132
Westfall, Robert L.	WOJG	Director of Communications & Electronics	6108
White, Ernest J. Jr.	Lt Col	Director of Intelligence	1126-27
Whitehead, Ennis C.	Lt Gen	Commanding General	1122
Wiedeman, Geoffrey P.	Major	Surgeon	5234
Wilber, Alan W.	Capt	Public Information Office	1243
Williams, Edward B. Jr.	Major	Director of Budget	TDY
Wilson, Raymond E.	Capt	Hq Sq ConAC	5259
Wilson, Thomas N.	Major	Deputy for Operations	TDY
Windsor, Leon J.	Capt	Air Adjutant General	6249
Wine, Chester B.	Major	Director of Personnel Planning & Man	TDY
Wood, Robert A.	Capt	Eastern Air Defense Force	7118-7143
Woodward, Edgar F. Jr.	Major	Director of Intelligence	5101
Wootton, Bernard M.	Col	Director of Communications & Electronics	2255
Wray, Robert A.	Major	Director of Military Personnel	TDY
Wys, Robert A.	Lt Col	Director of Operations & Training	1240
Yeager, Hobart R.	Col	Director of Communications & Electronics	2255
Young, Howard L.	Capt	Army & Navy Liasion	6221
Yudkin, Richard A.	Lt Col	Director of Personnel Planning & Man	6229
Zarski, Alexander F.	1st Lt	Director of Maintenance Supply & Serv	2133

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OF

AIR NATIONAL GUARD UNITS

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ABBREVIATIONS

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ABBREVIATIONS

AC - Aircraft Control
AC&W - Aircraft Control & Warning
ADC - Air Defense Command
AF - Air Force
AFB - Air Force Base
ANG - Air National Guard
Apt - Airport
AS - Air Service
Atchd - Attached
Avn - Aviation
B Sv - Base Services
Bn - Battalion
Bomb - Bombardment
Calbr - Calibration
co - Company
comd - Command
comm - Communication
ConAC - Continental Air Command
Cons - Construction
Det - Detachment
Div - Division
Engr - Engineering or Engineer
Fld - Field
Flt - Flight
Ftr - Fighter

ABBREVIATIONS (contd)

F	Forward
Gp	Group
Hq	Headquarters
JetP	Jet-Propelled
L	Light
L Bomb	Light Bombardment
Loc	Location
LS	Large Scale
Maint	Maintenance
Mat	Materiel
Med	Medical
Muni	Municipal
S	Special
SE	Single Engine
Sig	Signal
Sq	Squadron
Sta	Station
Sv	Service(s)
TAC	Tactical Air Command
Tech	Technical
Trp	Troop
Util	Utility
VH	Very Heavy
VHB	Very Heavy Bombardment
VLR	Very Long Range
Wea	Weather
Wg	Wing

SECTION I

AIR NATIONAL GUARD UNITS BY AIR FORCE AND STATE

FIRST AIR FORCE
Fort Slocum, New York

UNIT	WING	LOCATION
		CONNECTICUT
103 Ftr Gp Hq	67	Brainard Fld, Hartford
103 AC & W Sq (F)	67	Brainard Fld, Hartford
118 Ftr Sq (SE)	67	Bradley Fld, Windsor Locks
118 Ftr Sq (SE) Util Flt	67	Bradley Fld, Windsor Locks
118 Wea Sta (Type A)	67	Bradley Fld, Windsor Locks
203 AS Gp (Ftr) Det A	67	Bradley Fld, Windsor Locks
203 AS Gp (Ftr) Hq Det	67	Bradley Fld, Windsor Locks
		MAINE
101 Ftr Gp Hq	67	Camp Keyes, Augusta
132 Ftr Sq (JP)	67	Dow AFB, Bangor
132 Ftr Sq (SE) Util Flt	67	Dow AFB, Bangor
132 Wea Sta (Type A)	67	Dow AFB, Bangor
201 AS Gp (Ftr) Det A	67	Dow AFB, Bangor
201 AS Gp (Ftr) Hq Det	67	Dow AFB, Bangor
		MASSACHUSETTS
67 Ftr Wg Hq & Hq Sq	67	Commonwealth Armory, Boston
151 AC&W Gp Hq	67	Commonwealth Armory, Boston
101 AC Sq	67	Commonwealth Armory, Boston
101 Radar Calbr Det	67	Commonwealth Armory, Boston
101 USAF Comm Sq (Wg)	67	Commonwealth Armory, Boston
102 Ftr Gp Hq	67	Logan Apt, Boston
101 Ftr Sq (SE)	67	Logan Apt, Boston
101 Ftr Sq (SE) Util Flt	67	Logan Apt, Boston
101 Wea Sta (Type A)	67	Logan Apt, Boston
131 Ftr Sq (SE)	67	Barnes Mun Apt, Westfield
131 Ftr Sq (SE) Util Flt	67	Barnes Mun Apt, Westfield
131 Wea Sta (Type A)	67	Barnes Mun Apt, Westfield
202 AS Gp (Ftr) Det A	67	Logan Apt, Boston
202 AS Gp (Ftr) Det B	67	Barnes Mun Apt, Westfield
202 AS Gp (Ftr) Hq Det	67	Logan Apt, Boston
567 USAF Band	67	Commonwealth Armory, Boston
601 Sig L Cons Co (Avn)	67	State Armory, Worcester
*1801 Engr Avn Co (1901 EAB)	52	Commonwealth Armory, Boston
		NEW HAMPSHIRE
133 Ftr Sq (SE)	67	Grenier AFB, Manchester
133 Ftr Sq (SE) Util Flt	67	Grenier AFB, Manchester
133 Wea Sta (Type A)	67	Grenier AFB, Manchester
201 AS Gp (Ftr) Det B	67	Grenier AFB, Manchester

* Atchd 67th Ftr Wg

FIRST AIR FORCE

UNIT	WING	LOCATION
		NEW JERSEY
108 Ftr Gp Hq	52	Newark Mun Apt, Newark
119 Ftr Sq (SE)	52	Newark Mun Apt, Newark
119 Ftr Sq (SE) Util Flt	52	Newark Mun Apt, Newark
119 Wea Sta (Type A)	52	Newark Mun Apt, Newark
208 AS Gp (Ftr) Det B	52	Newark Mun Apt, Newark
208 AS Gp (Ftr) Hq Det	52	Newark Mun Apt, Newark
141 Ftr Sq (SE)	52	Mercer Co. Apt, Trenton
141 Ftr Sq (SE) Util Flt	52	Mercer Co. Apt, Trenton
141 Wea Sta (Type A)	52	Mercer Co. Apt, Trenton
208 AS Gp (Ftr) Det A	52	Mercer Co. Apt, Trenton
		NEW YORK
52 Ftr Wg Hq & Hq Sq	52	State Armory, White Plains
152 AC&W Gp Hq	52	State Armory, White Plains
106 AC Sq	52	State Armory, White Plains
108 AC&W Sq (F)	52	Hancock Apt, Syracuse
107 AC&W Sq (LS)	52	State Armory, White Plains
102 USAF Comm Sq (Wg)	52	State Armory, White Plains
102 Radar Calbr Det	52	Westchester Co. Apt, White Plains
602 Sig Light Cons Co (Avn)	52	Floyd Bennett NAS, Brooklyn
106 Bomb Gp (L) Hq	52	Floyd Bennett NAS, Brooklyn
102 Bomb Sq (L)	52	Floyd Bennett NAS, Brooklyn
102 Bomb Sq (L) Util Flt	52	Floyd Bennett NAS, Brooklyn
102 Wea Sta (Type A)	52	Floyd Bennett NAS, Brooklyn
206 AS Gp (LB) Det A	52	Floyd Bennett NAS, Brooklyn
114 Bomb Sq (L)	52	Floyd Bennett NAS, Brooklyn
114 Bomb Sq (L) Util Flt	52	Floyd Bennett NAS, Brooklyn
114 Wea Sta (Type A)	52	Floyd Bennett NAS, Brooklyn
206 AS Gp (LB) Det B	52	Floyd Bennett NAS, Brooklyn
206 AS Gp (LB) Hq Det	52	Floyd Bennett NAS, Brooklyn
107 Ftr Gp Hq	52	Niagara Falls Mun Apt, Niagara Falls
136 Ftr Sq (SE)	52	Niagara Falls Mun Apt, Niagara Falls
136 Ftr Sq (SE) Util Flt	52	Niagara Falls Mun Apt, Niagara Falls
136 Wea Sta (Type A)	52	Niagara Falls Mun Apt, Niagara Falls
207 AS Gp (Ftr) Det A	52	Niagara Falls Mun Apt, Niagara Falls
137 Ftr Sq (SE)	52	Westchester Co. Apt, White Plains
137 Ftr Sq (SE) Util Flt	52	Westchester Co. Apt, White Plains
137 Wea Sta (Type A)	52	Westchester Co. Apt, White Plains
207 AS Gp (Ftr) Det B	52	Westchester Co. Apt, White Plains
138 Ftr Sq (SE)	52	Hancock Apt, Syracuse
138 Ftr Sq (SE) Util Flt	52	Hancock Apt, Syracuse
138 Wea Sta (Type A)	52	Hancock Apt, Syracuse
207 AS Gp (Ftr) Det C	52	Hancock Apt, Syracuse
139 Ftr Sq (SE)	52	Schenectady Co. Apt, Schenectady
139 Ftr Sq (SE) Util Flt	52	Schenectady Co. Apt, Schenectady
139 Wea Sta (Type A)	52	Schenectady Co. Apt, Schenectady
202 AS Gp (Ftr) Det C	67	Schenectady Co. Apt, Schenectady
207 AS Gp (Ftr) Hq Det	52	Niagara Falls Mun Apt, Niagara Falls

* Attached 52nd Ftr Wg

FIRST AIR FORCE

UNIT	WING	LOCATION
		NEW YORK (contd)
1901 EAB Hq & Sv Co	52	Floyd Bennett NAS, Brooklyn
1802 Eng Avn Co (1901 EAB)	52	Floyd Bennett NAS, Brooklyn
552 USAF Band	52	State Armory, White Plains
		RHODE ISLAND
152 Ftr Sq (SE)	67	Theodore Greene Apt, Hillsgrove
152 Ftr Sq (SE) Util Flt	67	Theodore Greene Apt, Hillsgrove
152 Wea Sta (Type A)	67	Theodore Greene Apt, Hillsgrove
203 AS Gp (Ftr) Det B	67	Theodore Greene Apt, Hillsgrove
102 AC&W Sq (LS)	67	Cranston St. Armory, Providence
		VERMONT
134 Ftr Sq (SE)	67	Burlington Mun Apt, Burlington
134 Ftr Sq (SE) Util Flt	67	Burlington Mun Apt, Burlington
134 Wea Sta (Type A)	67	Burlington Mun Apt, Burlington
201 AS Gp (Ftr) Det C	67	Burlington Mun Apt, Burlington

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FOURTH AIR FORCE
Hamilton AFB, Hamilton, California

UNIT	WING	LOCATION
		ARIZONA
197 Ftr Sq (SE)	62	Luke Fld, Phoenix
197 Ftr Sq (SE) Util Flt	62	Luke Fld, Phoenix
197 Wea Sta (Type A)	62	Luke Fld, Phoenix
246 AS Gp (Ftr) Det C	62	Luke Fld, Phoenix
		CALIFORNIA
61 Ftr Wg Hq & Hq Sq	61	PO Box 356, NG Ctr, Alameda
161 AC&W Gp Hq	61	PO Box 356, NG Ctr, Alameda
144 AC Sq	61	PO Box 356, NG Ctr, Alameda
146 AC&W Sq (F)	61	Camp Kohler, Sacramento
111 USAF Comm Sq (Wg)	61	PO Box 356, NG Ctr, Alameda
111 Radar Calbr Det	61	PO Box 356, NG Ctr, Alameda
611 Sig Light Cons Co (Avn)	61	PO Box 356, NG Ctr, Alameda
1905 Eng Avn Bn Hq & Sv Co	61	PO Box 356, NG Ctr, Alameda
145 AC&W Sq (LS)	61	Ft Funstom, San Francisco
144 Ftr Gp Hq	61	Oakland Mun Apt, Oakland
194 Ftr Sq (SE)	61	PO Box 356, NG Ctr, Alameda
194 Ftr Sq (SE) Util Flt	61	Oakland Mun Apt, Oakland
194 Wea Sta (Type A)	61	PO Box 356, NG Ctr, Alameda
244 AS Gp (Ftr) Det A	61	PO Box 356, NG Ctr, Alameda
244 AS Gp (Ftr) Hq Det	61	PO Box 356, NG Ctr, Alameda
1811 Eng Avn Co (1905 EAB)	61	PO Box 356, NG Ctr, Alameda
561 USAF Band	61	PO Box 356, NG Ctr, Alameda
62 Ftr Wg Hq & Hq Sq	62	Lockheed Air Terminal, Burbank
162 AC&W Gp Hq	62	Lockheed Air Terminal, Burbank
147 AC Sq	62	Lockheed Air Terminal, Burbank
148 AC&W Sq (LS)	62	Compton Apt, Compton
149 AC&W Sq (F)	62	Ontario Inter Apt, Ontario
112 USAF Comm Sq (Wg)	62	Lockheed Air Terminal, Burbank
112 Radar Calbr Det	62	Lockheed Air Terminal, Burbank
615 Sig L Cons Co (Avn)	62	Lockheed Air Terminal, Burbank
146 Ftr Gp Hq	62	Van Nuys Metro Apt, Van Nuys
115 Bomb Sq (L)	62	Lockheed Air Terminal, Burbank
115 Bomb Sq (L) Util Flt	62	Lockheed Air Terminal, Burbank
115 Wea Sta (Type A)	62	Lockheed Air Terminal, Burbank
*211 AS Gp (LB) Det D	53	Lockheed Air Terminal, Burbank
195 Ftr Sq (SE)	62	Van Nuys Metro Apt, Van Nuys
195 Ftr Sq (SE) Util Flt	62	Van Nuys Metro Apt, Van Nuys
195 Wea Sta (Type A)	62	Van Nuys Metro Apt, Van Nuys
246 AS Gp (Ftr) Det A	62	Van Nuys Metro Apt, Van Nuys
196 Ftr Sq (JP)	62	San Bernardino AFB, San Bernardino
196 Ftr Sq (SE) Util Flt	62	San Bernardino AFB, San Bernardino
196 Wea Sta (Type A)	62	San Bernardino AFB, San Bernardino
246 AS Gp (Ftr) Det B	62	San Bernardino AFB, San Bernardino
246 AS Gp (Ftr) Hq Det	62	Van Nuys Metro Apt, Van Nuys
1812 Eng Avn Co (1905 EAB)	61	Van Nuys Metro Apt, Van Nuys
562 USAF Band	62	Lockheed Air Terminal, Burbank

* Attached 246 ASG (Ftr)

FOURTH AIR FORCE

UNIT	WING	LOCATION
		IDAHO
190 Ftr Sq (SE)	60	Boise Air Terminal, Boise
190 Ftr Sq (SE) Util Flt	60	Boise Air Terminal, Boise
190 Wea Sta (Type A)	60	Boise Air Terminal, Boise
242 AS Gp (Ftr) Det C	60	Boise Air Terminal, Boise
		MONTANA
186 Ftr Sq (SE)	60	Great Falls Mun Apt, Great Falls
186 Ftr Sq (SE) Util Flt	60	Great Falls Mun Apt, Great Falls
186 Wea Sta (Type A)	60	Great Falls Mun Apt, Great Falls
227 AS Gp (Ftr) Det C	66	Great Falls Mun Apt, Great Falls
		NEVADA
192 Ftr Sq (SE)	61	Reno AFB, Reno
192 Ftr Sq (SE) Util Flt	61	Reno AFB, Reno
192 Wea Sta (Type A)	61	Reno AFB, Reno
244 AS Gp (Ftr) Det B	61	Reno AFB, Reno
		OREGON
142 AC&W Sq (LS)	60	Portland Apt, Portland
142 Ftr Gp Hq	60	Portland Apt, Portland
123 Ftr Sq (SE)	60	Portland Apt, Portland
123 Ftr Sq (SE) Util Flt	60	Portland Apt, Portland
123 Wea Sta (Type A)	60	Portland Apt, Portland
242 AS Gp (Ftr) Det A	60	Portland Apt, Portland
242 AS Gp (Ftr) Hq Det	60	Portland Apt, Portland
1810 Eng Avn Co (1905 EAB)	61	Portland Apt, Portland
		UTAH
191 Ftr Sq (SE)	61	Salt Lake City Mun Apt #1, Salt Lake Cy
191 Ftr Sq (SE) Util Flt	61	Salt Lake City Mun Apt #1, Salt Lake Cy
191 Wea Sta (Type A)	61	Salt Lake City Mun Apt #1, Salt Lake Cy
244 AS Gp (Ftr) Det C	61	Salt Lake City Mun Apt #1, Salt Lake Cy
		WASHINGTON
60 Ftr Wg Hq & Hq Sq	60	Fort George Wright, Spokane
160 AC&W Gp Hq	60	Fort George Wright, Spokane
141 AC Sq	60	Fort George Wright, Spokane
143 AC&W Sq (F)	60	Old Armory, Seattle
110 Radar Calbr Det	60	Old Armory, Seattle
110 USAF Comm Sq (Wg)	60	Fort George Wright, Spokane
610 Sig L Cons Co (Avn)	60	Boeing Fld, Seattle
116 Ftr Sq (SE)	60	Felts Fld, Spokane
116 Ftr Sq (SE) Util Flt	60	Felts Fld, Spokane
116 Wea Sta (Type A)	60	Felts Fld, Spokane
242 AS Gp (Ftr) Det B	60	Felts Fld, Spokane
560 USAF Band	60	Fort George Wright, Spokane

* Attached 242 ASG (Ftr)

NINTH AIR FORCE
Langley Air Force Base, Virginia

UNIT	WING	LOCATION
		DELAWARE
142 Ftr Sq (SE)	53	New Castle Co Apt, Wilmington
142 Ftr Sq (SE) Util Flt	53	New Castle Co Apt, Wilmington
142 Wea Sta (Type A)	53	New Castle Co Apt, Wilmington
*208 AS Gp (Ftr) Det C	52	New Castle Co Apt, Wilmington
		DISTRICT OF COLUMBIA
113 AC&W Sq (F)	53	NG Armory, Wash, D.C.
113 Ftr Gp Hq	53	Andrews AFB, Wash, D.C.
121 Ftr (SE)	53	Andrews AFB, Wash, D.C.
121 Ftr Sq (SE) Util Flt	53	Andrews AFB, Wash, D.C.
121 Wea Sta (Type A)	53	Andrews AFB, Wash, D.C.
213 AS Gp (Ftr) Det A	53	Andrews AFB, Wash, D.C.
213 AS Gp (Ftr) Hq Det	53	Andrews AFB, Wash, D.C.
		KENTUCKY
123 Ftr Gp Hq	55	Standiford Fld, Louisville
165 Ftr Sq (SE)	55	Standiford Fld, Louisville
165 Ftr Sq (SE) Util Flt	55	Standiford Fld, Louisville
165 Wea Sta (Type A)	55	Standiford Fld, Louisville
223 AS Gp (Ftr) Det A	55	Standiford Fld, Louisville
223 AS Gp (Ftr) Hq Det	55	Standiford Fld, Louisville
		MARYLAND
104 Ftr Sq (SE)	53	Baltimore Mun Apt, Baltimore
104 Ftr Sq (SE) Util Flt	53	Baltimore Mun Apt, Baltimore
104 Wea Sta (Type A)	53	Baltimore Mun Apt, Baltimore
213 AS Gp (Ftr) Det B	53	Baltimore Mun Apt, Baltimore
		OHIO
55 Ftr Wg Hq & Hq Sq	55	Lockbourne AFB, Columbus
155 AC&W Gp Hq	55	Ft. Hayes, Columbus
121 AC Sq	55	Ft. Hayes, Columbus
123 AC&W Sq (F)	55	Lunken Apt, Cincinatti
105 USAF Comm Sq (Wg)	55	NG Armory, Zanesville
105 Radar Calbr Det	55	Lockbourne AFB, Columbus
605 Sig L Cons Co (Avn)	55	State Armory, Springfield
121 Ftr Gp Hq	55	Dayton Municipal Apt, Vandalia
112 Bomb Sq (L)	55	Cleveland Mun Apt, Cleveland
112 Bomb Sq (L) Util Flt	55	Cleveland Mun Apt, Cleveland
112 Wea Sta (Type A)	55	Cleveland Mun Apt, Cleveland
**206 AS Gp (LB) Det D	52	Cleveland Mun Apt, Cleveland
162 Ftr Sq (SE)	55	Dayton Mun Apt, Vandalia
162 Ftr Sq (SE) Util Flt	55	Dayton Mun Apt, Vandalia
162 Wea Sta (Type A)	55	Dayton Mun Apt, Vandalia
221 AS Gp (Ftr) Det A	55	Dayton Mun Apt, Vandalia

* Attached 213 ASG (Ftr)
** Attached 221 ASG (Ftr)

NINTH AIR FORCE

UNIT	WING	LOCATION
		OHIO (contd)
164 Ftr Sq (SE)	55	Mansfield Mun Apt, Mansfield
164 Ftr Sq (SE) Util Flt	55	Mansfield Mun Apt, Mansfield
164 Wea Sta (Type A)	55	Mansfield Mun Apt, Mansfield
221 AS Gp (Ftr) Det B	55	Mansfield Mun Apt, Mansfield
166 Ftr Sq (SE)	55	Lockbourne AFB, Columbus
166 Ftr Sq (SE) Util Flt	55	Lockbourne AFB, Columbus
166 Wea Sta (Type A)	55	Lockbourne AFB, Columbus
221 AS Gp (Ftr) Det C	55	Lockbourne AFB, Columbus
221 AS Gp (Ftr) Hq Det	55	Cleveland Mun Apt, Cleveland
***1805 Eng Avn Co (1902 EAB)	53	Lunken Apt, Cincinnati,
555 USAF Band	55	NG Armory, Toledo
		PENNSYLVANIA
53 Ftr Wg Hq & Hq Sq	53	Harrisburg Mun Apt, New Cumberland
153 AC&W Gp Hq	53	Harrisburg Mun Apt, New Cumberland
111 AC Sq	53	Harrisburg Mun Apt, New Cumberland
112 AC&W Sq (LS)	53	State College
103 Radar Calbr Det	53	Reading Mun Apt, Reading
103 USAF Comm Sq ([illegible])	53	Harrisburg Mun Apt, New Cumberland
603 Sig L Cons Co (Avn)	53	Philadelphia Inter Apt, Philadelphia
111 Bomb Gp (L) Hq	53	Philadelphia Inter Apt, Philadelphia
103 Bomb Sq (L)	53	Philadelphia Inter Apt, Philadelphia
103 Bomb Sq (L) Util Flt	53	Philadelphia Inter Apt, Philadelphia
103 Wea Sta (Type A)	53	Philadelphia Inter Apt, Philadelphia
211 AS Gp (LB) Det A	53	Philadelphia Inter Apt, Philadelphia
117 Bomb Sq (L)	53	Philadelphia Inter Apt, Philadelphia
117 Bomb Sq (L) Util Flt	53	Philadelphia Inter Apt, Philadelphia
117 Wea Sta (Type A)	53	Philadelphia Inter Apt, Philadelphia
211 AS Gp (LB) Det B	53	Philadelphia Inter Apt, Philadelphia
211 AS Gp (LB) Hq Det	53	Philadelphia Inter Apt, Philadelphia
112 Ftr Gp Hq	53	Greater Pittsburgh Apt, Coraopolis
146 Ftr Sq (SE)	53	Greater Pittsburgh Apt, Coraopolis
146 Ftr Sq (SE) Util Flt	53	Greater Pittsburgh Apt, Coraopolis
146 Wea Sta (Type A)	53	Greater Pittsburgh Apt, Coraopolis
212 AS Gp (Ftr) Det A	53	Greater Pittsburgh Apt, Coraopolis
147 Ftr Sq (SE)	53	Greater Pittsburgh Apt, Coraopolis
147 Ftr Sq (SE) Util Flt	53	Greater Pittsburgh Apt, Coraopolis
147 Wea Sta (Type A)	53	Greater Pittsburgh Apt, Coraopolis
212 AS Gp (Ftr) Det B	53	Greater Pittsburgh Apt, Coraopolis
148 Ftr Sq (SE)	53	Reading Mun Apt, Reading
148 Ftr Sq (SE) Util Flt	53	Reading Mun Apt, Reading
148 Wea Sta (Type A)	53	Reading Mun Apt, Reading
212 AS Gp (Ftr) Det C	53	Reading Mun Apt, Reading
212 AS Gp (Ftr) Hq Det	53	Greater Pittsburgh Apt, Coraopolis
1902 EAB Hq & Sv Co	53	Johnstown
1803 Eng Avn Co (1902 EAB)	53	Johnstown
553 USAF Band	53	Harrisburg Mun Apt, New Cumberland

*** Attached 55th Ftr Wg

NINTH AIR FORCE

UNIT	WING	LOCATION
		VIRGINIA
149 Ftr Sq (SE)	53	Byrd Fld, Richmond
149 Ftr Sq (SE) Util Flt	53	Byrd Fld, Richmond
149 Wea Sta (Type A)	53	Byrd Fld, Richmond
213 AS Gp (Ftr) Det C	53	Byrd Fld, Richmond
		WEST VIRGINIA
167 Ftr Sq (SE)	55	Charleston Mun Apt, Charleston
167 Ftr Sq (SE) Util Flt	55	Charleston Mun Apt, Charleston
167 Wea Sta (Type A)	55	Charleston Mun Apt, Charleston
223 AS Gp (Ftr) Det B	55	Charleston Mun Apt, Charleston

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TENTH AIR FORCE

Benjamin Harrison AFB, Ft Benjamin Harrison, Indiana

UNIT	WING	LOCATION
		COLORADO
86 Ftr Wg Hq & Hq Sq	86	Buckley Fld, Denver
159 AC&W Gp Hq	86	Buckley Fld, Denver
137 AC Sq	86	Buckley Fld, Denver
138 AC&W Sq (LS)	86	Denver Univ, Denver
139 AC&W Sq (F)	86	State Armory, Boulder
109 USAF Comm Sq (Wing)	86	Buckley Fld, Denver
109 Radar Calbr Det	86	Buckley Fld, Denver
609 Sig L Cons Co (Avn)	86	Buckley Fld, Denver
140 Ftr Gp Hq	86	Buckley Fld, Denver
120 Ftr Sq (SE)	86	Buckley Fld, Denver
120 Ftr Sq (SE) Util Flt	86	Buckley Fld, Denver
120 Wea Sta (Type A)	86	Buckley Fld, Denver
240 AS Gp (Ftr) Det A	86	Buckley Fld, Denver
240 AS Gp (Ftr) Hq Det	86	Buckley Fld, Denver
1809 Eng Avn Co (1903 EAB)	66	Buckley Fld, Denver
532 USAF Band	86	National Guard Armory, Denver
		ILLINOIS
66 Ftr Wg Hq & Hq Sq	66	Chicago-Orchard Apt, Park Ridge
156 AC&W Gp Hq	66	Chicago-Orchard Apt, Park Ridge
126 AC Sq	66	Chicago-Orchard Apt, Park Ridge
106 USAF Comm Sq (Wing)	66	Chicago-Orchard Apt, Park Ridge
106 Radar Calbr Det	66	Chicago Mun Apt, Chicago
606 Sig L Cons Co (Avn)	66	Chicago-Orchard Apt, Park Ridge
126 Bomb Gp (L) Hq	66	Chicago-Orchard Apt, Park Ridge
108 Bomb Sq (L)	66	Chicago Mun Apt, Chicago
108 Bomb Sq (L) Util Flt	66	Chicago Mun Apt, Chicago
108 Wea Sta (Type A)	66	Chicago Mun Apt, Chicago
226 AS Gp (LB) Det A	66	Chicago Mun Apt, Chicago
168 Bomb Sq (L)	66	Chicago-Orchard Apt, Park Ridge
168 Bomb Sq (L) Util Flt	66	Chicago-Orchard Apt, Park Ridge
168 Wea Sta (Type A)	66	Chicago-Orchard Apt, Park Ridge
226 AS Gp (LB) Det B	66	Chicago-Orchard Apt, Park Ridge
226 AS Gp (LB) Hq Det	66	Chicago-Orchard Apt, Park Ridge.
169 Ftr Sq (SE)	71	Peoria Mun Apt, Peoria
169 Ftr Sq (SE) Util Flt	71	Peoria Mun Apt, Peoria
169 Wea Sta (Type A)	71	Peoria Mun Apt, Peoria
*231 AS Gp (Ftr) Det B	71	Peoria Mun Apt, Peoria
170 Ftr Sq (SE)	71	Capitol Apt, Springfield
170 Ftr Sq (SE) Util Flt	71	Capitol Apt, Springfield
170 Wea Sta (Type A)	71	Capitol Apt, Springfield
*231 AS Gp (Ftr) Det C	71	Capitol Apt, Springfield
1903 EAB Hq & Sv Co	66	Chicago-Orchard Apt, Park Ridge
566 USAF Band	66	Chicago-Orchard Apt, Park Ridge

* Attached 226 ASG (Ftr)

TENTH AIR FORCE

UNIT	WING	LOCATION
		INDIANA
122 Ftr Gp Hq	71	Stout Fld, Indianapolis
122 AC&W Sq (LS)	71	Stout Fld, Indianapolis
113 Ftr Sq (SE)	71	Stout Fld, Indianapolis
113 Ftr Sq (SE) Util Flt	71	Stout Fld, Indianapolis
113 Wea Sta (Type A)	71	Stout Fld, Indianapolis
163 Ftr Sq (SE)	71	Baer Fld, Ft Wayne
163 Ftr Sq (SE) Util Flt	71	Baer Fld, Ft Wayne
163 Wea Sta (Type A)	71	Baer Fld, Ft Wayne
222 AS Gp (Ftr) Det A	71	Stout Fld, Indianapolis
222 AS Gp (Ftr) Det B	71	Baer Fld, Ft Wayne
222 AS Gp (Ftr) Hq Det	71	Stout Fld, Indianapolis
		IOWA
132 Ftr Gp Hq	71	Des Moines Mun Apt, Des Moines
133 AC&W Sq (F)	71	Fort Dodge
124 Ftr Sq (SE)	71	Des Moines Mun Apt, Des Moines
124 Ftr Sq (SE) Util Flt	71	Des Moines Mun Apt, Des Moines
124 Wea Sta (Type A)	71	Des Moines Mun Apt, Des Moines
232 AS Gp (Ftr) Det A	71	Des Moines Mun Apt, Des Moines
174 Ftr Sq (SE)	71	Sioux City Mun Apt, Sioux City
174 Ftr Sq (SE) Util Flt	71	Sioux City Mun Apt, Sioux City
174 Wea Sta (Type A)	71	Sioux City Mun Apt, Sioux City
232 AS Gp (Ftr) Det B	71	Sioux City Mun Apt, Sioux City
232 AS Gp (Ftr) Hq Det	71	Des Moines Mun Apt, Des Moines
		KANSAS
127 Ftr Sq (SE)	86	Wichita Mun Apt, Wichita
127 Ftr Sq (SE) Util Flt	86	Wichita Mun Apt, Wichita
127 Wea Sta (Type A)	86	Wichita Mun Apt, Wichita
240 AS Gp (Ftr) Det C	86	Wichita Mun Apt, Wichita
		MICHIGAN
127 Ftr Gp Hq	66	Detroit-Wayne Major Apt, Romulus
127 AC&W Sq (IS)	66	Vickers Armory, Detroit
107 Bomb Sq (L)	66	Detroit-Wayne Major Apt, Romulus
107 Bomb Sq (L) Util Flt	66	Detroit-Wayne Major Apt, Romulus
107 Wea Sta (Type A)	66	Detroit-Wayne Major Apt, Romulus
226 AS Gp (LB) Det C	66	Detroit-Wayne Major Apt, Romulus
171 Ftr Sq (SE)	66	Detroit-Wayne Major Apt, Romulus
171 Ftr Sq (SE) Util Flt	66	Detroit-Wayne Major Apt, Romulus
171 Wea Sta (Type A)	66	Detroit-Wayne Major Apt, Romulus
227 AS Gp (Ftr) Det A	66	Detroit-Wayne Major Apt, Romulus
172 Ftr Sq (SE	66	Kellogg Fld, Battle Creek
172 Ftr Sq (SE) Util Flt	66	Kellogg Fld, Battle Creek
172 Wea Sta (Type A)	66	Kellogg Fld, Battle Creek
227 AS Gp (Ftr) Det B	66	Kellogg Fld, Battle Creek
227 AS Gp (Ftr) Hq Det	66	Detroit-Wayne Major Apt, Romulus
1806 Eng Avn Co (1903 EAB)	66	Detroit, Michigan

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TENTH AIR FORCE

UNIT	WING	LOCATION
		MINNESOTA
133 Ftr Gp Hq	86	Holman Fld, St. Paul
132 AC&W Sq (LS)	86	Minneapolis Armory, Minneapolis
109 Ftr Sq (SE)	86	Holman Fld, St. Paul
109 Ftr Sq (SE) Util Flt	86	Holman Fld, St. Paul
109 Wea Sta (Type A)	86	Holman Fld, St. Paul
233 AS Gp (Ftr) Det A	86	Holman Fld, St. Paul
179 Ftr Sq (SE)	86	Duluth Apt, Duluth
179 Ftr Sq (SE) Util Flt	86	Duluth Apt, Duluth
179 Wea Sta (Type A)	86	Duluth Apt, Duluth
233 AS Gp (Ftr) Det C	86	Duluth Apt, Duluth
233 AS Gp (Ftr) Hq Det	86	Holman Fld, St. Paul
		MISSOURI
71 Ftr Wg Hq & Hq Sq	71	1 Grant Ave. Jefferson Bks, St Louis
157 AC&W Gp Hq	71	1 Grant Ave. Jefferson Bks, St Louis
131 AC Sq	71	1 Grant Ave. Jefferson Bks, St Louis
107 Radar Calbr Det	71	Lambert Fld, St. Louis
107 USAF Comm Sq (Wg)	71	1 Grant Ave. Jefferson Bks, St Louis
607 Sig L Cons Co (Avn)	71	1 Grant Ave. Jefferson Bks, St Louis
131 Ftr Gp Hq	71	Lambert Fld, St. Louis
180 Bomb Sq (L)	66	Rosecrans Fld, St. Joseph
180 Bomb Sq (L) Util Flt	66	Rosecrans Fld, St. Joseph
180 Wea Sta (Type A)	66	Rosecrans Fld, St. Joseph
**226 AS Gp (LB) Det D	66	Rosecrans Fld, St. Joseph
110 Ftr Sq (SE)	71	Lambert Fld, St. Louis
110 Ftr Sq (SE) Util Flt	71	Lambert Fld, St. Louis
110 Wea Sta (Type A)	71	Lambert Fld, St. Louis
231 AS Gp (Ftr) Det A	71	Lambert Fld, St. Louis
231 AS Gp (Ftr) Hq Det	71	Lambert Fld, St. Louis
1807 Eng Avn Co (1903 EAB)	66	1 Grant Ave. Jefferson Bks, St Louis
571 USAF Band	71	1 Grant Ave. Jefferson Bks, St Louis
		NEBRASKA
173 Ftr Sq (JP)	71	Lincoln Apt, Lincoln
173 Ftr Sq (SE) Util Flt	71	Lincoln Apt, Lincoln
173 Wea Sta (Type A)	71	Lincoln Apt, Lincoln
232 AS Gp (Ftr) Det C	71	Lincoln Apt, Lincoln
		NORTH DAKOTA
178 Ftr Sq (SE)	86	Fargo Mun Apt, Fargo
178 Ftr Sq (SE) Util Flt	66	Fargo Mun Apt, Fargo
178 Wea Sta (Type A)	86	Fargo Mun Apt, Fargo
233 AS Gp (Ftr) Det B	86	Fargo Mun Apt, Fargo

** Attached 231 ASG (Ftr)

TENTH AIR FORCE

UNIT	WING	LOCATION
		SOUTH DAKOTA
175 Ftr Sq (SE)	86	Sioux Falls Mun Apt, Sioux Falls
175 Ftr Sq (SE) Util Flt	86	Sioux Falls Mun Apt, Sioux Falls
175 Wea Sta (Type A)	86	Sioux Falls Mun Apt, Sioux Falls
*222 AS Gp (Ftr) Det C	71	Sioux Falls Mun Apt, Sioux Falls
		WISCONSIN
128 AC&W Sq (F)	66	General Mitchell Fld, Milwaukee
128 Ftr Gp Hq	66	General Mitchell Fld, Milwaukee
126 Ftr Sq (SE)	66	General Mitchell Fld, Milwaukee
126 Ftr Sq (SE) Util Flt	66	General Mitchell Fld, Milwaukee
126 Wea Sta (Type A)	66	General Mitchell Fld, Milwaukee
228 AS Gp (Ftr) Det A	66	General Mitchell Fld, Milwaukee
176 Ftr Sq (SE)	66	Truax Fld, Madison
176 Ftr Sq (SE) Util Flt	66	Truax Fld, Madison
176 Wea Sta (Type A)	66	Truax Fld, Madison
228 AS Gp (Ftr) Det B	66	Truax Fld, Madison
228 AS Gp (Ftr) Hq Det	66	General Mitchell Fld, Milwaukee
		WYOMING
187 Ftr Sq (SE)	86	Cheyenne Mun Apt, Cheyenne
187 Ftr Sq (SE) Util Flt	86	Cheyenne Mun Apt, Cheyenne
187 Wea Sta (Type A)	86	Cheyenne Mun Apt, Cheyenne
240 AS Gp (Ftr) Det B	86	Cheyenne Mun Apt, Cheyenne

* Atchd Hq Det, 233 ASG

TWELFTH AIR FORCE
Brooks Air Force Base, Texas

UNIT	WING	LOCATION
		ARKANSAS
154 Ftr Sq (SE)	63	Adams Fld, Little Rock
154 Ftr Sq (SE) Util Flt	63	Adams Fld, Little Rock
154 Wea Sta (Type A)	63	Adams Fld, Little Rock
237 AS Gp (Ftr) Det D	63	Adams Fld, Little Rock
		LOUISIANA
122 Bomb Sq (L)	63	New Orleans Mun Apt, New Orleans
122 Bomb Sq (L) Util Flt	63	New Orleans Mun Apt, New Orleans
122 Wea Sta (Type A)	63	New Orleans Mun Apt, New Orleans
*211 AS Gp (LB) Det C	53	New Orleans Mun Apt, New Orleans
135 AC&W Sq (LS)	63	Jackson Barracks, New Orleans
		NEW MEXICO
188 Ftr Sq (SE)	63	Kirtland AFB,
188 Ftr Sq (SE) Util Flt	63	Kirtland AFB,
188 Wea Sta (Type A)	63	Kirtland AFB,
**228 AS Gp (Ftr) Det C	66	Kirtland AFB,
		OKLAHOMA
137 Ftr Gp Hq	63	Max Westheimer Fld, Norman
125 Ftr Sq (SE)	63	Tulsa Mun Apt, Tulsa
125 Ftr Sq (SE) Util Flt	63	Tulsa Mun Apt, Tulsa
125 Wea Sta (Type A)	63	Tulsa Mun Apt, Tulsa
237 AS Gp (Ftr) Det A	63	Tulsa Mun Apt, Tulsa
185 Ftr Sq (SE) Util Flt	63	Max Westheimer Fld, Norman
185 Ftr Sq (SE)	63	Max Westheimer Fld, Norman
185 Wea Sta (Type A)	63	Max Westheimer Fld, Norman
237 AS Gp (Ftr) Det C	63	Max Westheimer Fld, Norman
237 AS Gp (Ftr) Hq Det	63	Max Westheimer Fld, Norman
		TEXAS
63 Ftr Wg Hq & Hq Sq	63	Ellington AFB, Houston
158 AC&W Gp Hq	63	Ellington AFB, Houston
134 AC Sq	63	LaPorte
136 AC&W Sq (F)	63	Jefferson Co. Apt, Beaumont
108 USAF Comm Sq (Wing)	63	Ellington AFB, Houston
108 Radar Calbr Det	63	Ellington AFB, Houston
608 Sig L Cons Co (Avn)	63	Ellington AFB, Houston
136 Ftr Gp Hq	63	Hensley Fld, Dallas
111 Ftr Sq (SE)	63	Ellington AFB, Houston
111 Ftr Sq (SE) Util Flt	63	Ellington AFB, Houston
111 Wea Sta (Type A)	63	Ellington AFB, Houston
236 AS Gp (Ftr) Det D	63	Ellington AFB, Houston

* Attached 236 ASG (Ftr)
** Attached 237 ASG (Ftr)

TWELFTH AIR FORCE

UNIT	WING	LOCATION
		TEXAS (contd)
181 Ftr Sq (SE)	63	Hensley Fld, Dallas
181 Ftr Sq (SE) Util Flt	63	Hensley Fld, Dallas
181 Wea Sta (Type A)	63	Hensley Fld, Dallas
236 AS Gp (Ftr) Det A	63	Hensley Fld, Dallas
182 Ftr Sq (SE)	63	Brooks AFB,
182 Ftr Sq (SE) Util Flt	63	Brooks AFB,
182 Wea Sta (Type A)	63	Brooks AFB,
236 AS Gp (Ftr) Det C	63	Brooks AFB,
236 AS Gp (Ftr) Hq Det	63	Hensley Fld, Dallas
1808 Eng Avn Co (Sep)	63	Hensley Fld, Dallas
531 USAF Band	63	Ellington AFB, Houston

FOURTEENTH AIR FORCE
Orlando Air Force Base, Orlando, Florida

UNIT	WING	LOCATION
		ALABAMA
117 Ftr Gp Hq	54	Birmingham Mun Apt, Birmingham
106 Bomb Sq (L)	54	Birmingham Mun Apt, Birmingham
106 Bomb Sq (L) Util Flt	54	Birmingham Mun Apt, Birmingham
106 Wea Sta (Type A)	54	Birmingham Mun Apt, Birmingham
*206 AS Gp (LB) Det C	52	Birmingham Mun Apt, Birmingham
160 Ftr Sq (SE)	54	Birmingham Mun Apt, Birmingham
160 Ftr Sq (SE) Util Flt	54	Birmingham Mun Apt, Birmingham
160 Wea Sta (Type A)	54	Birmingham Mun Apt, Birmingham
217 AS Gp (Ftr) Det B	54	Birmingham Mun Apt, Birmingham
217 AS Gp (Ftr) Hq Det	54	Birmingham Mun Apt, Birmingham
		FLORIDA
159 Ftr Sq (JP)	54	Jacksonville Mun Apt #1, Jacksonville
159 Ftr Sq (SE) Util Flt	54	Jacksonville Mun Apt #1, Jacksonville
159 Wea Sta (Type A)	54	Jacksonville Mun Apt #1, Jacksonville
**217 AS Gp (Ftr) Det C	54	Jacksonville Mun Apt #1, Jacksonville
		GEORGIA
54 Ftr Wg Hq & Hq Sq	54	Marietta AFB, Marietta
154 AC&W Gp Hq	54	Marietta AFB, Marietta
116 AC Sq	54	Marietta AFB, Marietta
104 Radar Calbr Det	54	Marietta AFB, Marietta
104 USAF Comm Sq (Wing)	54	Marietta AFB, Marietta
604 Sig L Cons Co (Avn)	54	Marietta AFB, Marietta
116 Ftr Gp Hq	54	Marietta AFB, Marietta
128 Ftr Sq (SE)	54.	Marietta AFB, Marietta
128 Ftr Sq (SE) Util Flt	54	Marietta AFB, Marietta
128 Wea Sta (Type A)	54	Marietta AFB, Marietta
216 AS Gp (Ftr) Det A	54	Marietta AFB, Marietta
158 Ftr Sq (JP)	54	Hunter Fld, Savannah
158 Ftr Sq (SE) Util Flt	54	Hunter Fld, Savannah
158 Wea Sta (Type A)	54	Hunter Fld, Savannah
216 AS Gp (Ftr) Det C	54	Hunter Fld, Savannah
216 AS Gp (Ftr) Hq Det	54	Marietta AFB, Marietta
1804 Eng Avn Co (Sep)	54	Marietta AFB, Marietta
530 USAF Band	54	Marietta AFB, Marietta
117 AC&W Sq (LS)	54	Hunter Fld, Savannah

* Attached 217 ASG (Ftr)
** Attached 216 ASG (Ftr)

FOURTEENTH AIR FORCE

UNIT	WING	LOCATION
		MISSISSIPPI
153 Ftr Sq (SE)	54	Key Fld, Meridian
153 Ftr Sq (SE) Util Flt	54	Key Fld, Meridian
153 Wea Sta (Type A)	54	Key Fld, Meridian
217 AS Gp (Ftr) Det A	54	Key Fld, Meridian
		NORTH CAROLINA
156 Ftr Sq (SE)	54	Douglas Fld, Charlotte
156 Ftr Sq (SE) Util Flt	54	Douglas Fld, Charlotte
156 Wea Sta (Type A)	54	Douglas Fld, Charlotte
218 AS Gp (Ftr) Det C	54	Douglas Fld, Charlotte
118 AC&W Sq (F)	54	Douglas Fld, Charlotte
		SOUTH CAROLINA
157 Ftr Sq (SE)	54	Congaree AB, Columbia
157 Ftr Sq (SE) Util Flt	54	Congaree AB, Columbia
157 Wea Sta (Type A)	54	Congaree AB, Columbia
216 AS Gp (Ftr) Det B	54	Congaree AB, Columbia
		TENNESSEE
118 Ftr Gp Hq	54	Berry Fld, Nashville
105 Ftr Sq (SE)	54	Berry Fld, Nashville
105 Ftr Sq (SE) Util Flt	54	Berry Fld, Nashville
105 Wea Sta (Type A)	54	Berry Fld, Nashville
213 AS Gp (Ftr) Det A	54	Berry Fld, Nashville
155 Ftr Sq (SE)	54	Memphis Mun Apt, Memphis
155 Ftr Sq (SE) Util Flt	54	Memphis Mun Apt, Memphis
155 Wea Sta (Type A)	54	Memphis Mun Apt, Memphis
218 AS Gp (Ftr) Det B	54	Memphis Mun Apt, Memphis
218 AS Gp (Ftr) Hq Det	54	Berry Fld, Nashville

SECTION II

AIR NATIONAL GUARD UNITS BY TYPE

WING HEADQUARTERS AND HEADQUARTERS SQUADRON

WING	AIR FORCE	STATES INCLUDED	LOCATION
52	First	N.Y., N.J.	State Armory, White Plains, New York
53	Ninth	DC, Md, Pa. Va. Del.	Harrisburg Mun Apt, New Cumberland, Pa.
54	Fourteenth	Ala, Fla, Ga, Miss, NC, SC, Tenn.	Marietta AFB, Marietta, Ga.
55	Ninth	Ky, Ohio, W.Va.	Lockbourne AFB, Columbus, Ohio
60	Fourth	Idaho, Mont, Oreg, Wash.	Fort George Wright, Spokane, Wash.
61	Fourth	Calif. (N of 35°47') Nev, Utah	National Guard Center, PO Box 356, Alameda, Calif.
62	Fourth	Ariz, Calif. (S of 35°47')	Lockheed Air Terminal, Burbank, Calif.
63	Twelfth	Ark, La. NM, Okla Texas	Ellington AFB, Houston, Texas
66	Tenth	Ill, (less 169 & 170 Ftr Sq) Wis, Mich, and the 180 L Bomb Sq of Missouri	Chicago-Orchard Apt, Park Ridge, Ill.
67	First	Conn, Mass, Me, NH, RI, Vt.	Commonwealth Armory, Boston, Mass.
71	Tenth	Iowa, Ind, Mo, (less 180 Bomb Sq (L)) Neb. and the 169 & 170 Ftr Sq of Ill.	1 Grant Ave, Jefferson Bks, St Louis, Mo.
86	Tenth	Colo, Kans, Minn, ND, SD, and Wyo.	Buckley Fld, Denver, Colo.

AIRCRAFT CONTROL AND WARNING GROUP HQ

ORG	WING	AIR FORCE	LOCATION
151	67	First	Commonwealth Armory, Boston, Mass.
152	52	First	State Armory, White Plains, N. Y.
153	53	Ninth	Harrisburg Mun Apt, New Cumberland, Pa.
154	54	Fourteenth	Marietta AFB, Marietta, Ga.
155	55	Ninth	Ft. Hayes, Columbus, Ohio
156	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
157	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis, Mo.
158	63	Twelfth	Ellington AFB, Houston, Tex.
159	86	Tenth	Buckley Fld, Denver, Colo.
160	60	Fourth	Ft. George Wright, Spokane, Wash.
161	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
162	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

AIRCRAFT CONTROL AND WARNING SQUADRONS (LS)

ORG	GP	WING	AIR FORCE	LOCATION
102	151	67	First	Cranston Street Armory, Providence, R.I.
107	152	52	First	State Armory, White Plains, N.Y.
112	153	53	Ninth	State College, Pa.
117	154	54	Fourteenth	Hunter Fld, Savannah, Ga.
122	157	71	Tenth	Stout Fld, Indianapolis, Ind.
127	156	66	Tenth	Vickers Armory, Detroit, Mich.
132	159	86	Tenth	Minneapolis Armory, Minneapolis, Minn.
135	158	63	Twelfth	Jackson Bks, New Orleans, La.
138	159	86	Tenth	Denver Univ., Denver, Colo.
142	160	60	Fourth	Portland Apt, Portland, Oreg.
145	161	61	Fourth	Fort Funston, San Francisco, Calif.
148	162	62	Fourth	Compton Apt, Compton, Calif.

AIRCRAFT CONTROL AND WARNING SQUADRONS (F)

103	151	67	First	Brainerd Fld, Hartford, Conn.
108	152	52	First	Hancock Apt, Syracuse, N. Y.
113	153	53	Ninth	NG Armory, Washington, D. C.
118	154	54	Fourteenth	Douglas Fld, Charlotte, N. C.
123	155	55	Ninth	Lunken Apt, Cincinnati, Ohio
128	156	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
133	157	71	Tenth	Fort Dodge, Ia.
136	158	63	Twelfth	Jefferson Co. Apt, Beaumont, Tex.
139	159	86	Tenth	State Armory, Boulder, Colo.
143	160	60	Fourth	Old Armory, Seattle, Wash.
146	161	61	Fourth	Camp Kohler, Sacramento, Calif.
149	162	62	Fourth	Ontario Inter Apt, Ontario, Calif.

AIRCRAFT CONTROL SQUADRONS

ORG	GP	WING	AIR FORCE	LOCATION
101	151	67	First	Commonwealth Armory, Boston, Mass.
106	152	52	First	State Armory, White Plains, N. Y.
111	153	53	Ninth	Harrisburgh Mun Apt, New Cumberland, Pa.
116	154	54	Fourteenth	Marietta AFB, Marietta, Ga.
121	155	55	Ninth	Ft. Hayes, Columbus, Ohio
126	156	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
131	157	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis 23, Mo.
134	158	63	Twelfth	La Porte, Texas
137	159	86	Tenth	Buckley Fld, Denver, Colo.
141	160	60	Fourth	Ft. George Wright, Spokane, Wash.
144	161	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
147	162	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

USAF COMMUNICATIONS SQUADRONS (WING)

ORG	WING	AIR FORCE	
101	67	First	Commonwealth Armory, Boston, Mass.
102	52	First	State Armory, White Plains, N. Y.
103	53	Ninth	Harrisburg Mun Apt, New Cumberland, Pa.
104	54	Fourteenth	Marietta AFB, Marietta, Ga.
105	55	Ninth	NG Armory, Zanesville, Ohio
106	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
107	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis 23, Mo.
108	63	Twelfth	Ellington AFB, Houston, Tex.
109	86	Tenth	Buckley Fld, Denver, Colo.
110	60	Fourth	Ft. George Wright, Spokane, Wash.
111	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
112	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

SIGNAL LIGHT CONSTRUCTION COMPANIES (AVN)

601	67	First	State Armory, Worcester, Mass.
602	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
603	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
604	54	Fourteenth	Marietta AFB, Marietta, Ga.
605	55	Ninth	State Armory, Springfield, Ohio
606	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
607	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis 23, Mo.
608	63	Twelfth	Ellington AFB, Houston, Tex.
609	86	Tenth	Buckley Fld, Denver, Colo.
610	60	Fourth	Boeing Fld, Seattle, Wash.
611	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
615	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

RADAR CALIBRATION DETACHMENTS

ORG	GP	WING	AIR FORCE	LOCATION
101	151	67	First	Commonwealth Armory, Boston, Mass.
102	152	52	First	Westchester Co. Apt, White Plains, N.Y.
103	153	53	Ninth	Reading Mun Apt, Reading, Pa.
104	154	54	Fourteenth	Marietta AFB, Marietta, Ga.
105	155	55	Ninth	Lockbourne AFB, Columbus, Ohio
106	156	66	Tenth	Chicago Mun Apt, Chicago, Ill.
107	157	71	Tenth	Lambert Fld, St, Louis, Mo.
108	158	63	Twelfth	Ellington AFB, Houston, Tex.
109	159	86	Tenth	Buckley Fld, Denver, Colo.
110	160	60	Fourth	Old Armory, Seattle, Wash.
111	161	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
112	162	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

AIR SERVICE GROUPS (LB)AND DETACHMENTS

ORG	DET	WING	AIR FORCE	
206	Hq	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
206	A	52	First	Floyd Bennett NAS, Brooklyn, N, Y.
206	B	52	First	Floyd Bennett NAS. Brooklyn, N. Y.
206	C	52	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
206	D	55	Ninth	Cleveland Mun Apt, Cleveland, Ohio
211	Hq	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
211	A	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
211	B	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
211	C	53	Ninth	New Orleans Mun Apt, New Orleans, La.
211	D	53	Ninth	Lockheed Air Terminal, Burbank, Calif.
226	Hq	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
226	A	66	Tenth	Chicago Mun Apt, Chicago, Ill.
226	B	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
226	C	66	Tenth	Detroit-Wayne Apt, Romulus, Mich.
226	D	66	Tenth	Rosecrans Fld, St. Joseph, Mo.

AIR SERVICE GROUPS (FIGHTER) AND DETACHMENTS

201	Hq	67	First	Dow AFB, Bangor, Me.
201	A	67	First	Dow AFB, Bangor, Me.
201	B	67	First	Grenier AFB, Manchester, N.H.
201	C	67	First	Burlington Mun Apt, Burlington, Vt.
202	Hq	67	First	Logan Apt, Boston, Mass.
202	A	67	First	Logan Apt, Boston, Mass.
202	B	67	First	Barnes Mun Apt, Westfield, Mass.
202	C	67	First	Schenectady Co. Apt, Schenectady, N.Y.
203	Hq	67	First	Bradley Fld, Windsor Locks, Conn.
203	A	67	First	Bradley Fld, Windsor Locks, Conn.
203	B	67	First	Theodore F. Greene Apt, Hillsgrove, R.I.
207	Hq	52	First	Niagara Falls Mun Apt, Niagara Falls, N.Y.
207	A	52	First	Niagara Falls Mun Apt, Niagara Falls, N.Y.
207	B	52	First	Westchester Co. Apt, White Plains, N.Y.
207	C	52	First	Hancock Apt, Syracuse, N.Y.

AIR SERVICE GROUPS (FIGHTER) AND DETACHMENTS

ORG	DET	WING	AIR FORCE	LOCATION
208	Hq	52	First	Newark Mun Apt, Newark, N. J.
208	A	52	First	Mercer Co, Apt, Trenton, N. J.
208	B	52	First	Newark Mun Apt, Newark, N. J.
*208	C	52	Ninth	New Castle Co. Apt, Wilmington, Del.
212	Hq	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
212	A	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
212	B	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
212	C	53	Ninth	Reading Mun Apt, Reading, Pa.
213	Hq	53	Ninth	Andrews AFB, Washington, D. C.
213	A	53	Ninth	Andrews AFB, Washington, D. C.
213	B	53	Ninth	Baltimore Mun Apt, Baltimore, Md.
213	C	53	Ninth	Byrd Fld, Richmond, Va.
216	Hq	54	Fourteenth	Marietta AFB, Marietta, Ga.
216	A	54	Fourteenth	Marietta AFB, Marietta, Ga.
216	B	54	Fourteenth	Congaree AB, Columbia, S. C.
216	C	54	Fourteenth	Hunter Fld, Savannah, Ga.
217	Hq	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
217	A	54	Fourteenth	Key Fld, Meridian, Miss.
217	B	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
217	C	54	Fourteenth	Jacksonville Mun Apt #1, Jacksonville, Fla.
218	Hq	54	Fourteenth	Berry Fld, Nashville, Tenn.
218	A	54	Fourteenth	Berry Fld, Nashville, Tenn.
218	B	54	Fourteenth	Memphis Mun Apt, Memphis, Tenn.
218	C	54	Fourteenth	Douglas Fld, Charlotte, N. C.
221	Hq	55	Ninth	Cleveland Mun Apt, Cleveland, Ohio
221	A	55	Ninth	Dayton Mun Apt, Vandalia, Ohio
221	B	55	Ninth	Mansfield Mun Apt, Mansfield, Ohio
221	C	55	Ninth	Lockbourne AFB, Columbus, Ohio
222	Hq	71	Tenth	Stout Fld, Indianapolis, Ind.
222	A	71	Tenth	Stout Fld, Indianapolis, Ind.
222	B	71	Tenth	Baer Fld, Ft. Wayne. Ind.
232	C	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
223	Hq	55	Ninth	Standiford Fld, Louisville, Ky.
223	A	55	Ninth	Standiford Fld, Louisville, Ky.
223	B	55	Ninth	Charleston Mun Apt, Charleston, W. Va.
227	Hq	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
227	A	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
227	B	66	Tenth	Kellogg Fld, Battle Creek, Mich
227	C	66	Tenth	Great Falls Mun Apt, Great Falls, Mont.
228	Hq	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
228	A	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
228	B	66	Tenth	Truax Fld, Madison, Wis.
228	C	66	Tenth	Kirtland AFB, N. M.
231	Hq	71	Tenth	Lambert Fld, St. Louis, Mo.
231	A	71	Tenth	Lambert Fld, St. Louis, Mo.
231	B	71	Tenth	Peoria Mun Apt, Peoria, Ill.
231	C	71	Tenth	Capitol Apt, Springfield, Ill.
232	Hq	71	Tenth	Des Moines Mun Apt, Des Moines, Ia.
232	A	71	Tenth	Des Moines Mun Apt, Des Moines, Ia.
232	B	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
222	C	71	Tenth	Lincoln Apt, Lincoln, Neb.

* Atchd 53d Ftr Wg

AIR SERVICE GROUPS (FIGHTER) AND DETACHMENTS

ORG	DET	WING	AIR FORCE	LOCATION
233	Hq	86	Tenth	Holman Fld, St. Paul, Minn.
233	A	86	Tenth	Holman Fld, St. Paul, Minn.
233	B	86	Tenth	Fargo Mun Apt, Fargo, N. D.
233	C	86	Tenth	Duluth Apt, Duluth, Minn.
236	Hq	63	Twelfth	Hensley Fld, Dallas, Tex.
236	A	63	Twelfth	Hensley Fld, Dallas, Tex.
236	B	63	Twelfth	Ellington AFB, Houston, Tex.
236	C	63	Twelfth	Brooks AFB, Texas
237	Hq	63	Twelfth	Max Westheimer Fld, Norman, Okla.
237	A	63	Twelfth	Tulsa Mun Apt, Tulsa, Okla.
237	B	63	Twelfth	Adams Fld, Little Rock, Ark.
237	C	63	Twelfth	Max Westheimer Fld, Norman, Okla.
240	Hq	86	Tenth	Buckley Fld, Denver, Colo.
240	A	86	Tenth	Buckley Fld, Denver, Colo.
240	B	86	Tenth	Cheyenne Mun Apt, Cheyenne, Wyo.
240	C	86	Tenth	Wichita Mun Apt, Wichita, Kans.
242	Hq	60	Fourth	Portland Apt, Portland, Oreg.
242	A	60	Fourth	Portland Apt, Portland, Oreg.
242	B	60	Fourth	Felts Fld, Spokane, Wash.
242	C	60	Fourth	Boise Air Terminal, Boise, Idaho
244	Hq	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
244	A	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
244	B	61	Fourth	Reno AFB, Reno, Nev.
244	C	61	Fourth	Salt Lake Mun Apt, #1, Salt Lake City, Utah
246	Hq	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
246	A	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
246	B	62	Fourth	San Bernardino AFB, San Bernardino, Calif.
246	C	62	Fourth	Luke Fld, Phoenix, Ariz.
198	C			Isle Grant Apt, Puerto Rico
199	C			Bellows Fld, Oahu, T.H.

LIGHT BOMB GROUP HQS

ORG	WING	AIR FORCE	LOCATION
106	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
111	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
126	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.

LIGHT BOMBARDMENT SQUADRONS

ORG	GP	WING	AIR FORCE	
102	106	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
103	111	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
106	117	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
107	127	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
108	126	66	Tenth	Chicago Mun Apt, Chicago. Ill.
112	121	55	Ninth	Cleveland Mun Apt, Cleveland, Ohio
114	106	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
115	146	62	Fourth	Lockheed Air Terminal, Burbank, Calif.
117	111	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
122	136	63	Twelfth	New Orleans Mun Apt, New Orleans, La.
168	126	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
180	126	66	Tenth	Rosecrans Fld, St. Joseph, Mo.

UTILITY FLIGHTS, LIGHT BOMBARDMENT SQUADRONS

102	106	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
103	111	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
106	117	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
107	127	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
108	126	66	Tenth	Chicago Mun Apt, Chicago, Ill.
112	121	55	Ninth	Cleveland Mun Apt. Cleveland, Ohio
114	106	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
115	146	62	Fourth	Lockheed Air Terminal, Burbank, Calif.
117	111	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
122	136	63	Twelfth	New Orleans Mun Apt, New Orleans, La.
168	126	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
180	126	66	Tenth	Rosecrans Fld, St. Joseph, Mo.

FIGHTER GROUP HQS

ORG	WING	AIR FORCE	
101	67	First	Camp Keys, Augusta, Me.
102	67	First	Logan Apt, Boston, Mass.
103	67	First	Brainard Fld, Hartford, Conn.
107	52	First	Niagara Falls Mun Apt, Niagara Falls, N. Y.
108	52	First	Newark Mun Apt, Newark, N. J.
112	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
113	53	Ninth	Andrews AFB, Washington, D. C.
116	54	Fourteenth	Marietta AFB, Marietta, Ga.
117	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
118	54	Fourteenth	Berry Fld, Nashville, Tenn.
121	55	Ninth	Dayton Mun Apt, Vandalia, Ohio
122	71	Tenth	Stout Fld, Indianapolis, Ind.

FIGHTER GROUP HQS (Contd)

ORG	WING	AIR FORCE	LOCATION
123	55	Ninth	Standiford Fld, Louisville, Ky.
127	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
128	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
131	71	Tenth	Lambert Fld, St. Louis, Mo.
132	71	Tenth	Des Moines Mun Apt, Des Moines, Ia.
133	86	Tenth	Holman Fld, St. Paul, Minn.
136	63	Twelfth	Hensley Fld, Dallas, Tex.
137	63	Twelfth	Max Westheimer Fld, Norman, Okla.
140	86	Tenth	Buckley Fld, Denver, Colo.
142	60	Fourth	Portland Apt, Portland, Oreg.
144	61	Fourth	Oakland Mun Apt, Oakland, Calif.
146	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.

FIGHTER SQUADRONS (SE)

ORG	GP	WING	AIR FORCE	LOCATION
101	102	67	First	Logan Apt, Boston, Mass.
104	113	53	Ninth	Baltimore Mun Apt, Baltimore, Md.
105	118	54	Fourteenth	Berry Fld, Nashville, Tenn.
109	133	86	Tenth	Holman Fld, St. Paul, Minn.
110	131	71	Tenth	Lambert Fld, St. Louis, Mo.
111	136	63	Twelfth	Ellington AFB, Houston, Tex.
113	122	71	Tenth	Stout Fld, Indianapolis, Ind.
116	142	60	Fourth	Felts Fld, Spokane, Wash.
118	103	67	First	Bradley Fld, Windsor Locks, Conn.
119	108	52	First	Newark Mun Apt, Newark, N. J.
120	140	86	Tenth	Buckley Fld, Denver, Colo.
121	113	53	Ninth	Andrews AFB, Washington, D. C.
123	142	60	Fourth	Portland Apt, Portland, Oreg.
124	132	71	Tenth	Des Moines Mun Apt, Des Moines, Ia.
125	137	63	Twelfth	Tulsa Mun Apt, Tulsa, Okla.
126	128	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
127	140	86	Tenth	Wichita Mun Apt, Wichita, Kans.
128	116	54	Fourteenth	Marietta AFB, Marietta, Ga.
131	102	67	First	Barnes Mun Apt, Westfield, Mass.
133	101	67	First	Grenier AFB, Manchester, N. H.
134	101	67	First	Burlington Mun Apt, Burlington, Vt.
136	107	52	First	Niagara Falls Mun Apt, Niagara Falls, N. Y.
137	107	52	First	Westchester Co. Apt, White Plains, N. Y.
138	107	52	First	Hancock Apt, Syracuse, N. Y.
139	107	52	First	Schenectady Co. Apt, Schenectady, N. Y.
141	108	52	First	Mercer Co. Apt, Trenton, N. J.
142	108	53	Ninth	New Castle Co. Apt, Wilmington, Del.
146	112	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
147	112	53	Minth	Greater Pittsburgh Apt, Coraopolis, Pa.
148	112	53	Ninth	Reading Mun Apt, Reading, Pa.
149	113	53	Ninth	Byrd Fld, Richmond, Va.
152	103	67	First	Theodore F. Greene Apt, Hillsgrove, R. I.
153	117	54	Fourteenth	Key Fld, Meridian, Miss.
154	137	63	Twelfth	Adams Fld, Little Rock, Ark.

FIGHTER SQUADRONS (SE)

ORG	GP	WING	AIR FORCE	LOCATION
155	117	54	Fourteenth	Memphis Mun Apt, Memphis, Tenn.
156	117	54	Fourteenth	Douglas Fld, Charlotte, N. C.
157	116	54	Fourteenth	Congaree AB, Columbia, S. C.
160	117	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
162	121	55	Ninth	Dayton Mun Apt, Vandalia, Ohio
163	122	71	Tenth	Baer Fld, Ft. Wayne, Ind.
164	121	55	Ninth	Mansfield Mun Apt, Birmingham, Ala.
165	123	55	Ninth	Standiford Fld, Louisville, Ky.
166	121	55	Ninth	Lockbourne AFB, Columbus, Ohio
167	123	55	Ninth	Charleston Mun Apt, Charleston, W. Va.
169	131	71	Tenth	Peoria Mun Apt, Peoria, Ill.
170	131	71	Tenth	Capitol Apt, Springfield, Ill.
171	127	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
172	127	66	Tenth	Kellogg Fld, Battle Creek, Mich.
174	132	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
175	133	86	Tenth	Sioux Falls Mun Apt, Sioux Falls, S. D.
176	128	66	Tenth	Truax Fld, Madison, Wis.
178	133	86	Tenth	Fargo Mun Apt, Fargo, N. D.
179	133	86	Tenth	Duluth Apt, Duluth, Minn.
181	136	63	Twelfth	Hensley Fld, Dallas, Tex.
182	136	63	Twelfth	Brooks AFB, Brooks Fld, Tex.
185	137	63	Twelfth	Max Westheimer Fld, Norman, Okla.
186	142	60	Fourth	Great Falls Mun Apt, Great Falls, Mont.
187	140	86	Tenth	Cheyenne Mun Apt, Cheyenne, Wyo.
188	137	63	Twelfth	Kirtland AFB, Kirtland Field, N. M.
190	142	60	Fourth	Boise Air Terminal, Boise, Idaho
191	144	61	Fourth	Salt Lake Mun Apt #1, Salt Lake City, Utah
192	144	61	Fourth	Reno AFB, Reno, Nev.
194	144	61	Fourth	NG Ctr, P.O. Box 356, Alameda, Calif.
195	146	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
197	146	62	Fourth	Luke Fld, Phoenix, Ariz.
198				Isle Grande Apt, Puerto Rico
199				Bellows Fld, Oahu, T.H.

UTILITY FLIGHTS, FIGHTER SQUADRONS (SE)

101	102	67	First	Logan Apt, Boston, Mass.
104	113	53	Ninth	Baltimore Mun Apt, Baltimore, Md.
105	118	54	Fourteenth	Berry Fld, Nashville, Tenn.
109	133	86	Tenth	Holman Fld, St. Paul, Minn.
110	131	71	Tenth	Lambert Fld, St. Louis, Mo.
111	136	63	Twelfth	Ellington AFB, Houston, Tex.
113	122	71	Tenth	Stout Fld, Indianapolis, Ind.
116	142	60	Fourth	Felts Fld, Spokane, Wash.
118	103	67	First	Bradley Fld, Windsor Locks, Conn.
119	108	52	First	Newark Mun Apt, Newark, N. J.
120	140	86	Tenth	Buckley Fld, Denver, Colo.
121	113	53	Ninth	Andrews AFB, Washington, D. C.
123	142	60	Fourth	Portland Apt, Portland, Oreg.
124	132	71	Tenth	Des Moines Mun Apt, Des Moines, Ia.
125	137	63	Twelfth	Tulsa Mun Apt, Tulsa, Okla.

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UTILITY FLIGHTS, FIGHTER SQUADRONS (SE)

ORG	GP	WING	AIR FORCE	LOCATION
126	128	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
127	140	86	Tenth	Wichita Mun Apt, Wichita, Kans.
128	116	54	Fourteenth	Marietta AFB, Marietta, Ga.
131	102	67	First	Barnes Mun Apt, Westfield, Mass.
132	101	67	First	Dow AFB, Bangor, Me.
133	101	67	First	Grenier AFB, Manchester, N. H.
134	101	67	First	Burlington Mun Apt, Burlington, Vt.
136	107	67	First	Niagara Falls Mun Apt, Niagara Falls, N. Y.
137	107	52	First	Westchester Co. Apt, White Plains, N. Y.
138	107	52	First	Hancock Apt, Syracuse, N. Y.
139	107	52	First	Schenectady Co. Apt, Schenectady, N. Y.
141	108	52	First	Mercer Co. Apt, Trenton, N. J.
142	108	52	Ninth	New Castle Co. Apt, Wilmington, Del.
146	112	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
147	112	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
148	112	53	Ninth	Reading Mun Apt, Reading, Pa.
149	113	53	Ninth	Byrd Fld, Richmond, Va.
152	103	67	First	Theodore F. Greene Apt, Hillsgrove, R. I.
153	117	54	Fourteenth	Key Fld, Meridian, Miss.
154	137	63	Twelfth	Adams Fld, Little Rock, Ark.
155	117	54	Fourteenth	Memphis Mun Apt, Memphis, Tenn.
156	117	54	Fourteenth	Douglas Fld, Charlotte, N. C.
157	116	54	Fourteenth	Congaree AB, Columbia, S. C.
158	116	54	Fourteenth	Hunter Fld, Savannah, Ga.
159	116	54	Fourteenth	Jacksonville Mun Apt #1, Jacksonville, Fla.
160	117	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
162	121	55	Ninth	Dayton Mun Apt, Vandalia, Ohio
163	122	71	Tenth	Baer Fld, Ft. Wayne, Ind.
164	121	55	Ninth	Mansfield Mun Apt, Mansfield, Ohio
165	123	55	Ninth	Standiford Fld, Louisville, Ky.
166	121	55	Ninth	Lockbourne AFB, Columbus, Ohio
167	123	55	Ninth	Charleston Mun Apt, Charleston, W. Va.
169	131	71	Tenth	Peoria Mun Apt, Peoria, Ill.
170	131	71	Tenth	Capitol Apt, Springfield, Ill.
171	127	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
172	127	66	Tenth	Kellogg Fld, Battle Creek, Mich.
173	132	71	Tenth	Lincoln Apt, Lincoln, Neb.
174	132	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
175	133	86	Tenth	Sioux Falls Mun Apt, Sioux Falls, S. D.
176	128	66	Tenth	Truax Fld, Madison, Wis.
178	133	86	Tenth	Fargo Mun Apt, Fargo, N. D.
179	133	86	Tenth	Duluth Apt, Duluth, Minn.
181	136	63	Twelfth	Hensley Fld, Dallas, Tex.
182	136	63	Twelfth	Brooks AFB, Tex.
185	137	63	Twelfth	Max Westheimer Fld, Norman, Okla.
186	142	60	Fourth	Great Falls Mun Apt, Great Falls, Mont.
187	140	86	Tenth	Cheyenne Mun Apt, Cheyenne, Wyo.
188	137	63	Twelfth	Kirtland AFB, Kirtland Fld, N. M.
190	142	60	Fourth	Boise Air Terminal, Boise, Idaho
191	144	61	Fourth	Salt Lake Mun Apt #1, Salt Lake City, Utah
192	144	61	Fourth	Reno AFB, Reno, Nev.
194	144	61	Fourth	Oakland Mun Apt, Oakland, Calif.

UTILITY FLIGHTS, FIGHTER SQUADRONS (SE)

ORG	GP	WING	AIR FORCE	LOCATION
195	146	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
196	146	62	Fourth	San Bernardino AFB, San Bernardino, Calif.
197	146	62	Fourth	Luke Fld, Phoenix, Ariz.
198				Isle Grande Apt, Puerto Rico
199				Bellows Fld, Oahu, T.H.
132	101	67	First	Dow AFB, Bangor, Me.
158	166	54	Fourteenth	Hunter Fld, Savannah, Ga.
159	116	54	Fourteenth	Jacksonville Mun Apt #1, Jacksonville, Fla.
173	140	86	Tenth	Lincoln Apt, Lincoln, Neb.
196	146	62	Fourth	San Bernardino AFB, San Bernardino, Calif.

FIGHTER SQUADRONS (JF)

ORG	GP	WING	AIR FORCE	LOCATION
132	101	67	First	Dow AFB, Bangor, Me.
158	166	54	Fourteenth	Hunter Fld, Savannah, Ga.
159	116	54	Fourteenth	Jacksonville Mun Apt #1, Jacksonville, Fla.
173	140	71	Tenth	Lincoln Apt, Lincoln, Neb.
196	146	62	Fourth	San Bernardino AFB, San Bernardino, Calif.

ENGINEER AVIATION BATTALIONS (HQ & SV CO)

ORG	WING	AIR FORCE	LOCATION
1901	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
1902	53	Ninth	Johnstown, Pa.
1903	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
1905	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.

ENGINEER AVIATION COMPANIES

ORG	BN	WING	AIR FORCE	
1801	1901	52	First	Commonwealth Armory, Boston, Mass.
1802	1901	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
1803	1902	53	Ninth	Johnstown, Pa.
1804	(SEP)	54	Fourteenth	Marietta AFB, Marietta, Ga.
1805	1902	53	Ninth	Lunken Apt, Cincinnati, Ohio
1806	1903	66	Tenth	Detroit, Mich.
1807	1903	66	Tenth	1 Grant Ave, Jefferson Bks, St. Louis, Mo.
1808	(SEP)	63	Twelfth	Ellington AFB, Houston, Tex.
1809	1903	66	Tenth	Buckley Fld, Denver, Colo.
1810	1905	61	Fourth	Portland Apt, Portland, Oreg.
1811	1905	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
1812	1905	61	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.

WEATHER STATIONS (TYPE A)

ORG	WING	AIR FORCE	
101	67	First	Logan Apt, Boston, Mass.
102	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
103	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
104	53	Ninth	Baltimore Mun Apt, Baltimore, Md.
105	54	Fourteenth	Berry Fld, Nashville, Tenn.
106	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
107	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
108	66	Tenth	Chicago Mun Apt, Chicago, Ill.
109	86	Tenth	Holman Fld, St. Paul, Minn.
110	71	Tenth	Lambert Fld, St. Louis, Mo.
111	63	Twelfth	Ellington AFB, Houston, Tex.
112	55	Ninth	Cleveland Mun Apt, Cleveland, Ohio
113	71	Tenth	Stout Fld, Indianapolis, Ind.
114	52	First	Floyd Bennett NAS, Brooklyn, N. Y.
115	62	Fourth	Lockheed Air Terminal, Burbank, Calif.
116	60	Fourth	Felts Fld, Spokane, Wash.
117	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
118	67	First	Bradley Fld, Windsor Locks, N. H.
119	52	First	Newark Mun Apt, Newark, N. J.
120	86	Tenth	Buckley Fld, Denver, Colo.
121	53	Ninth	Andrews AFB, Washington, D. C.

WEATHER STATIONS (TYPE A) (Contd)

ORG	WING	AIR FORCE	LOCATION
122	63	Twelfth	New Orleans Mun Apt, New Orleans, La.
123	60	Fourth	Portland Apt, Portland, Oreg.
124	71	Tenth	Des Moines Mun Apt, Des Moines, Ia.
125	63	Twelfth	Tulsa Mun Apt, Tulsa, Okla.
126	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
127	86	Tenth	Wichita Mun Apt, Wichita, Kans.
128	54	Fourteenth	Marietta AFB, Marietta, Ga.
131	67	First	Barnes Mun Apt, Westfield, Mass.
132	67	First	Dow AFB, Bangor, Me.
133	67	First	Grenier AFB, Manchester, N. H.
134	67	First	Burlington Mun Apt, Burlington, Vt.
136	52	First	Niagara Falls Mun Apt, Niagara Falls, N. Y.
137	52	First	Westchester Co. Apt, White Plains, N. Y.
138	52	First	Hancock Apt, Syracuse, N. Y.
139	52	First	Schenectady Co. Apt, Schenectady, N. Y.
141	52	First	Mercer Co. Apt, Trenton, N. J.
142	53	Ninth	New Castle Co. Apt, Wilmington, Del.
146	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
147	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
148	53	Ninth	Reading Mun Apt, Reading, Pa.
149	53	Ninth	Byrd Fld, Richmond, Va.
152	67	First	Theodore F. Greene Apt, Hillsgrove, R. I.
153	54	Fourteenth	Key Fld, Meridian, Miss.
154	63	Twelfth	Adams Fld, Little Rock, Ark.
155	54	Fourteenth	Memphis Mun Apt, Memphis, Tenn.
156	54	Fourteenth	Douglas Fld, Charlotte, N. C.
157	54	Fourteenth	Congaree AB, Columbia, S. C.
158	54	Fourteenth	Hunter Fld, Savannah, Ga.
159	54	Fourteenth	Jacksonville Mun Apt #1, Jacksonville, Fla.
160	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
162	55	Ninth	Dayton Mun Apt, Vandalia, Ohio
163	71	Tenth	Baer Fld, Ft. Wayne, Ind.
164	55	Ninth	Mansfield Mun Apt, Mansfield, Ohio
165	55	Ninth	Standiford Fld, Louisville, Ky.
166	55	Ninth	Lockbourne AFB, Columbus, Ohio
167	55	Ninth	Charleston Mun Apt, Charleston, W. Va.
168	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
169	71	Tenth	Peoria Mun Apt, Peoria, Ill.
170	71	Tenth	Capitol Apt, Springfield, Ill.
171	55	First	Detroit-Wayne Major Apt, Romulus, Mich.
172	55	First	Kellogg Fld, Battle Creek, Mich.
173	71	Tenth	Lincoln Apt, Lincoln, Neb.

WEATHER STATIONS (TYPE A) (Contd)

ORG	WING	AIR FORCE	LOCATION
174	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
175	86	Tenth	Sioux Falls Mun Apt, Sioux Falls, S. D.
176	66	Tenth	Truax Fld, Madison, Wis.
178	86	Tenth	Fargo Mun Apt, Fargo, N. D.
179	86	Tenth	Duluth Apt, Duluth, Minn.
180	66	Tenth	Rosecrans Fld, St. Joseph, Mo.
181	63	Twelfth	Hensley Fld, Dallas, Tex.
182	63	Twelfth	Brooks AFB, Tex.
185	63	Twelfth	Max Westheimer Fld, Norman, Okla.
186	60	Fourth	Great Falls Mun Apt, Great Falls, Mont.
187	86	Tenth	Cheyenne Mun Apt, Cheyenne, Wyo.
188	63	Twelfth	Kirtland AFB, Kirtland, N. M.
190	60	Fourth	Boise Air Terminal, Boise, Idaho
191	61	Fourth	Salt Lake Mun Apt #1, Salt Lake City, Utah
192	61	Fourth	Reno AFB, Reno Nev.
194	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
195	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
196	62	Fourth	San Bernardino AFB, San Bernardino, Calif.
197	62	Fourth	Luke Fld, Phoenix, Ariz.
198			Isle Grande Apt, Puerto Rico
199			Bellows Fld, Oahu, T.H.
			WING BANDS
530	54	Fourteenth	Marietta AFB, Marietta, Ga.
531	63	Twelfth	Ellington AFB, Houston, Tex.
532	86	Tenth	Buckley Fld, Denver, Colo.
552	52	First	State Armory, White Plains, N. Y.
553	53	Ninth	Harrisburg Mun Apt, New Cumberland, Pa.
555	55	Ninth	NG Armory, Toledo, Ohio
560	60	Fourth	Ft. George Wright, Spokane, Wash.
561	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
562	62	Fourth	Lockheed Air Terminal, Burbank, Calif.
566	66	Tenth	Chicago-Orchard Apt, Park Ridge, Ill.
567	67	First	Commonwealth Armory, Boston, Mass.
571	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis, Mo.

SECTION III

AIR NATIONAL GUARD UNITS BY WING

52D FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
52 Ftr Wg Hq & Hq Sq	State Armory, White Plains, N.Y.
552 USAF Band	State Armory, White Plains, N.Y.
102 USAF Comm Sq (Wg)	State Armory, White Plains, N.Y.
602 Sig Lt Const Co (Avn)	Floyd Bennett NAS, Brooklyn, N.Y.
1901 EAB Hq & Sv Co	Floyd Bennett NAS, Brooklyn, N.Y.
1802 Eng Avn Co (1901 EAB)	Floyd Bennett NAS, Brooklyn, N.Y.
1801 Eng Avn Co (1901 EAB) (Atchd 67 Ftr Wg)	Commonwealth Armory, Boston, Mass.
152 AC&W Gp Hq	State Armory, White Plains, N.Y.
106 AC Sq	State Armory, White Plains, N.Y.
107 AC&W Sq (LS)	State Armory, White Plains, N.Y.
108 AC&W Sq (F)	Hancock apt, Syracuse, N.Y.
102 Radar Calib Det	State Armory, White Plains, N.Y.
106 Bomb Gp (L) Hq	Floyd Bennett NAS, Brooklyn, N.Y.
102 Bomb Sq (L)	Floyd Bennett NAS, Brooklyn, N.Y.
102 Bomb Sq (L) Util Flt	Floyd Bennett NAS, Brooklyn, N.Y.
114 Bomb Sq (L)	Floyd Bennett NAS, Brooklyn,,N.Y.
114 Bomb Sq (L) Util Flt	Floyd Bennett NAS, Brooklyn, N.Y.
107 Ftr Gp Hq	Niagara Falls Mun Apt, Niagara Falls, N.Y.
136 Ftr Sq (SE)	Niagara Falls Mun Apt, Niagara Falls, N.Y.
136 Ftr Sq (SE) Util Flt	Niagara Falls, Mun Apt, Niagara Falls, N.Y.
137 Ftr Sq (SE)	Westchester Co Apt, White Plains, N.Y.
137 Ftr Sq (SE) Util Flt	Westchester Co Apt, White Plains, N.Y.
138 Ftr Sq (SE)	Hancock Apt, Syracuse, N.Y.
138 Ftr Sq (SE) Util Flt	Hancock Apt, Syracuse, N.Y.
139 Ftr Sq (SE)	Schenectady Co Apt, Schenectady, N.Y.
139 Ftr Sq (SE) Util Flt	Schenectady Co Apt, Schenectady, N.Y.
108 Ftr Gp Hq	Newark Mun Apt, Newark, N.J.
119 Ftr Sq (SE)	Newark Mun Apt, Newark, N.J.
119 Ftr Sq (SE) Util Flt	Newark Mun Apt, Newark, N.J.
141 Ftr Sq (SE)	Mercer Co Apt, Trenton, N.J.
141 Ftr Sq (SE) Util Flt	Mercer Co Apt, Trenton, N.J.
206 AS Gp (LF) Hq Det	Floyd Bennett NAS, Brooklyn, N.Y.
Det A	Floyd Bennett NAS, Brooklyn, N.Y.
Det B	Floyd Bennett NAS, Brooklyn, N.Y.
Det C (Atchd 217 ASG (Ftr))	Birmingham Mun Apt, Birmingham, Ala.
Det D (Atchd 221 ASG (Ftr))	Cleveland Mun Apt, Cleveland, Ohio

52D FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
207 AS Gp (Ftr) Hq Det	Niagara Falls Mun Apt, Niagara Falls, N.Y.
Det A	Niagara Falls Mun Apt, Niagara Falls, N.Y.
Det B	Westchester Co Apt, White Plains, N.Y.
Det C	Hancock Apt, Syracuse, N.Y.
Det C, 202 ASG (Ftr)	Schenectady Co Apt, Schenectady, N.Y.
208 AS Gp (Ftr) Hq Det	Newark Mun Apt, Newark, N.Y.
Det A	Mercer Co Apt, Trenton, N.J.
Det B	Newark Mun Apt, Newark, N.J.
Det C (Atchd 213 ASG (Ftr))	New Castle Co Apt, Wilmington, Del.
102 Wea Sta (Type A)	Floyd Bennett NAS, Brooklyn, N.Y.
114 Wea Sta (Type A)	Floyd Bennett NAS, Brooklyn, N.Y.
119 Wea Sta (Type A)	Newark Mun Apt, Newark, N.J.
136 Wea Sta (Type A)	Niagara Falls, Mun Apt, Niagara Falls, N.Y.
137 Wea Sta (Type A)	Westchester Co Apt, White Plains, N.Y.
138 Wea Sta (Type A)	Hancock Apt, Syracuse, N.Y.
139 Wea Sta (Type A)	Schenectady Co Apt, Schenectady, N.Y.
141 Wea Sta (Type A)	Mercer Co Apt, Trenton, N.J.

53D FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
53 Ftr Wg Hq & Hq Sq	Harrisburg Mun Apt, New Cumberland, Pa.
553 USAF Band	Harrisburg Mun Apt, New Cumberland, Pa.
103 USAF Comm Sq (Wg)	Harrisburg Mun Apt, New Cumberland, Pa.
603 Sig Lt Const Co (Avn)	Philadelphia Int Apt, Philadelphia, Pa.
1902 EAB Hq & Sv Co	Johnstown, Pa.
1803 Eng Avn Co (1902 EAB)	Johnstown, Pa.
1805 Eng Avn Co (1902 EAB) (Atchd 55 Ftr Wg)	Lunken Apt. Cincinnati, Ohio
153 AC&W Gp Hq	Harrisburg Mun Apt, New Cumberland, Pa.
111 AC Sq	Harrisburg Mun Apt, New Cumberland, Pa.
112 AC&W Sq (LS)	State College, Pa.
113 AC&W Sq (F)	NG Armory, Washington, D. C.
103 Radar Calib Det	Reading Mun Apt, Reading, Pa.
111 Bomb Gp (L) Hq	Philadelphia Int Apt, Philadelphia, Pa.
103 Bomb Sq (L)	Philadelphia Int Apt, Philadelphia, Pa.
103 Bomb Sq (L) Util Flt	Philadelphia Int Apt, Philadelphia, Pa.
117 Bomb Sq (L)	Philadelphia Int Apt, Philadelphia, Pa.
117 Bomb Sq (L) Util Flt	Philadelphia Int Apt, Philadelphia, Pa.
112 Ftr Gp Hq	Greater Pittsburgh Apt, Coraopolis, Pa.
146 Ftr Sq (SE)	Greater Pittsburgh Apt, Coraopolis, Pa.
146 Ftr Sq (SE) Util Flt	Greater Pittsburgh Apt, Coraopolis, Pa.
147 Ftr Sq (SE)	Greater Pittsburgh Apt, Coraopolis, Pa.
147 Ftr Sq (SE) Util Flt	Greater Pittsburgh Apt, Coraopolis, Pa.
148 Ftr Sq (SE)	Reading Mun Apt, Reading, Pa.
148 Ftr Sq (SE) Util Flt	Reading Mun Apt, Reading, Pa.
113 Ftr Gp Hq	Andrews AFB, Washington, D. C.
104 Ftr Sq (SE)	Baltimore Mun Apt, Baltimore, Md.
104 Ftr Sq (SE) Util Flt	Baltimore Mun Apt, Baltimore, Md.
121 Ftr Sq (SE)	Andrews AFB, Washington, D. C.
121 Ftr Sq (SE) Util Flt	Andrews AFB, Washington, D. C.
142 Ftr Sq (SE)	New Castle Co,Apt, Wilmington, Del.
142 Ftr Sq (SE) Util Flt	New Castle Co Apt, Wilmington, Del.
149 Ftr Sq (SE)	Byrd Fld, Richmond, Va.
149 Ftr Sq (SE) Util Flt	Byrd Fld, Richmond, Va.
211 AS Gp (LD) Hq Det	Philadelphia Int Apt, Philadelphia, Pa.
Det A	Philadelphia Int Apt, Philadelphia, Pa.
Det B	Philadelphia Int Apt, Philadelphia, Pa.
Det C (Atchd 236 ASG (FTR))	New Orleans Mun Apt , New Orleans, La.
Det D (Atchd 246 ASG (FTR))	Van Nuys Met Apt, Van Nuys, Calif.

53D FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
212 AS Gp (Ftr) Hq Det	Greater Pittsburgh Apt, Coraopolis, Pa.
Det A	Greater Pittsburgh Apt, Coraopolis, Pa.
Det B	Greater Pittsburgh Apt, Coraopolis, Pa.
Det C	Reading Mun Apt, Reading, Pa.
213 AS Gp (Ftr) Hq Det	Andrews AFB, Washington, D. C.
Det A	Andrews AFB, Washington, D. C.
Det B	Baltimore Mun Apt, Baltimore, Md.
Det C	Byrd Fld, Richmond, Va.
Det C, 208 ASG (Ftr)	New Castle Co Apt, Wilmington, Del.
103 Wea Sta (Type A)	Philadelphia Int Apt, Philadelphia, Pa.
104 Wea Sta (Type A)	Baltimore Mun Apt, Baltimore, Md.
117 Wea Sta (Type A)	Philadelphia Int Apt, Philadelphia, Pa.
121 Wea Sta (Type A)	Andrews AFB, Washington, D.C.
142 Wea Sta (Type A)	New Castle Co Apt, Wilmington, Del.
146 Wea Sta (Type A)	Greater Pittsburgh Apt, Coraopolis, Pa.
147 Wea Sta (Type A)	Greater Pittsburgh Apt, Coraopolis, Pa.
148 Wea Sta (Type A)	Reading Mun Apt, Reading, Pa.
149 Wea Sta (Type A)	Byrd Fld, Richmond, Va.

54TH FIGHTER WING

FOURTEENTH AIR FORCE

UNIT	LOCATION
54 Ftr Wg Hq & Hq Sq	Marietta AFB, Marietta, Ga.
530 USAF Band	Marietta AFB, Marietta, Ga.
104 USAF Comm Sq (WG)	Marietta AFB, Marietta, Ga.
604 Sig Lt Const Co (Avn)	Marietta AFB, Marietta, Ga.
1804 Eng Avn Co (Sep)	Marietta AFB, Marietta, Ga.
154 AC&W Gp Hq	Marietta AFB, Marietta, Ga.
116 AC Sq	Marietta AFB, Marietta, Ga.
117 AC&W Sq (LS)	Hunter Fld, Savannah, Ga.
118 AC&W Sq (F)	Douglas Fld, Charlotte, N. C.
104 Radar Calib Det	Marietta AFB, Marietta, Ga.
116 Ftr Gp Hq	Marietta AFB, Marietta, Ga.
128 Ftr Sq (SE)	Marietta AFB, Marietta, Ga.
128 Ftr Sq (SE) Util Flt	Marietta AFB, Marietta, Ga.
157 Ftr Sq (SE)	Congaree AFB, Columbia, SC
157 Ftr Sq (SE) Util Flt	Congaree AB, Columbia, S. C.
158 Ftr Sq (JP)	Hunter Fld, Savannah, Ga.
158 Ftr Sq (JP) Util Flt	Hunter Fld, Savannah, Ga.
159 Ftr Sq (JP)	Jacksonville Mun Apt #1,Jacksonville, Fla.
159 Ftr Sq (SE) Util Flt	Jacksonville Mun Apt #1, Jacksonville, Fla.
117 Ftr Gp Hq	Birmingham Mun Apt, Birmingham, Ala.
106 Bomb Sq (L)	Birmingham Mun Apt, Birmingham, Ala.
106 Bomb Sq (L) Util Flt	Birmingham Mun Apt, Birmingham, Ala.
153 Ftr Sq (SE)	Key Fld, Meridian, Miss.
153 Ftr Sq (SE) Util Flt	Key Fld, Meridian, Miss.
160 Ftr Sq (SE)	Birmingham Mun Apt, Birmingham Ala
160 Ftr Sq (SE) Util Flt	Birmingham Mun Apt, Birmingham Ala
118 Ftr Gp Hq	Berry Fld, Nashville, Tenn.
105 Ftr Sq (SE)	Berry Fld, Nashville, Tenn.
105 Ftr Sq (SE) Util Flt	Berry Fld, Nashville, Tenn.
155 Ftr Sq (SE)	Memphis Mun Apt, Memphis, Tenn.
155 Ftr Sq (SE) Util Flt	Memphis Mun Apt, Memphis, Tenn.
156 Ftr Sq (SE)	Douglas Fld, Charlotte, N. C.
156 Ftr Sq (SE) Util Flt	Douglas Fld, Charlotte, N. C.
216 AS Gp (Ftr) Hq Det	Marietta AFB, Marietta, Ga.
Det A	Marietta AFB, Marietta, Ga.
Det B	Congaree AB, Columbia, SC
Det C	Hunter Fld, Savannah, Ga.
Det C, 217 ASG (Ftr)	Jacksonville Mun Apt #1, Jacksonville, Fla.
217 AS Gp (Ftr) Hq Det	Birmingham Mun Apt, Birmingham, Ala.
Det A	Key Fld, Meridian, Miss
Det B	Birmingham Mun Apt, Birmingham, Ala.
Det C (Atchd 216 ASG (Ftr))	Jacksonville Mun Apt #1, Jacksonville, Fla.
Det C, 206 ASG (LB)	Birmingham Mun Apt, Birmingham, Ala.

54TH FIGHTER WING

FOURTEENTH AIR FORCE

UNIT	LOCATION
218 AS Gp (Ftr) Hq Det	Berry Fld, Nashville, Tenn.
Det A	Berry Fld, Nashville, Tenn.
Det B	Memphis Mun Apt, Memphis, Tenn.
Det C	Douglas Fld, Charlotte, N. C.
105 Wea Sta (Type A)	Berry Fld, Nashville, Tenn.
106 Wea Sta (Type A)	Birmingham Mun Apt, Birmingham, Ala.
128 Wea Sta (Type A)	Marietta AFB, Marietta, Ga.
153 Wea Sta (Type A)	Key Fld, Meridian, Miss.
155 Wea Sta (Type A)	Memphis Mun Apt, Memphis, Tenn.
156 Wea Sta (Type A)	Douglas Fld, Charlotte, N. C.
157 Wea Sta (Type A)	Congaree AB, Columbia, S. C.
158 Wea Sta (Type A)	Hunter Fld, Savannah, Ga.
159 Wea Sta (Type A)	Jacksonville, Mun Apt, #1, Jacksonville, Fla.
160 Wea Sta (Type A)	Birmingham Mun Apt, Birmingham, Ala.

55TH FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
55 Ftr Wg Hq & Hq Sq	Lockbourne AFB, Columbus, Ohio
555 USAF Band	NG Armory, Toledo, Ohio
105 USAF Comm Sq (Wg)	NG Armory, Zanesville, Ohio
605 Sig Lt Const Co (Avn)	State Armory, Springfield, Ohio
1805 Eng Avn Co (1902 EAB) (Atchd fr 53 Ftr Wg)	Lunken Apt, Cincinnati, Ohio
155 AC&W Gp Hq	Ft Hayes, Columbus, Ohio
121 AC Sq	Ft Hayes, Columbus, Ohio
123 AC&W Sq (F)	Lunken Apt, Cincinnati, Ohio
105 Radar Calib Det	Lockbourne AFB, Columbus, Ohio
121 Ftr Gp Hq	Dayton Mun Apt, Vandalia, Ohio
112 Bomb Sq (L)	Cleveland Mun Apt, Cleveland, Ohio
112 Bomb Sq (L) Util Flt	Cleveland Mun Apt, Cleveland, Ohio
162 Ftr Sq (SE)	Dayton Mun Apt, Vandalia, Ohio
162 Ftr Sq (SE) Util Flt	Dayton Mun Apt, Vandalia, Ohio
164 Ftr Sq (SE)	Mansfield Mun Apt, Mansfield, Ohio
164 Ftr Sq (SE) Util Flt	Mansfield Mun Apt, Mansfield, Ohio
166 Ftr Sq (SE)	Lockbourne AFB, Columbus, Ohio
166 Ftr Sq (SE) Util Flt	Lockbourne AFB, Columbus, Ohio
123 Ftr Gp Hq	Standiford Fld, Louisville, Ky.
165 Ftr Sq (SE)	Standiford Fld, Louisville, Ky.
165 Ftr Sq (SE) Util Flt	Standiford Fld, Louisville, Ky.
167 Ftr Sq (SE)	Charleston Mun Apt, Charleston, W. Va.
167 Ftr Sq (SE) Util Flt	Charleston Mun Apt, Charleston , W. Va.
221 AS Gp (Ftr) Hq Det	Cleveland Mun Apt, Cleveland, Ohio
Det A	Dayton Mun Apt, Vandalia, Ohio
Det B	Mansfield Mun Apt, Mansfield, Ohio
Det C	Lockbourne AFB, Columbus, Ohio
Det D 206 ASG (LB)	Cleveland Mun Apt, Cleveland, Ohio
223 AS Gp (Ftr) Hq Det	Standiford Fld, Lousiville, Ky.
Det A	Standiford Fld, Louisville, Ky.
Det B	Charleston Mun Apt, Charleston, W. Va.

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55TH FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
112 Wea Sta (Type A)	Cleveland Mun Apt, Cleveland, Ohio
162 Wea Sta (Type A)	Dayton Mun Apt, Vandalia, Ohio
164 Wea Sta (Type A)	Mansfield Mun Apt, Mansfield, Ohio
165 Wea Sta (Type A)	Standiford Fld, Louisville, Ky.
166 Wea Sta (Type A)	Lockbourne AFB, Columbus, Ohio
167 Wea Sta (Type A)	Charleston Mun Apt, Charleston, W. Va.

60TH FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
60 Ftr Wg Hq & Hq Sq	Ft George Wright, Spokane, Wash.
560 USAF Band	Ft George Wright, Spokane, Wash.
110 USAF Comm Sq (WG)	Ft George Wright, Spokane, Wash.
610th Sig Lt Const Co (Avn)	Boeing Fld, Seattle, Wash.
1810 Eng Avn Co (1905 EAB) (Atchd fr 61st Ftr Wg)	Portland Apt, Portland, Oregon
160 AC&W Gp Hq	Ft George Wright, Spokane, Wash.
141 AC Sq	Ft George Wright, Spokane, Wash.
142 AC&W Sq (LS)	Portland Apt, Portland, Oregon
143 AC&W (F)	Old Armory, Seattle, Wash.
110 Radar Calib Det	Old Armory, Seattle, Washington
142 Ftr Gp Hq	Portland Apt, Portland, Oregon
116 Ftr Sq (SE)	Felts Fld, Spokane, Wash.
116 Ftr Sq (SE) Util Flt	Felts Fld, Spokane, Wash.
123 Ftr Sq (SE)	Portland Apt, Portland, Oregon
123 Ftr Sq (SE) Util Flt	Portland Apt, Portland, Oregon
190 Ftr Sq (SE)	Boise Air Terminal, Boise, Idaho
190 Ftr Sq (SE) Util Flt	Boise Air Terminal, Boise, Idaho
186 Ftr Sq (SE)	Great Falls Mun apt, Great Falls, Mont.
186 Ftr Sq (SE) Util Flt	Great Falls Mun Apt, Great Falls, Mont.
242 AS Gp (Ftr) Hq Det	Portland Apt, Portland, Oregon
Det A	Portland Apt, Portland, Oregon
Det B	Felts Fld, Spokane, Wash.
Det C	Boise Air Terminal, Boise, Idaho
Det C, 227 ASG (Ftr)	Great Falls Mun Apt, Great Falls, Mont.
116 Wea Sta (Type A)	Felts Fld, Spokane, Wash.
123 Wea Sta (Type A)	Portland Apt, Portland, Oregon
186 Wea Sta (Type A)	Great Falls Mun Apt, Great Falls, Mont.
190 Wea Sta (Type A)	Boise Air Terminal, Boise, Idaho

61ST FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
61 Ftr Wg Hq & Hq Sq	NG Ctr, PO Box 356, Alameda, Calif.
561 USAF Band	NG Ctr, PO Box 356, Alameda, Calif.
111 USAF Comm Sq (Wg)	NG Ctr, PO Box 356, Alameda, Calif.
611 Sig Lt Const Co (Avn)	NG Ctr, PO Box 356, Alameda, Calif.
1905 EAB Hq & Sv Co	NG Ctr, PO Box 356, Alameda, Calif.
1810 Eng Avn Co (1905 EAB) (Atchd 60 Ftr Wg)	Portland Apt, Portland, Oregon.
1811 Eng Avn Co (1905 EAB)	NG Ctr, PO Box 356, Alameda, Calif.
1812 Eng Avn Co (1905 EAB)	NG Ctr, PO Box 356, Alameda, Calif.
161 AC&W Gp Hq	NG Ctr, PO Box 356, Alameda, Calif.
144 AC Sq	NG Ctr, PO Box 356, Alameda, Calif.
145 AC&W Sq (LS)	Ft Funston, San Francisco, Calif.
146 AC&W Sq (F)	Camp Kohler, Sacramento, Calif.
111 Radar Calib Det	NG Ctr, PO Box 356, Alameda, Calif.
144 Ftr Gp Hq	Oakland Mun Apt, Oakland, Calif.
191 Ftr Sq (SE)	Salt Lake Mun Apt #1, Salt Lake City, Utah
191 Ftr Sq (SE) Util Flt	Salt Lake Mun Apt #1, Salt Lake City, Utah
192 Ftr Sq (SE)	Reno AFB, Reno, Neb.
192 Ftr Sq (SE) Util Flt	Reno AFB, Reno, Neb.
194 Ftr Sq (SE)	NG Ctr, PO Box 356, Alameda, Calif.
194 Ftr Sq (SE) Util Flt	Oakland Mun Apt, Oakland, Calif.
244 AS Gp (Ftr) Hq Det	NG Ctr, PO Box 356, Alameda, Calif.
Det A	NG Ctr, PO Box 356, Alameda, Calif.
Det B	NG Ctr, PO Box 356, Alameda, Calif.
Det C	Salt Lake Mun Apt #1, Salt Lake City, Utah
191 Wea Sta (Type A)	Salt Lake Mun Apt #1, Salt Lake City, Utah
192 Wea Sta (Type A)	Reno AFB, Reno, Nev.
194 Wea Sta (Type A)	NG Ctr, PO Box 356, Alameda, Calif.

62ND FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
62 Ftr Wg Hq & Hq Sq	Lockheed Air Terminal, Burbank, Calif.
562 USAF Band	Lockheed Air Terminal, Burbahk, Calif.
112 USAF Comm Sq (Wg)	Lockheed Air Terminal, Burbank, Calif.
615 Sig Lt Const Co (Avn)	Lockheed Air Terminal, Burbank, Calif.
1812 Eng Avn Co (1905 EAB) (Atchd fr 61 Ftr Wg)	Van Nuys Metro Apt. Van Nuys, Calif.
162 AC&W Gp Hq	Lockheed Air Terminal, Burbank, Calif.
147 AC Sq	Lockheed Air Terminal, Burbank, Calif.
148 AC&W Sq (LS)	Compton Apt, Compton, Calif.
149 AC&W Sq (F)	Ontario Inter Apt, Ontario, Calif.
112 Radar Calib Det	Lockheed Air Terminal, Burbank, Calif.
146 Ftr Gp Hq	Van Nuys Metro Apt. Van Nuys, Calif.
115 Bomb Sq (L)	Lockheed Air Terminal, Burbank, Calif.
115 Bomb Sq (L) Util Flt	Lockheed Air Terminal, Burbank, Calif.
195 Ftr Sq (SE)	Van Nuys Metro Apt, Van Nuys, Calif.
195 Ftr Sq (SE) Util Flt	Van Nuys Metro Apt, Van Nuys, Calif.
196 Ftr Sq (JP)	San Bernardino AFB, San Bernardino, Calif.
196 Ftr Sq (SE) Util Flt	San Bernardino AFB, San Bernardino, Calif.
197 Ftr Sq (SE)	Luke Fld, Phoenix, Ariz.
197 Ftr Sq (SE) Util Flt	Luke Fld, Phoenix, Ariz.
246 AS Gp (Ftr) Hq Det	Van Nuys Metro Apt, Van Nuys, Calif.
Det A	Van Nuys Metro Apt, Van Nuys, Calif.
Det B	San Bernardino AFB, San Bernardino, Calif.
Det C	Luke Fld, Phoenix, Airz.
*Det D,211 ASG (LB)	Lockheed Air Terminal, Burbank, Calif.
115 Wea Sta (Type A)	Lockheed Air Terminal, Burbank, Calif.
195 Wea Sta (Type A)	Van Nuys Metro Apt. Van Nuys, Calif.
196 Wea Sta (Type A)	San Bernardino AFB, San Bernardino, Calif.
197 Wea Sta (Type A)	Luke Fld, Phoenix, Airz.

63D FIGHTER WING

TWELFTH AIR FORCE

UNIT	LOCATION
63 Ftr Wg Hq & Hq Sq	Ellington AFB, Houston, Texas.
531 USAF Band	Ellington AFB, Houston, Texas
108 USAF Comm Sq (WG)	Ellington AFB, Houston, Texas
608 Sig Lt Const Co (Avn)	Ellington AFB, Houston, Texas
1808 Eng Avn Co (Sep)	Hensley Fld, Dallas, Texas
158 AC&W Gp Hq	Ellington AFB, Houston, Texas.
134 AC Sq	LaPorte, Texas
135 AC&W Sq (LS)	Jackson Barracks, New Orleans, La.
136 AC&W Sq (F)	Jefferson Co Apt, Beaumont, Texas
108 Radar Calib Det	Ellington AFB, Houston, Texas
136 Ftr Gp Hq	Hensley Fld, Dallas, Texas
111 Ftr Sq (SE)	Ellington AFB, Houston, Texas
111 Ftr Sq (SE) Util Flt	Ellingtn AFB, Houston, Texas
122 Bomb Sq (L)	New Orleans Mun Apt, New Orleans, La.
122 Bomb Sq (L) Util Flt	New Orleans Mun Apt, New Orleans, La.
181 Ftr Sq (SE)	Hensley Fld, Dallas, Texas.
181 Ftr Sq (SE) Util Flt	Hensley Fld, Dallas, Texas
182 Ftr Sq (SE)	Brooks AFB, Texas
182 Ftr Sq (SE) Util Flt	Brooks AFB, Texas
137 Ftr Gp Hq	Max Westheimer Fld, Norman, Okla.
125 Ftr Sq (SE)	Tulsa Mun Apt, Tulsa, Okla.
125 Ftr Sq (SE) Util Flt	Tulsa Mun Apt, Tulsa, Okla.
154 Ftr Sq (SE)	Adams Fld, Little Rock, Ark.
154 Ftr Sq (SE) Util Flt	Adams Fld, Little Rock, Ark.
185 Ftr Sq (SE)	Max Westheimer Fld, Norman, Okla.
185 Ftr Sq (SE) Util Flt	Mas Westheimer Fld, Norman, Okla.
188 Ftr Sq (SE)	Kirtland AFB, N.M.
188 Ftr Sq (SE) Util Flt	Kirtland AFB, N.M.
236 AS Gp (Ftr) Hq Det	Hensley Fld, Dallas, Texas.
Det A	Hensley Fld, Dallas, Texas
Det B	Ellington AFB, Houston, Texas
Det C	Brooks AFB, Texas
Det C, 211 ASG (LB)	New Orleans Mun Apt, New Orleans, La.
237 AS Gp (Ftr) Hq Det	Max Westheimer Fld, Norman, Okla
Det A	Tulsa Mun Apt, Tulsa, Okla.
Det B	Adams Fld, Little Rock, Ark.
Det C	Max Westheimer Fld, Norman, Okla
Det C, 228, ASG (Ftr)	Kirtland AFB, N.M.

63D FIGHTER WING

TWELFTH AIR FORCE

UNIT	LOCATION
111 Wea Sta (Type A)	Ellington AFB, Houston, Texas
122 Wea Sta (Type A)	New Orleans Mun Apt, New Orleans, La.
125 Wea Sta (Type A)	Tulsa Mun Apt, Tulsa, Okla.
154 Wea Sta (Type A)	Adams Fld, Little Rock, Ark.
181 Wea Sta (Type A)	Hensley Fld, Dallas, Texas
182 Wea Sta (Type A)	Brooks AFB, Texas
185 Wea Sta (Type A)	Max Westheimer Fld, Norman, Okla
188 Wea Sta (Type A)	Kirtland AFB, N.M.

66TH FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
66 Ftr Wg Hq & Hq Sq	Chicago-Orchard Apt, Park Ridge, Ill
566 USAF Band	Chicago-Orchard Apt, Park Ridge, Ill
106 USAF Comm Sq (Wg)	Chicago-Orchard Apt, Park Ridge, Ill
606 Sig Lt Const Co (Avn)	Chicago-Orchard Apt, Park Ridge, Ill
1903 EAB Hq & Sv Co	Chicago-Orchard Apt, Park Ridge, Ill
1806 Eng Avn Co (1903 EAB)	Detroit, Mich.
1807 Eng Avn Co (1903 EAB) (Atchd 71 Ftr Wg)	1 Grant Ave, Jefferson Bks, St Louis, Mo
1809 Eng Avn Co (1903 EAB) (Atchd 86 Ftr Wg)	Buckley Fld, Denver, Colo.
156 AC&W Gp Hq	Chicago-Orchard Apt, Park Ridge, Ill
126 AC Sq	Chicago-Orchard Apt, Park Ridge, Ill
127 AC&W Sq (LS)	Vickers Armory, Detroit, Mich.
128 AC&W Sq (F)	General Mitchell Fld, Milwaukee Wisc.
106 Radar Calib Det	Chicago Mun Apt, Chicago, Ill.
126 Bomb Go (L) Hq	Chicago-Orchard Apt, Park Ridge Ill
108 Bomb Sq (L)	Chicago Mun Apt, Chicago, Ill
108 Bomb Sq (L) Util Flt	Chicago Mun Apt, Chicago, Ill
168 Bomb Sq (L)	Chicago-Orchard Apt, Park Ridge, Ill
168 Bomb Sq (L) Util Flt	Chicago-Orchard Apt, Park Ridge, Ill
180 Bomb Sq (L)	Rosscrans Fld St Joseph, Mo
180 Bomb Sq (L) Util Flt	Rosecrans Fld St Joseph, Mo
127 Ftr Gp Hq	Detroit-Wayne Major Apt, Romulus Mich
107 Bomb Sq (L)	Detroit-Wayne Major Apt, Romulus Mich
107 Bomb Sq (L) Util Flt	Detroit-Wayne Major Apt, Romulus Mich
171 Ftr Sq (SE)	Detroit-Wayne Major Apt, Romulus Mich
171 Ftr Sq (SE) Util Flt	Detroit-Wayne Major Apt, Romulus Mich
172 Ftr Sq (SE)	Kellogg Fld Battle Creek, Mich
172 Ftr Sq (SE) Util Flt	Kellogg Fld Battle Creek, Mich.
128 Ftr Gp Hq	General Mitchell Fld, Milwaukee, Wisc
126 Ftr Sq (SE)	General Mitchell Fld, Milwaukee Wisc.
126Ftr Sq (SE) Util Flt	General Mitchell Fld, Milwaukee Wisc.
176 Ftr Sq (SE)	Truax Fld, Madison, Wisc.
176 Ftr Sq (SE) Util Flt	Truax Fld, Madison, Wisc.
226 AS Gp (LB) Hq Det	Chicago-Orchard Apt, Park Ridge, Ill
Det A	Chicago Mun Apt, Chicago, Ill
Det B	Chicago-Orchard Apt, Park Ridge, Ill
Det C (Atchd 227 ASG (Ftr))	Detroit-Wayne Major Apt, Romulus, Mich.
Det D	Rosecrans Fld, St Joseph, Mo

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66TH FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
227 AS Gp (Ftr) Hq Det	Detroit-Wayne Major Apt, Romulus, Mich,
Det A	Detroit-Wayne Major Apt, Romulus, Mich,
Det B	Kellogg Fld, Battle Creek Mich.
Det C (Atchd 242 ASG (Ftr))	Great Falls Mun Apt, Great Falls, Mont.
Det C, 226 ASG (LB)	Detroit-Wayne Major Apt, Romulus, Mich.
228 AS Gp (Ftr) Hq Det	General Mitchell Fld, Milwaukee, Wisc.
Det A	General Mitchell Fld, Milwaukee, Wisc.
Det B	Truax Fld, Madison, Wisc.
Det C (Atchd 237 ASG (Ftr))	Kirtland AFB, N.M.
107 Wea Sta (Type A)	Detroit-Wayne Major Apt, Romulus, Mich.
108 Wea Sta (Type A)	Chicago Mun Apt, Chicago, Ill
126 Wea Sta (Type A)	General Mitchell Fld, Milwaukee, Wisc.
168 Wea Sta (Type A)	Chicago-Orchard Apt, Park Ridge, Ill
171 Wea Sta (Type A)	Detroit-Wayne Major Apt, Romulus, Mich,
172 Wea Sta (Type A)	Kellogg Fld, Battle Creek, Mich.
176 Wea Sta (Type A)	Truax Fld, Madison, Wisc.
180 Wea Sta (Type A)	Roscerans Fld, St Joseph, Mo

67TH FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
67 Ftr Wg Hq & Hq Sq	Commonwealth Armory, Boston, Mass.
567 USAF Band	Commonwealth Armory, Boston, Mass.
101 USAF Comm Sq (Wg)	Commonwealth Armory, Boston, Mass.
601 Sig Lt Const Co (Avn)	State Armory, Worcester, Mass.
1801 Eng Avn Co (1901 EAB) (Atchd fr 52 Ftr Wg)	Commonwealth Armory, Boston, Mass.
151 AC&W Gp Hq	Commonwealth Armory, Boston, Mass.
101 AC Sq	Commonwealth Armory, Boston, Mass.
102 AC&W Sq (LG)	Cranston Street Armory, Providence,RI
103 AC&W Sq (F)	Brainard Fld, Hartford, Conn.
101 Radar Calib Det	Commonwealth Armory, Boston, Mass.
101 Ftr Gp Hq	Camp Keys, Augusta, Me.
132 Ftr Sq (JP)	Dow AFB, Bangor, Me.
132 Ftr Sq (SE) Util Flt	Dow AFB, Bangor, Me.
133 Ftr Sq (SE)	Grenier AFB, Manchester, N.H.
133 Ftr Sq (SE) Util Flt	Grenier AFB, Manchester, N.H.
134 Ftr Sq (SE)	Burlington Mun Apt, Burlington, Vt.
134 Ftr Sq (SE) Util Flt	Burlington Mun Apt, Burlington, Vt.
102 Ftr Gp Hq	Logan Apt, Boston, Mass.
101 Ftr Sq (SE)	Logan Apt, Boston, Mass.
101 Ftr Sq (SE) Util Flt	Logan Apt, Boston, Mass.
131 Ftr Sq (SE)	Barnes Mun Apt, Westfield, Mass.
131 Ftr Sq (SE) Util Flt	Barnes Mun Apt, Westfield, Mass.
103 Ftr Gp Hq	Brainard Fld, Hartford Conn.
118 Ftr Sq (SE)	Bradley Fld, Windsor Locks, Conn.
118 Ftr Sq (SE) Util Flt	Bradley Fld, Windsor Locks, Conn.
152 Ftr Sq (SE)	Theodore F. Greene Apt, Hillsgrove, RI
152 Ftr Sq (SE) Util Flt	Theodore F. Greene Apt, Hillsgrove, RI
201 AS Gp (Ftr) Hq Det	Dow AFB, Bangor, Me.
Det A	Dow AFB, Bangor, Me.
Det B	Grenier AFB, Manchester, NH
Det C	Burlington Mun Apt, Burlington, Vt.
202 AS Gp (Ftr) Hq Det	Logan Apt, Boston, Mass.
Det A	Logan Apt, Boston, Mass.
Det B	Barnes Mun Apt, Westfield, Mass.
Det C, (Atchd 207 ASG (Ftr))	Schenectady Co Apt, Schenectady, N.Y.
203 AS Gp (Ftr) Hq Det	Bradley Fld, Windsor Locks, Conn.
Det A	Bradley Fld, Windsor Locks, Conn.
Det B	Theodore F. Greene Apt, Hillsgrove, RI

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67TH FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
101 Wea Sta (Type A)	Logan Apt, Boston, Mass.
118 Wea Sta (Type A)	Bradley Fld, Windsor Locks, Conn.
131 Wea Sta (Type A)	Barnes Mun Apt, Westfield, Mass
132 Wea Sta (Type A)	Dow AFB, Bangor, Me.
133 Wea Sta (Type A)	Grenier AFB, Manchester, N.H.
134 Wea Sta (Type A)	Burlington Mun Apt, Burlington, Vt.
152 Wea Sta (Type A)	Theodore F. Greene Apt, Hillsgrove, RI

71ST FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
71 Ftr Wg Hq & Hq Sq	1 Grant Ave, Jefferson Bks, St Louis, M
571 USAF Band	1 Grant Ave Jefferson Bks, St Louis, Mo,
107 USAF Comm Sq (WG)	1 Grant Ave Jefferson Bks, St Louis, Mo,
607 Sig Lt Const Co (Avn)	1 Grant Ave Jefferson Bks, St Louis, Mo,
1807 Eng Avn Co (1903 EAB) (Atchd Fr 66 Ftr Wg)	1 Grant Ave Jefferson Bks, St Louis, Mo.
157 AC&W Gp Hq	1 Grant Ave, Jefferson Bks, St Louis, Mo
122 AC&W Sq (LS)	Stout Fld, Indianapolis, Ind.
131 AC Sq	1 Grant Ave, Jefferson Bks, St. Louis Mo
133 AC&W Sq (F)	Fort Dodge, Iowa
107 Radar Calib Det	Lambert Fld, St Louis Mo
131 Ftr Gp Hq	Lambert Fld, St. Louis, Mo
110 Ftr Sq (SE)	Lambert Fld, St Louis, Mo
110 Ftr Sq (SE) Util Flt	Lambert Fld, St. Louis, Mo
169 Ftr Sq (SE)	Peoria Mun Apt, Peoria, Ill
169 Ftr Sq (SE) Util Flt	Peoria Mun Apt, Peoria, Ill
170 Ftr Sq (SE)	Capitol Apt, Springfield, Ill
170 Ftr Sq (SE) Util Flt	Capitol Apt, Springfield, Ill
122 Ftr Gp Hq	Stout Fld, Indianapolis, Ind.
113 Ftr Sq (SE)	Stout Fld, Indianapolis, Ind.
113 Ftr Sq (SE) Util Flt	Stout Fld, Indianapolis, Ind.
163 Ftr Sq (SE)	Baer Fld, Ft Wayne, Ind.
163 Ftr Sq (SE) Util Flt	Baer Fld, Ft. Wayne, Ind.
132 Ftr Gp Hq	Des Moines Mun Apt, Des Moines, Ia.
124 Ftr Sq (SE)	Des Moines Mun Apt, Des Moines, Ia.
124 Ftr Sq (SE) Util Flt	Des Moines Mun Apt, Des Moines, Ia.
173 Ftr Sq (SE)	Lincoln Apt, Lincoln, Neb
173 Ftr Sq (SE) Util Flt	Lincoln Apt, Lincoln, Neb
174 Ftr Sq (SE)	Sioux City Mun Apt, Sioux City, Ia.
174 Ftr Sq (SE) Util Flt	Sioux City Mun Apt, Sioux City, Ia.
222 AS Gp (Ftr) Hq Det	Stout Fld, Indianapolis, Ind.
Det A	Stout Fld, Indianapolis, Ind.
Det B	Baer Fld, Ft Wayne, Ind.
Det C (Atcd 233 ASG)	Sious Falls Mun Apt, Sious Falls, S.D.
231 AS Gp (Ftr) Hq Det	Lambert Fld St Louis, Mo
Det A	Lambert Fld St Louis, Mo
Det B	Peoria Mun Apt, Peoria, Ill
Det C	Capitol Apt, Springfield, Ill

71ST FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
232 AS Gp (Ftr) Hq Det	Des Moines Mun Apt, Des Moines, Ia.
Det A	Des Moines Mun Apt, Des Moines, Ia.
Det B	Sioux City Mun Apt, Sioux City, Ia.
Det C	Lincoln Apt, Lincoln, Neb.
110 Wea Sta (Type A)	Lambert Fld, St. Louis, Mo
113 Wea Sta (Type A)	Stout Fld, Indianapolis, Ind.
124 Wea Sta (Type A)	Des Moines Mun Apt, Des Moines, Ia.
163 Wea Sta (Type A)	Baer Fld, Ft Wayne, Ind.
169 Wea Sta (Type A)	Peoria Mun Apt, Peoria, Ill
170 Wea Sta (Type A)	Capitol Apt, Springfield, Ill
173 Wea Sta (Type A)	Lincoln Apt, Lincoln, Neb.
174 Wea Sta (Type A)	Sioux City Mun Apt, Sioux City, Ia.

86TH FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
86 Ftr Wg Hq & Hq Sq	Buckley Fld, Denver, Colo
532 USAF Band	NG Armory, Denver, Colo
109 USAF Comm Sq (Wg)	Buckley Fld Denver, Colo
609 Sig Lt Const Co (Avn)	Buckley Fld, Denver, Colo
1809 Eng Avn Co (1903 EAB)	Buckley Fld, Denver, Colo
159 AC&W Gp Hq	Buckley Fld, Denver, Colo
132 AC&W Sq (LS)	Minneapolis Armory, Minneapolis, Minn.
137 AC Sq	Buckley Fld, Denver, Colo
138 AC&W Sq (LS)	Denver Univ, Denver, Colo
139 AC&W Sq (F)	State Armory, Boulder, Colo
109 Radar Calib Det	Buckley Fld, Denver, Colo
133 Ftr Gp Hq	Holman Fld, St Paul, Minn.
109 Ftr Sq (SE)	Holman Fld, St Paul, Minn.
109 Ftr Sq (SE) Util Flt	Holman Fld, St Paul, Minn.
175 Ftr Sq (SE)	Sioux Falls Mun Apt, Sioux Falls, S. D.
175 Ftr Sq (SE) Util Flt	Sioux Falls Mun Apt, Sioux Falls, S. D.
178 Ftr Sq (SE)	Fargo Mun Apt, Fargo, N. D.
178 Ftr Sq (SE) Util Flt	Fargo Mun Apt, Fargo, N.D.
179 Ftr Sq (SE)	Duluth Apt Duluth, Minn
179 Ftr Sq (SE) Util Flt	Duluty Apt Duluty, Minn
140 Ftr Gp Hq	Buckley Fld, Denver, Colo
120 Ftr Sq (SE)	Buckley Fld, Denver, Colo
120 Ftr Sq (SE) Util Flt	Buckley Fld, Denver, Colo
127 Ftr Sq (SE)	Wichita Mun Apt, Wichita, Kans.
127 Ftr Sq (SE) Util Flt	Wichita Mun Apt, Wichita, Kans.
187 Ftr Sq (SE)	Cheyenne Mun Apt, Cheyenne, Wyo.
187 Ftr Sq (SE) Util Flt	Cheyenne Mun Apt, Cheyenne, Wyo.
233 AS Gp (Ftr) Hq Det	Holman Fld, St Paul, Minn.
Det A	Holman Fld, St Paul, Minn.
Det B	Fargo Mun Apt, Fargo, N. D.
Det C	Duluth Apt, Duluth Minn.
Det C,(222 ASG (Ftr))	Sioux Falls Mun Apt, Sioux Falls, S. D.
240 AS Gp (Ftr) Hq Det	Buckley Fld, Denver, Colo
Det A	Buckley Fld, Denver, Colo
Det B	Cheyenne Mun Apt, Cheyenne, Wyo
Det C	Wichita Mun Apt, Wichita, Kans.
109 Wea Sta (Type A)	Holman Fld, St Paul Minn
120 Wea Sta (Type A)	Buckley Fld, Denver, Colo
127 Wea Sta (Type A)	Wichita Mun Apt, Wichita, Kans.
175 Wea Sta (Type A)	Sioux Falls Mun Apt, Sioux Falls S.D.
178 Wea Sta (Type A)	Fargo Mun Apt, Fargo N. D.
179 Wea Sta(Type A)	Duluth Apt Duluth, Minn.
187 Wea Sta (Type A)	Cheyenne Mun Apt, Cheyenne, Wyo.

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SECTION IV

NUMBER AND TYPE OF AUTHORIZED AND FEDERALLY RECOGNIZED AIR NATIONAL GUARD UNITS

	1st AF	4th AF	9th AF	10th AF	12th AF	14th AF	Puerto Rico	Hawaii	Total
	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth
Ftr Wing Hq	2	3	2	3	1	1			12
Ftr Group Hq	5	3	4	7	2	3			24
Ftr Sq	13	10	12	19	7	9	1	1	72
Utility Flt (Ftr)	13	10	12	19	7	9	1	1	72
Air Sv Gp, Hq Det (Ftr)	5	3	4	7	2	3			24
Air Sv Gp Det (Ftr)	13	10	12	19	7	9	1	1	72
Lt Bomb Gp Hq	1	0	1	1	0	0			3
Lt Bomb Sq	2	1	3	4	1	1			12
Utility Flt (Lt Bomb)	2	1	3	4	1	1			12
Air Sv Gp Hq Det (Lt Bomb)	1	0	1	1	0	0			3
Air Sv Gp Det (Lt Bomb)	2	1	3	4	1	1			12
AF Comm Sq	2	3	2	3	1	1			12
Signal Lt Constr Co	2	3	2	3	1	1			12
A/C & Wrng Gp Hq	2	3	2	3	1	1			12
Aircraft Control Sq	2	3	2	3	1	1			12
A/C & Wrng Sq (Lgs)	2	3	1	4	1	1			12
A/C & Wrng Sq (FWD)	2	3	2	3	1	1			12
Radar Calib Det	2	3	2	3	1	1			12
Engr Aviation Bn	1	1	1	1	0	0			4
Engr Aviation Co	2	3	2	3	1	1			12
Weather Stations	15	11	15	23	8	10	1	1	84
Band	2	3	2	3	1	1			12
TOTAL	93	81	90	140	46	56	4	4	514

DIRECTORY
OF
AIR NATIONAL GUARD UNITS
SECTION V
LIST OF STATE ADJUTANTS GENERAL

STATE	NAME	STATE STATUS	ADDRESS, PHONE NO., & TWX NO.
Alabama	Saliba, James S.	Brig Gen	Montgomery (5); 3-5761; MG 100
Arizona	Tuthill, A.M.	Maj Gen	Phoenix; 3-1176; PX 180
Arkansas -	Rick, Earl T.	Brig Gen	Little Rock; 4-3667; LR 18
California	O'Sullivan, Curtis D.	*Maj Gen	Sacramento (14); 2-4711 Ex 2958; SC 46
Colorado	Schaefer, Irving O.	*Brig Gen	Denver (9); Pearl 4624;DN3
Connecticut	Reincke, Frederick G.	*Brig Gen	Hartford (6): 7-6341; Ex. 896; HF98
Delaware -	Rinard, Paul R.	**Brig Gen	Wilmington; 4-7587; New Ca. Del 730
Dist. of Col	Nevitt, Peyton G.	*Colonel	(s)Washington (3);Ex. 2333
Florida	Lance, Mark W.	*Brig Gen	St Augustine: 1540; St Augustine, Fla 185
Georgia	Vandiver, Ernest	Brig Gen	Atlanta (3): Alpine 2273
Hawaii	Makinney, Fred W.	Brig Gen	Honolulu; 65458
Idaho	Walsh, John E.	*Brig Gen	Boise; 3779: BE 84
Illinois	Boyle, Leo M.	**Maj Gen	Springfield; 6651; SI 193
Indiana	Hitchock, Robinson	Brig Gen	Indianapolis; Riley 8571; IP 465
Iowa	Grahl, Charles H.	*Brig Gen	Des Moines (19); 4-9111; Ex 8; DM 297
Kansas	McLean, Milton R.	Brig Gen	Topeka: 7753; TOP 45
Kentucky	Murray, Roscoe L.	Brig Gen	Frankfort: 1001; FKFT 462
Louisiana H	Hufft, Raymond F.	*Brig Gen	New Orleans (12); CR 6681 NO 397
Maine	Carter, Geo M	*Brig Gen	Augusta: 1200 Ex 305; AUG ME 470
Maryland	Reckord, Milton A.	Maj Gen	Baltimore (1); Mulberry 3388, 3389, BA 90
Massachusetts	Harrison, Wm.H.,Jr.	*Maj Gen	Boston: Capitol 7-4600
Michigan	Moran, Geo C. (Actg)	**Brig Gen	Lansing (1);49451;LG 15
Minnesota	Walsh, Ellard A.	Maj Gen	St Paul (1); Cedar 3013 STP 95
Mississippi	Wilson, William P.	Brig Gen	Jackson (103;2-5544; JN 98
Missouri	Harris, John A.	Brig Gen	Jefferson City: 336; JFF CY 365
Montana	Mitchell, Spencer H.	*Brig Gen	Helena;761; HL 14
Nebraska	Henninger, Guy N.	*Brig Gen	Lincoln;2-7571, LINC NEB 391
Nevada	May, James A.	**Brig Gen	Carson City; 101; CARSON CITY NEV 193
New Hampshire	Bowen, Charles	*Brig Gen	Concord: Concord 800; CD 50

STATE	NAME	STATE STATUS	ADDRESS, PHONE NO., & TWO NO.
New Jersey	Rose, Edward C.	*Brig Gen	Trenton (7); Trenton 2-2131; TREN 441
New Mexico	Sage, Charles G.	*Brig Gen	Santa Fe; 2867; SANTA FE NM 108
ew York	Brown, Ames T.	*Brig Gen	Albany (7); Albany 4-1131; AL 373
.Carolina	Metts, J.VanB.	Brig Gen	Raleigh: RAL 6611 Ex 380; RALGH 287
.Dakota	Edwards, Herbert L.	*Brig Gen	Bismarck; 2801; BM 4
hio	Kreber, Leo M	*Maj Gen	Columbus: MA 5161: Cl 595
Oklahoma	Kenny, Roy, L.	*Brig Gen	Okla City (5);58-2116 OC 563
regon	Riles, Thomas E.	Brig Gen	Salem; 4171 Ex 461; SAL ORE 258
ennsylvania	Weber, Frank A.	Brig Gen	*Harrisburg; HBG 515 Ex 3040; LEB 193
rto Rico	Esteves, Luis R.	*Brig Gen	San Juan (18); 2-5473
hode Island	Murphy, James A.(Actg)	Brig Gen	Providence; Jackson 7100 Ex 261; PR 64
. Carolina	Dozier, James C.	*Brig Gen	Columbia (10): 9784: CLBA SC 492
S. Dakota	Arndt, Theodore A.	*Brig Gen	Rapid City; 2801RPD CY 74
Tennessee	Anderson, Carl A.	Brig Gen	Nashville (3) 6-267; NV 62
Texas	Berry, Kearie L.	Maj Gen	Austin (11); AUS TEX 2-2086
Utah	West, J. Wallace	*Brig Gen	Ft Douglas; 3-4612; UVGN
ermont	Campbell, Murdock, A.	*Brig Gen	Montpelier; Mont 1500 Ex 24; MPLR 46
irginia	Waller, Samuel G	Maj Gen	Richmond (19); 2-7217; RH 181
ashington	Llewellyn, Ensly M.	** Brig Gen	Camp Murray; Fort Lewis Lakewood 2177
est Virginia	Fox, Charles R.	* Brig Gen	Charleston (5);34-631;CH 96
isconsin	Mullen, John F.	*Brig Gen	Madison (2): Badger 2299; MN 9
yoming	Esmay, Rhodolph L.	*Colonel	Cheyenne; 4941; CY 14

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* Federally Recognized same grade

** Federally Recognized in lower grade

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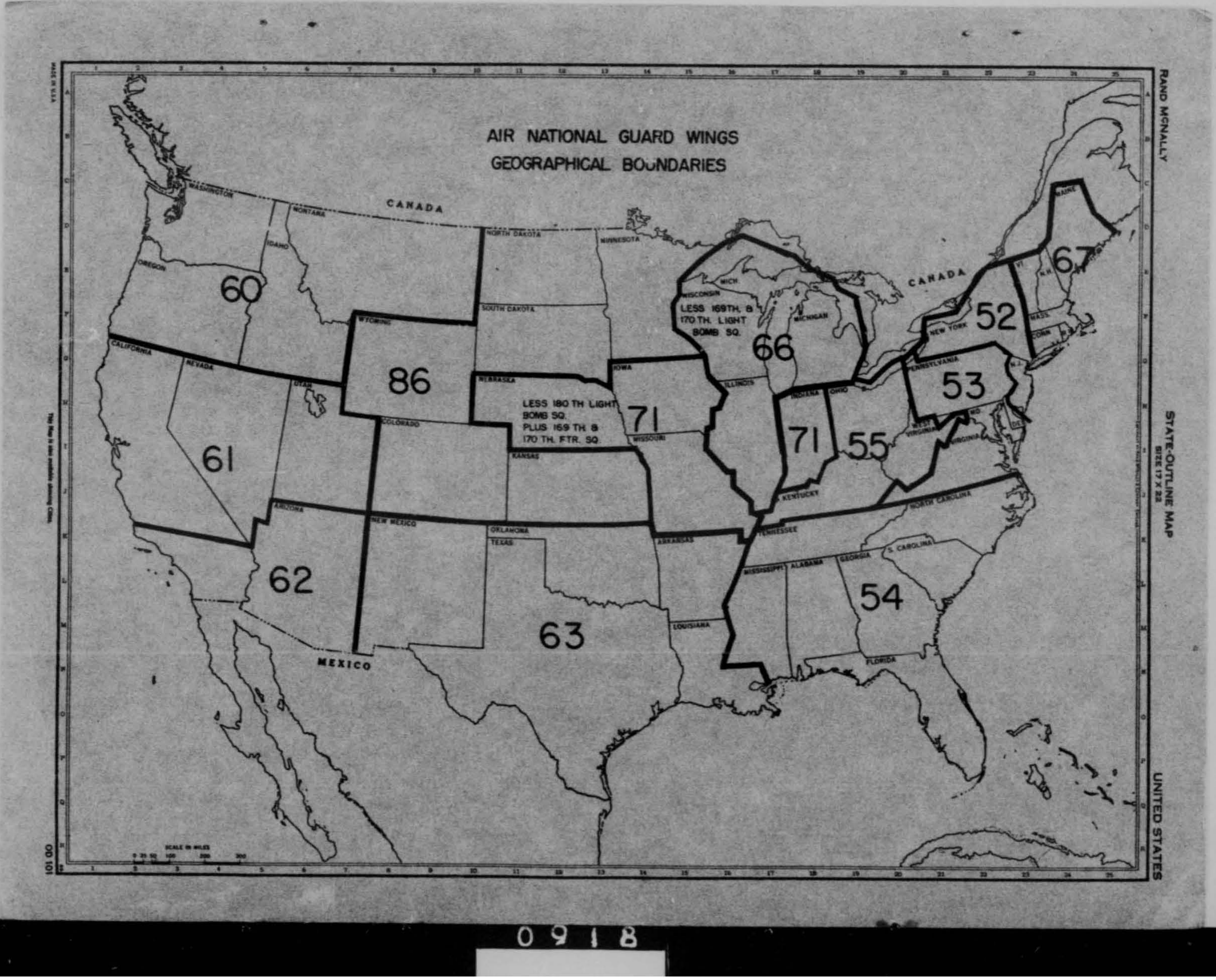

AIR NATIONAL GUARD WINGS
GEOGRAPHICAL BOUNDARIES

CANADA
MEXICO
WASHINGTON
OREGON
IDAHO
MONTANA
NORTH DAKOTA
SOUTH DAKOTA
MINNESOTA
WYOMING
NEBRASKA
IOWA
WISCONSIN
MICH
MICHIGAN
ILLINOIS
INDIANA
OHIO
KENTUCKY
TENNESSEE
CALIFORNIA
NEVADA
UTAH
COLORADO
KANSAS
MISSOURI
ARIZONA
NEW MEXICO
OKLAHOMA
TEXAS
ARKANSAS
LOUISIANA
MISSISSIPPI
ALABAMA
GEORGIA
FLORIDA
S. CAROLINA
NORTH CAROLINA
VIRGINIA
PENNSYLVANIA
NEW YORK
MAINE
VT.
N.H.
MASS.
CONN.
60
61
62
63
86
71
71
66
55
54
53
52
67
LESS 169TH. & 170 TH. LIGHT BOMB SQ.
LESS 180 TH LIGHT BOMB SQ. PLUS 169 TH. & 170 TH. FTR. SQ.
RAND McNALLY
STATE-OUTLINE MAP
SIZE 17 X 22
UNITED STATES
SCALE IN MILES
00 101

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1 Nov. 1949

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U.S.A.F.
HIST[illegible]~~

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Directory of ANG Units, 1 Nov 49

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

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DIRECTORY

OF

AIR NATIONAL GUARD UNITS

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

DIRECTORY
OF
AIR NATIONAL GUARD UNITS

SUPPLEMENT

Page numbers and effective dates listed below are for the purpose of providing a means to verify and insure that copies of ConAC Directory of Air National Guard Units are current.

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Report all errors or ommissions to:
Commanding General
Continental Air Command
Mitchel Air Force Base, N.Y.
Attention: Adjutant General

Revised 1 Nov 49
M-49-1285

FOURTH AIR FORCE

UNIT	WING	LOCATION
		IDAHO
190 Ftr Sq (SE)	60	Boise Air Terminal, Boise
190 Ftr Sq (SE)	60	Boise Air Terminal, Boise
190 Wea Sta (Type A)	60	Boise Air Terminal, Boise
242 AS Gp (Ftr) Det C	60	Boise Air Terminal, Boise
		MONTANA
186 Ftr Sq (SE)	60	Great Falls Mun Apt, Great Falls
186 Ftr Sq (SE) Util Flt	60	Great Falls Mun Apt, Great Falls
186 Wea Sta (Type A)	60	Great Falls Mun Apt, Great Falls
227 AS Gp (Ftr) Det C	66	Great Falls Mun Apt, Great Falls
		NEVADA
192 Ftr Sq (SE)	61	Reno AFB, Reno
192 Ftr Sq (SE) Util Flt	61	Reno AFB, Reno
192 Wea Sta (Type A)	61	Reno AFB, Reno
244 AS Gp (Ftr) Det B	61	Reno AFB, Reno
		OREGON
142 AC&W Sq (IS)	60	Portland Apt, Portland
142 Ftr Gp Hq	60	Portland Apt, Portland
123 Ftr Sq (SE)	60	Portland Apt, Portland
123 Ftr Sq (SE) Util Flt	60	Portland Apt, Portland
123 Wea Sta (Type A)	60	Portland Apt, Portland
242 AS Gp (Ftr) Det A	60	Portland Apt, Portland
242 AS Gp (Ftr) Hq Det	60	Portland Apt, Portland
1810 Eng Avn Co (1905 EAB)	61	Portland Apt, Portland
		UTAH
191 Ftr Sq (SE)	61	Salt Lake City Mun Apt #1, Salt Lake Cy
191 Ftr Sq (SE) Util Flt	61	Salt Lake City Mun Apt #1, Salt Lake Cy
191 Wea Sta (Type A)	61	Salt Lake City Mun Apt #1, Salt Lake Cy
244 AS Gp (Ftr) Det C	61	Salt Lake City Mun Apt #1, Salt Lake Cy
		WASHINGTON
60 Ftr Wg Hq & Hq Sq	60	George Wright AFB, Spokane
160 AC&W Gp Hq	60	George Wright AFB, Spokane
141 AC Sq	60	George Wright AFB, Spokane
143 AC&W Sq (F)	60	Boeing Fld, Seattle, Wash.
110 Radar Calbr Det	60	Boeing Fld, Seattle, Wash.
110 USAF Comm Sq (Wg)	60	George Wright AFB, Spokane
610 Sig L Cons Co (Avn)	60	Boeing Fld, Seattle, Wash.
116 Ftr Sq (SE)	60	Geiger Fld, Spokane
116 Ftr Sq (SE) Util Flt	60	Geiger Fld, Spokane
116 Wea Sta(Type A)	60	Geiger Fld, Spokane
242 AS Gp (Ftr) Det B	60	Geiger Fld, Spokane
560 USAF Band	60	George Wright AFB, Spokane

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NINTH AIR FORCE
Langley Air Force Base, Virginia

UNIT	WING	LOCATION
		DELAWARE
142 Ftr Sq (SE)	53	New Castle Co Apt, Wilmington
142 Ftr Sq (SE) Util Flt	53	New Castle Co Apt, Wilmington
142 Wea Sta (Type A)	53	New Castle Co Apt, Wilmington
*208 AS Gp (Ftr) Det C	52	New Castle Co Apt, Wilmington
		DISTRICT OF COLUMBIA
113 AC&W Sq (F)	53	NG Armory, Wash, D.C.
119 Ftr Gp Hq	53	Andrews AFB, Wash, D.C.
121 Ftr Sq (SE)	53	Andrews AFB, Wash, D.C.
121 Ftr Sq Util Flt	53	Andrews AFB, Wash, D.C.
121 Wea Sta (Type A)	53	Andrews AFB, Wash, D.C.
213 AS Gp (Ftr) Det A	53	Andrews AFB, Wash, D.C.
213 AS Gp (Ftr) Hq Det	53	Andrews AFB, Wash, D.C.
		KENTUCKY
123 Ftr Gp Hq	55	Standiford Fld, Louisville
165 Ftr Sq (SE)	55	Standiford Fld, Louisville
165 Ftr Sq (SE) Util Flt	55	Standiford Fld, Louisville
165 Wea Sta (Type A)	55	Standiford Fld, Louisville
223 AS Gp (Ftr) Det A	55	Standiford Fld, Louisville
223 AS Gp (Ftr) Hq Det	55	Standiford Fld, Louisville
		MARYLAND
104 Ftr Sq (SE)	53	Baltimore Mun Apt, Baltimore
104 Ftr Sq (SE) Util Flt	53	Baltimore Mun Apt, Baltimore
104 Wea Sta (Type A)	53	Baltimore Mun Apt, Baltimore
213 AS Gp (Ftr) Det B	53	Baltimore Mun Apt, Baltimore
		OHIO
55 Ftr Wg Hq & Hq Sq	55	Lockbourne AFB, Columbus
155 AC&W Gp Hq	55	Ft. Hayes, Columbus
121 AC Sq	55	Ft. Hayes, Columbus
123 AC&W Sq (F)	55	Lunken Apt, Cincinatti
105 USAF Comm Sq (Wg)	55	Elberon Armory, Zanesville
105 Radar Calbr Det	55	Lockbourne AFB, Columbus
605 Sig L Cons Co (Avn)	55	110 Mulberry St, Springfield
121 Ftr Gp Hq	55	Dayton Municipal Apt, Vandalia
112 Bomb Sq (L)	55	Cleveland Mun Apt, Cleveland
112 Bomb Sq (L) Util Flt	55	Cleveland Mun Apt, Cleveland
112 Wea Sta (Type A)	55	Cleveland Mun Apt, Cleveland
**206 AS Gp (LB) Det D	52	Cleveland Mun Apt, Cleveland
162 Ftr Sq (SE)	55	Dayton Mun Apt, Vandalia
162 Ftr Sq (SE) Util Flt	55	Dayton Mun Apt, Vandalia
162 Wea Sta (Type A)	55	Dayton Mun Apt, Vandalia
221 AS Gp (Ftr) Det A	55	Dayton Mun Apt, Vandalia

* Attached 213 ASG (Ftr)
** Attached 221 ASG (FTR)

NINTH AIR FORCE

UNIT	WING	LOCATION
		OHIO (contd)
164 Ftr Sq (SE)	55	Mansfield Mun Apt, Mansfield
164 Ftr Sq (SE) Util Flt	55	Mansfield Mun Apt, Mansfield
164 Wea Sta (Type A)	55	Mansfield Mun Apt, Mansfield
221 AS Gp (Ftr) Det B	55	Mansfield Mun Apt, Mansfield
166 Ftr Sq (SE)	55	Lockbourne AFB, Columbus
166 Ftr Sq (SE) Util Flt	55	Lockbourne AFB, Columbus
166 Wea Sta (Type A)	55	Lockbourne AFB, Columbus
221 AS Gp (Ftr) Det C	55	**Lookbourne AFB, Columbus**
221 AS Gp (Ftr) Hq Det	55	Cleveland Mun Apt, Cleveland
*** 1805 Eng Avn Co (1902 EAB)	53	Lunkem Apt, Cincinnati
555 USAF Band	55	NG Armory, Toledo (965 Wall St)
		PENNSYLVANIA
53 Ftr Wg Hq & Hq Sq	53	Harrisburg Mun Apt, New Cumberland
153 AC&W Gp Hq	53	Harrisburg Mun Apt, New Cumberland
111 AC Sq	53	Harrisburg Mun Apt, New Cumberland
112 AC&W Sq (IS)	53	State College
103 Radar Calbr Det	53	Reading Mun Apt, Reading
103 USAF Comm Sq (Wg)	53	Harrisburg Mun Apt, New Cumberland
603 Sig L Cons Co (Avn)	53	Philadelphia Int'l Apt, Philadelphia
111 Bomb Gp (L) Hq	53	Philadelphia Int'l Apt, Philadelphia
103 Bomb Sq (L)	53	Philadelphia Int'l Apt, Philadelphia
103 Bomb Sq (L) Util Flt	53	Philadelphia Int'l Apt, Philadelphia
103 Wea Sta (Type A)	53	Philadelphia Int'l Apt, Philadelphia
211 AS Gp (LB) Det A	53	Philadelphia Int'l Apt, Philadelphia
117 Bomb Sq (L)	53	Philadelphia Int'l Apt, Philadelphia
117 Bomb Sq (L) Util Flt	53	Philadelphia Int'l Apt, Philadelphia
117 Wea Sta (Type A)	53	Philadelphia Int'l Apt, Philadelphia
211 AS Gp (LB) Det B	53	Philadelphia Int'l Apt, Philadelphia
211 AS Gp (LB) Hq Det	53	Philadelphia Int'l Apt, Philadelphia
112 Ftr Gp Hq	53	Greater Pittsburgh Apt, Coraopolis
146 Ftr Sq (SE)	53	Greater Pittsburgh Apt, Coraopolis
146 Ftr Sq (SE) Util Flt	53	Greater Pittsburgh Apt, Coraopolis
146 Wea Sta (Type A)	53	Greater Pittsburgh Apt, Coraopolis
212 AS Gp (Ftr) Det A	53	Greater Pittsburgh Apt, Coraopolis
147 Ftr Sq (SE)	53	Greater Pittsburgh Apt, Coraopolis
147 Ftr Sq (SE) Util Flt	53	Greater Pittsburgh Apt, Coraopolis
147 Wea Sta (Type A)	53	Greater Pittsburgh Apt, Coraopolis
212 ASGp (Ftr) Det B	53	Greater Pittsburgh Apt, Coraopolis
148 Ftr Sq (SE)	53	Reading Mun Apt, Reading
148 Ftr Sq (SE) Util Flt	53	Reading Mun Apt, Reading
148 Wea Sta (Type A)	53	Reading Mun Apt, Reading
212 AS Gp (Ftr) Det C	53	Reading Mun Apt, Reading
212 AS Gp (Ftr) Hq Det	53	Greater Pittsburgh Apt, Coraopolis
1902 EAB Hq & Sv Co	53	Johnstown
1803 Eng Avn Co (1902 EAB)	53	Johnstown
553 USAF Band	53	Harrisburg Mun Apt, New Cumberland

*** Attached 55th Ftr Wg

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TWELFTH AIR FORCE
Brooks Air Force Base, Texas

UNIT	WING	LOCATION
		ARKANSAS
154 Ftr Sq (SE)	63	Adams Fld, Little Rock
154 Ftr Sq (SE) Util Flt	63	Adams Fld, Little Rock
154 Wea Sta (Type A)	63	Adams Fld, Little Rock
237 AS Gp (Ftr) Det B	63	Adams Fld, Little Rock
		LOUISIANA
122 Bomb Sq (L)	63	New Orleans Mun Apt, New Orleans
122 Bomb Sq (L) Util Flt	63	New Orleans Mun Apt, New Orleans
122 Wea Sta (Type A)	63	New Orleans Mun Apt, New Orleans
*211 AS Gp (LB) Det C	53	New Orleans Mun Apt, New Orleans
135 AC&W Sq (LS)	63	Jackson Barracks, New Orleans
		NEW MEXICO
188 Ftr Sq (SE)	63	Kirtland AFB
188 Ftr Sq (SE) Util Flt	63	Kirtland AFB
188 Wea Sta (Type A)	63	Kirtland AFB
**228 AS Gp (Ftr) Det C	66	Kirtland AFB
		OKLAHOMA
137 Ftr Gp Hq	63	Will Rogers Fld, Oklahoma City
125 Ftr Sq (SE)	63	Tulsa Mun Apt, Tulsa
125 Ftr Sq (SE) Util Flt	63	Tulsa Mun Apt, Tulsa
125 Wea Sta (Type A)	63	Tulsa Mun Apt, Tulsa
237 AS Gp (Ftr) Det A	63	Tulsa Mun Apt, Tulsa
185 Ftr Sq (SE) Util Flt	63	Will Rogers Fld, Oklahoma City
185 Ftr Sq (SE)	63	Will Rogers Fld, Oklahoma City
185 Wea Sta (Type A)	63	Will Rogers Fld, Oklahoma City
237 AS Gp (Ftr) Det C	63	Will Rogers Fld, Oklahoma City
237 AS Gp (Ftr) Hq Det	63	Will Rogers Fld, Oklahoma City
		TEXAS
63 Ftr Wg Hq & Hq Sq	63	Ellington AFB, Houston
158 AC&W Gp Hq	63	Ellington AFB, Houston
134 AC Sq	63	LaPorte
136 AC&W Sq (F)	63	Jefferson Co, Apt, Beaumont
108 USAF Comm Sq (Wing)	63	Ellington AFB, Houston
608 Sig L Cons Co (Avn)	63	Ellington AFB, Houston
136 Ftr Gp Hq	63	Hensley Fld, Dallas
111 Ftr Sq (SE)	63	Ellington AFB, Houston
111 Ftr Sq (SE) Util Flt	63	Ellington AFB, Houston
111 Wea Sta (Type A)	63	Ellington AFB, Houston
236 AS Gp (Ftr) Det B	63	Ellington AFB, Houston
108 Radar Calbr Det	63	Ellington AFB, Houston

* Attached 236 ASG (Ftr)
** Attached 237 ASG (Ftr)

SECTION II

AIR NATIONAL GUARD UNITS BY TYPE

WING HEADQUARTERS AND HEADQUARTERS SQUADRON

WING	AIR FORCE	STATES INCLUDED	LOCATION
52	First	N.Y., N.J.	State Armory, White Plains, New York
53	Ninth	DC, Md, Pa. Va. Del.	Harrisburg Mun Apt, New Cumberland, Pa.
54	Fourteenth	Ala, Fla, Ga. Miss, NC, SC, Tenn.	Marietta AFB, Marrietta, Ga.
55	Ninth	Ky, Ohio, W. Va.	Lockbourne AFB, Columbus, Ohio
60	Fourth	Idaho, Mont, Oregon, Wash.	George Wright AFB, Spokane, Wash.
61	Fourth	Calif. (N of 35°47') Nev, Utah	National Guard Center, PO Box 356, Alameda, Calif.
62	Fourth	Ariz, Calif. (S of 35°47')	Lockheed Air Terminal, Burbank, Calif.
63	Twelfth	Ark, La, NM, Oklahoma, Texas	Ellington AFB, Houston, Texas
66	Tenth	Ill, (Less 169 & 170 Ftr Sq) Wis, Mich, and the 180 L Bomb Sq of Missouri	O'Hare Int'l Apt, Park Ridge, Ill.
67	First	Conn, Mass, Me NH, RI, Vt.	Commonwealth Armory, Boston, Mass.
71	Tenth	Iowa, Ind, Mo, (less 180 Bomb Sq (L)) Neb. and the 169 & 170 Ftr Sq of Ill.	1 Grant Ave, Jefferson Bks, St Louis, Mo.
86	Tenth	Colo, Kans, Minn, ND, SD, and Wyo.	Buckley Fld, Denver, Colo.

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AIRCRAFT CONTROL AND WARNING GROUP HQ

ORG	WING	AIR FORCE	LOCATION
151	67	First	Commonwealth Armory, Boston, Mass.
152	52	First	State Armory, White Plains, N.Y.
153	53	Ninth	Harrisburg Mun Apt, New Cumberland, Pa.
154	54	Fourteenth	Marietta AFB, Marietta, Ga.
155	55	Ninth	Ft. Hayes, Columbus, Ohio
156	66	Tenth	O'Hare Int'l Apt, Park Ridge, Ill.
157	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis, Mo.
158	63	Twelfth	Ellington AFB, Houston, Texas
159	86	Tenth	Buckley Fld, Denver, Colo.
160	60	Fourth	George Wright AFB, Spokane, Wash.
161	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
162	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

AIRCRAFT CONTROL AND WARNING SQUADRONS (LS)

ORG	GP	WING	AIR FORCE	LOCATION
102	151	67	First	Cranston Street Armory, Providence, RI
107	152	52	First	State Armory, White Plains, N.Y.
112	153	53	Ninth	State College, Pa.
117	154	54	Fourteenth	Hunter Fld, Savannah, Ga.
122	157	71	Tenth	Stout Fld, Indianapolis, Ind.
127	156	66	Tenth	Vickers Armory, Detroit, Mich.
132	159	86	Tenth	Minneapolis Armory, Minneapolis, Minn.
135	158	63	Twelfth	Jackson Bks, New Orleans, La.
138	159	86	Tenth	Denver Univ., Denver, Colo.
142	160	60	Fourth	Portland Apt, Portland, Oreg.
145	161	61	Fourth	Fort Funston, San Francisco, Calif.
148	162	62	Fourth	Compton Apt, Compton, Calif.

AIRCRAFT CONTROL AND WARNING SQUADRONS (F)

103	151	67	First	Brainard Fld, Hartford, Conn.
108	152	52	First	Hancock Apt, Syracuse, N.Y.
113	153	53	Ninth	NG Armory, Washington, D.C.
118	154	54	Fourteenth	Douglas Fld, Charlotte, N.C.
123	155	55	Ninth	Lunken Apt, Cincinnati, Ohio
128	156	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
133	157	71	Tenth	Fort Dodge, Ia.
136	158	63	Twelfth	Jefferson Co. Apt, Beaumont, Tex.
139	159	86	Tenth	State Armory, Boulder, Colo.
143	160	60	Fourth	Boeing Fld, Seattle, Wash.
146	161	61	Fourth	Camp Kohler, Sacramento, Calif.
149	162	62	Fourth	Ontario Int'l Apt, Ontario, Calif.

AIRCRAFT CONTROL SQUADRONS

ORG	GP	WING	AIR FORCE	LOCATION
101	151	67	First	Commonwealth Armory, Boston, Mass.
106	152	52	First	State Armory, White Plains, N.Y.
111	153	53	Ninth	Harrisburgh Mun Apt, New Cumberland, Pa.
116	154	54	Fourteenth	Marietta AFB, Marietta, Ga.
121	155	55	Ninth	Ft. Hayes, Columbus, Ohio
126	156	66	Tenth	O'Hare International Apt, Park Ridge, Ill.
131	157	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis 23, Mo.
134	158	63	Twelfth	La Porte, Texas
137	159	86	Tenth	Buckley Fld, Denver, Colo.
141	160	60	Fourth	George Wright AFB, Spokane, Wash.
144	161	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
147	162	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

USAF COMMUNICATIONS SQUADRONS (WING)

ORG	WING	AIR FORCE	
101	67	First	Commonwealth Armory, Boston, Mass.
102	52	First	State Armory, White Plains, N.Y.
103	53	Ninth	Harrisburg Mun Apt, New Cumberland, Pa.
104	54	Fourteenth	Marietta AFB, Marietta, Ga.
105	55	Ninth	Elberon Armory, Zanesville, Ohio
106	66	Tenth	O'Hare International Apt, Park Ridge, Ill.
107	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis 23, Mo.
108	63	Twelfth	Ellington AFB, Houston, Tex.
109	86	Tenth	Buckley Fld, Denver, Colo.
110	60	Fourth	George Wright AFB, Spokane, Wash.
111	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
112	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

SIGNAL LIGHT CONSTRUCTION COMPANIES (AVN)

601	67	First	State Armory, Worcester, Mass.
602	52	First	Floyd Bennett NAS, Brooklyn, N.Y.
603	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
604	54	Fourteenth	Marietta AFB, Marietta, Ga.
605	55	Ninth	110 E. Mulberry St., Springfield, Ohio
606	66	Tenth	O'Hare International Apt, Park Ridge, Ill.
607	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis 23, Mo.
608	63	Twelfth	Ellington AFB, Houston, Tex.
609	86	Tenth	Buckley Fld, Denver, Colo.
610	60	Fourth	Boeing Fld, Seattle, Wash.
611	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
615	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

RADAR CALIBRATION DETACHMENTS

ORG	GP	WING	AIR FORCE	LOCATION
101	151	67	First	Commonwealth Armory, Boston, Mass.
102	152	52	First	Westchester Co. Apt, White Plains, N.Y.
103	153	53	Ninth	Reading Mun Apt, Reading, Pa.
104	154	54	Fourteenth	Marietta AFB, Marietta, Ga.
105	155	55	Ninth	Lockbourne AFB, Columbus, Ohio
106	156	66	Tenth	Chicago Mun Apt, Chicago, Ill.
107	157	71	Tenth	Lambert Fld, St. Louis, Mo.
108	158	63	Twelfth	Ellington AFB, Houston, Tex.
109	159	86	Tenth	Buckley Fld, Denver, Colo.
110	160	60	Fourth	Boeing Fld, Seattle, Wash.
111	161	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
112	162	62	Fourth	Lockheed Air Terminal, Burbank, Calif.

AIR SERVICE GROUPS (LB) AND DETACHMENTS

ORG	DET	WING	AIR FORCE	
206	Hq	52	First	Floyd Bennett NAS, Brooklyn, N.Y.
206	A	52	First	Floyd Bennett NAS, Brooklyn, N.Y.
206	B	52	First	Floyd Bennett NAS, Brooklyn, N.Y.
206	C	52	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
206	D	55	Ninth	Cleveland Mun Apt, Cleveland, Ohio
211	Hq	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
211	A	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
211	B	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
211	C	53	Ninth	New Orleans Mun Apt, New Orleans, La.
211	D	53	Ninth	Lockheed Air Terminal, Burbank, Calif.
226	Hq	66	Tenth	O'Hare Int'l Apt, Park Ridge, Ill.
226	A	66	Tenth	Chicago-Mun Apt, Chicago, Ill.
226	B	66	Tenth	O'Hare Int'l Apt, Park Ridge, Ill.
226	C	66	Tenth	Detroit-Wayne Apt, Romulus, Mich.
226	D	66	Tenth	Rosecrans Fld, St. Joseph, Mo.

AIR SERVICE GROUPS (FIGHTER) AND DETACHMENTS

201	Hq	67	First	Dow AFB, Bangor, Me.
201	A	67	First	Dow AFB, Bangor, Me.
201	B	67	First	Grenier AFB, Manchester, N.H.
201	C	67	First	Burlington Mun Apt, Burlington, Vt.
202	Hq	67	First	Logan Apt, Boston, Mass.
202	A	67	First	Logan Apt, Boston, Mass.
202	B	67	First	Barnes Mun Apt, Westfield, Mass.
202	C	67	First	Schenectady Co. Apt, Schenectady, N.Y.
203	Hq	67	First	Bradley Fld, Windsor Locks, Conn.
203	A	67	First	Bradley Fld, Windsor Locks, Conn.
203	B	67	First	Theodore F. Greene Apt, Hillsgrove, R.I.
207	Hq	52	First	Niagara Falls Mun Apt, Niagara Falls, N.Y.
207	A	52	First	Niagara Falls Mun Apt, Niagara Falls, N.Y.
207	B	52	First	Westchester Co. Apt, White Plains, N.Y.
207	C	52	First	Hancock Apt, Syracuse, N.Y.

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AIR SERVICE GROUPS (FIGHTER) AND DETACHMENTS

ORG	DET	WING	AIR FORCE	LOCATION
208	Hq	52	First	Newark Mun Apt, Newark, N.J.
208	A	52	First	Mercer Co. Apt, Trenton, N.J.
208	B	52	First	Newark Mun Apt, Newark, N.J.
*208	C	52	Ninth	New Castle Co. Apt, Wilmington, Del.
212	Hq	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
212	A	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
212	B	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
212	C	53	Ninth	Reading Mun Apt, Reading, Pa.
213	Hq	53	Ninth	Andrews AFB, Washington, D.C.
213	A	53	Ninth	Andrews AFB, Washington, D.C.
213	B	53	Ninth	Baltimore Mun Apt, Baltimore, Md.
213	C	53	Ninth	Byrd Fld, Richmond, Va.
216	Hq	54	Fourteenth	Marietta AFB, Marietta, Ga.
216	A	54	Fourteenth	Marietta AFB, Marietta, Ga.
216	B	54	Fourteenth	Congaree AB, Columbia, S.C.
216	C	54	Fourteenth	Hunter Fld, Savannah, Ga.
217	Hq	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
217	A	54	Fourteenth	Key Fld, Meridian, Miss.
217	B	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
217	C	54	Fourteenth	Jacksonville Mun Apt #1, Jacksonville, Fla.
218	Hq	54	Fourteenth	Berry Fld, Nashville, Tenn.
218	A	54	Fourteenth	Berry Fld, Nashville, Tenn.
218	B	54	Fourteenth	Memphis Mun Apt, Memphis, Tenn.
218	C	54	Fourteenth	Douglas Fld, Charlotte, N.C.
221	Hq	55	Ninth	Cleveland Mun Apt, Cleveland, Ohio
221	A	55	Ninth	Dayton Mun Apt, Vandalia, Ohio
221	B	55	Ninth	Mansfield Mun Apt, Mansfield, Ohio
221	C	55	Ninth	Lockbourne AFB, Columbus, Ohio
222	Hq	71	Tenth	Stout Fld, Indianapolis, Ind.
222	A	71	Tenth	Stout Fld, Indianapolis, Ind.
222	B	71	Tenth	Baer Fld, Ft. Wayne, Ind.
**222	C	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
223	Hq	55	Ninth	Standiford Fld, Louisville, Ky.
223	A	55	Ninth	Standiford Fld, Louisville, Ky.
223	B	55	Ninth	Charleston Mun Apt, Charleston, W. Va.
227	Hq	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
227	A	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
227	B	66	Tenth	Kellogg Fld, Battle Creek, Mich.
227	C	66	Tenth	Great Falls Mun Apt, Great Falls, Mont.
228	Hq	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
228	A	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
228	B	66	Tenth	Truax Fld, Madison, Wis.
228	C	66	Tenth	Kirtland AFB, N.M.
231	Hq	71	Tenth	Lambert Fld, St. Louis, Mo.
231	A	71	Tenth	Lambert Fld, St. Louis, Mo.
231	B	71	Tenth	Peoria Mun Apt, Peoria, Ill.
231	C	71	Tenth	Capitol Apt, Springfield, Ill.
232	Hq	71	Tenth	DesMoines Mun Apt, DesMoines, Ia.
232	A	71	Tenth	DesMoines Mun Apt, DesMoines, Ia.
232	B	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
232	C	71	Tenth	Lincoln Apt, Lincoln, Neb.

* Atchd 53d Ftr Wg
** Atchd Hq Det, 233d AS Gp

AIR SERVICE GROUPS (FIGHTER) AND DETACHMENTS

ORG	DET	WING	AIR FORCE	LOCATION
233	Hq	86	Tenth	Holman Fld, St. Paul, Minn.
233	A	86	Tenth	Holman Fld, St. Paul, Minn.
233	B	86	Tenth	Fargo Mun Apt, Fargo, N.D.
233	C	86	Tenth	Duluth Apt, Duluth, Minn.
236	Hq	63	Twelfth	Hensley Fld, Dallas, Tex.
236	A	63	Twelfth	Hensley Fld, Dallas, Tex.
236	B	63	Twelfth	Ellington AFB, Houston, Tex.
236	C	63	Twelfth	Brooks AFB, Texas
237	Hq	63	Twelfth	Will Rogers Fld, Oklahoma City, Okla.
237	A	63	Twelfth	Tulsa Mun Apt, Tulsa, Okla.
237	B	63	Twelfth	Adams Fld, Little Rock, Ark.
237	C	63	Twelfth	Will Rogers Fld, Oklahoma City, Okla.
240	Hq	86	Tenth	Buckley Fld, Denver, Colo.
240	A	86	Tenth	Buckley Fld, Denver, Colo.
240	B	86	Tenth	Cheyenne Mun Apt, Cheyenne, Wyo.
240	C	86	Tenth	Wichita Mun Apt, Wichita, Kans.
242	Hq	60	Fourth	Portland Apt, Portland, Oreg.
242	A	60	Fourth	Portland Apt, Portland, Oreg.
242	B	60	Fourth	Geiger Fld, Spokane, Wash.
242	C	60	Fourth	Boise Air Terminal, Boise, Idaho
244	Hq	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
244	A	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
244	B	61	Fourth	Reno AFB, Reno, Nev.
244	C	61	Fourth	Salt Lake Mun Apt, #1, Salt Lake City, Utah
246	Hq	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
246	A	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
246	B	62	Fourth	San Bernardino AFB, San Bernardino, Calif.
246	C	62	Fourth	Luke Fld, Phoenix, Ariz.
198	C			Isle Grant Apt, Puerto Rico
199	C			Bellows Fld, Oahu, T.H.

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FIGHTER GROUP HQ (Contd)

ORG	WING	AIR FORCE	LOCATION
123	55	Ninth	Standiford Fld, Louisville, Ky.
127	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
128	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
131	71	Tenth	Lambert Fld, St. Louis, Mo.
132	71	Tenth	DesMoines Mun Apt, DesMoines, Ia.
133	86	Tenth	Holman Fld, St. Paul, Minn.
136	63	Twelfth	Hensley Fld, Dallas, Tex.
137	63	Twelfth	Will Rogers Fld, Oklahoma City, Okla.
140	86	Tenth	Buckley Fld, Denver, Colo.
142	60	Fourth	Portland Apt, Portland, Oreg.
144	61	Fourth	Oakland Mun Apt, Oakland, Calif.
146	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.

FIGHTER SQUADRONS (SE)

ORG	GP	WING	AIR FORCE	LOCATION
101	102	67	First	Logan Apt, Boston, Mass.
104	113	53	Ninth	Baltimore Mun Apt, Baltimore, Md.
105	118	54	Fourteenth	Berry Fld, Nashville, Tenn.
109	133	86	Tenth	Holman Fld, St. Paul, Minn.
110	131	71	Tenth	Lambert Fld, St. Louis, Mo.
111	136	63	Twelfth	Ellington AFB, Houston, Tex.
113	122	71	Tenth	Stout Fld, Indianapolis, Ind.
116	142	60	Fourth	Geiger Fld, Spokane, Wash.
118	103	67	First	Bradley Fld, Windsor Locks, Conn.
119	108	52	First	Newark Mun Apt, Newark, N.J.
120	140	86	Tenth	Buckley Fld, Denver, Colo.
121	113	53	Ninth	Andrews AFB, Washington, D.C.
123	142	60	Fourth	Portland Apt, Portland, Oreg.
124	132	71	Tenth	DesMoines Mun Apt, DesMoines, Ia.
125	137	63	Twelfth	Tulsa Mun Apt, Tulsa, Okla.
126	128	66	Tenth	General Mitchell Fld,Milwaukee, Wis.
127	140	86	Tenth	Wichita Mun.Apt, Wichita, Kans.
128	116	54	Fourteenth	Marietta AFB, Marietta, Ga.
131	102	67	First	Barnes Mun Apt, Westfield, Mass.
133	101	67	First	Grenier AFB, Manchester, N.H.
134	101	67	First	Burlington Mun Apt, Burlington, Vt.
136	107	52	First	Niagara Falls Mun Apt, Niagara Falls, N.Y.
137	107	52	First	Westchester Co. Apt, White Plains, N.Y.
138	107	52	First	Hancock Apt, Syracuse, N.Y.
139	107	52	First	Schenectady Co. Apt, Schenectady, N.Y.
141	108	52	First	Mercer Co. Apt, Trenton, N.J.
142	108	53	Ninth	New Castle Co. Apt, Wilmington, Del.
146	112	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
147	112	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
148	112	53	Ninth	Reading Mun Apt, Reading, Pa.
149	113	53	Ninth	Byrd Fld, Richmond, Va.
152	103	67	First	Theodore F. Greene Apt, Hillsgrove, R.I.
153	117	54	Fourteenth	Key Fld, Meridian, Miss.
154	137	63	Twelfth	Adams Fld, Little Rock, Ark.

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FIGHTER SQUADRONS (SE)

ORG	GP	WING	AIR FORCE	LOCATION
155	117	54	Fourteenth	Memphis Mun Apt, Memphis, Tenn.
156	117	54	Fourteenth	Douglas Fld, Charlotte, N.C.
157	116	54	Fourteenth	Congaree AF, Columbia, S.C.
160	117	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
162	121	55	Ninth	Dayton Mun Apt, Vandalia, Ohio
163	122	71	Tenth	Baer Fld, Ft. Wayne, Ind
164	121	55	Ninth	Mansfield Mun Apt, Manfield, Ohio
165	123	55	Ninth	Standiford Fld, Louisville, Ky.
166	121	55	Ninth	Lockbourne AFB, Columbus, Ohio
167	123	55	Ninth	Charleston Mun Apt, Charleston, W. Va.
169	131	71	Tenth	**Peoria** Mun Apt, Peoria, Ill
170	131	71	Tenth	Capitol Apt, Springfield, Ill.
171	127	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
172	127	66	Tenth	Kellogg Fld, Battle Creek, Mich.
174	132	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
175	133	86	Tenth	Sioux Falls Mun Apt, Sioux Falls, S.D.
176	128	66	Tenth	Truax Fld, Madison, Wis.
178	133	86	Tenth	Fargo Mun Apt, Fargo, N.D.
179	133	86	Tenth	Duluth Apt, Duluth, Minn.
181	136	63	Twelfth	Hensley Fld, Dallas, Tex.
182	136	63	Twelfth	Brooks AFB, Brooks Fld, Tex.
185	137	63	Twelfth	Will Rogers Fld, Oklahoma City, Okla.
186	142	60	Fourth	Great Falls Mun Apt, Great Falls, Mont.
187	140	86	Tenth	Cheyenne Mun Apt, Cheyenne, Wyo.
188	137	63	Twelfth	Kirtland AFB, Kirtland Fld, N.M.
190	142	60	Fourth	Boise Air Terminal, Boise, Idaho
191	144	61	Fourth	Salt Lake Mun Apt #1, Salt Lake City, Utah
192	144	61	Fourth	Reno AFB, Reno, Nev.
194	144	61	Fourth	NG Ctr, P.O. Box 356, Alameda, Calif.
195	146	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
197	146	62	Fourth	Luke Fld, Phoenix, Ariz.
198				Isle Grande Apt, Puerto Rico
199				Bellows Fld, Oahu, T.H.

UTILITY FLIGHTS, FIGHTER SQUADRONS (SE)

ORG	GP	WING	AIR FORCE	LOCATION
101	102	67	First	Logan Apt, Boston, Mass.
104	113	53	Ninth	Baltimore Mun Apt, Baltimore, Md.
105	118	54	Fourteenth	Berry Fld, Nashville, Tenn.
109	133	86	Tenth	Holman Fld, St. Paul, Minn.
110	131	71	Tenth	Lambert Fld, St. Louis, Mo.
111	136	63	Twelfth	Ellington AFB, Houston, Tex.
113	122	71	Tenth	Stout Fld, Indianapolis, Ind.
116	142	60	Fourth	Geiger Fld, Spokane, Wash.
118	103	67	First	Bradley Fld, Windsor Locks, Conn.
119	108	52	First	Newark Mun Apt, Newark, N.J.
120	140	86	Tenth	Buckley Fld, Denver, Colo.
121	113	53	Ninth	Andrews AFB, Washington, D.C.
123	142	60	Fourth	Portland Apt, Portland, Oreg.
124	132	71	Tenth	DesMoines Mun Apt, DesMoines, Ia.
125	137	63	Twelfth	Tulsa Mun Apt, Tulsa, Okla.

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UTILITY FLIGHTS, FIGHTER SQUADRONS (SE)

ORG	GP	WING	AIR FORCE	LOCATION
126	128	66	Tenth	General Mitchell Fld, Milwaukee, Wis.
127	140	86	Tenth	Wichita Mun Apt, Wichita, Kans.
128	116	54	Fourteenth	Marietta AFB, Marietta, Ga.
131	102	67	First	Barnes Mun Apt, Westfield, Mass.
132	101	67	First	Dow AFB, Bangor, Me.
133	101	67	First	Grenier AFB, Manchester, N.H.
134	101	67	First	Burlington Mun Apt, Burlington, Vt.
136	107	67	First	Niagara Falls Mun Apt, Niagara Falls, N.Y.
137	107	52	First	Westchester Co. Apt, White Plains, N.Y.
138	107	52	First	Hancock Apt, Syracuse, N.Y.
139	107	52	First	Schenectady Co. Apt, Schenectady, N.Y.
141	108	52	First	Mercer Co. Apt, Trenton, N.J.
142	108	52	Ninth	New Castle Co. Apt, Wilmington, Del.
146	112	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
147	112	53	Ninth	Greater Pittsburgh Apt, Coraopolis, Pa.
148	112	53	Ninth	Reading Mun Apt, Reading, Pa.
149	113	53	Ninth	Byrd Fld, Richmond, Va.
152	103	67	First	Theodore F. Greene Apt, Hillsgrove, R.I.
153	117	54	Fourteenth	Key Fld, Meridian, Miss.
154	137	63	Twelfth	Adams Fld, Little Rock, Ark.
155	117	54	Fourteenth	Memphis Mun Apt, Memphis, Tenn.
156	117	54	Fourteenth	Douglas Fld, Charlotte, N.C.
157	116	54	Fourteenth	Congaree AB, Columbia, S.C.
158	116	54	Fourteenth	Hunter Fld, Savannah, Ga.
159	116	54	Fourteenth	Jacksonville Mun Apt #1, Jacksonville, Fla.
160	117	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
162	121	55	Ninth	Dayton Mun Apt, Vandalia, Ohio
163	122	71	Tenth	Baer Fld, Ft. Wayne, Ind.
164	121	55	Ninth	Mansfield Mun Apt, Mansfield, Ohio
165	123	55	Ninth	Standiford Fld, Louisville, Ky.
166	121	55	Ninth	Lockbourne AFB, Columbus, Ohio
167	123	55	Ninth	Charleston Mun Apt, Charleston, W.Va.
169	131	71	Tenth	Peoria Mun Apt, Peoria, Ill.
170	131	71	Tenth	Capitol Apt, Springfield, Ill.
171	127	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
172	127	66	Tenth	Kellogg Fld, Battle Creek, Mich.
173	132	71	Tenth	Lincoln Apt, Lincoln, Neb.
174	132	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
175	133	86	Tenth	Sioux Falls Mun Apt, Sioux Falls, S.D.
176	128	66	Tenth	Truax Fld, Madison, Wis.
178	133	86	Tenth	Fargo Mun Apt, Fargo, N.D.
179	133	86	Tenth	Duluth Apt, Duluth, Minn.
181	136	63	Twelfth	Hensley Fld, Dallas, Tex.
182	136	63	Twelfth	Brooks AFB, Tex.
185	137	63	Twelfth	Will Rogers Fld, Oklahoma City, Okla.
186	142	60	Fourth	Great Falls Mun Apt, Great Falls, Mont.
187	140	86	Tenth	Cheyenne Mun Apt, Cheyenne, Wyo.
188	137	63	Twelfth	Kirtland AFB, Kirtland Fld, N.M.
190	142	60	Fourth	Boise Air Terminal, Boise, Idaho
191	144	61	Fourth	Salt Lake Mun Apt #1, Salt Lake City, Utah
192	144	61	Fourth	Reno AFB, Reno, Nev.
194	144	61	Fourth	Oakland Mun Apt, Oakland, Calif.

ENGINEER AVIATION BATTALION (HQ & SV CO)

ORG	WING	AIR FORCE	LOCATION
1901	52	First	Floyd Bennett NAS, Brooklyn N.Y.
1902	53	Ninth	Johnstown, Pa.
1903	66	Tenth	O'Hare Nat'l Apt, Park Ridge, Ill.
1905	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.

ENGINEER AVIATION COMPANIES

ORG	BN	WING	AIR FORCE	
1801	1901	52	First	Commonwealth Armory, Boston, Mass.
1802	1901	52	First	Floyd Bennett NAS, Brooklyn, N.Y.
1803	1902	53	Ninth	Johnstown, Pa.
1804	(SEP)	54	Fourteenth	Marietta AFB, Marietta, Ga.
1805	1902	53	Ninth	Lunken Apt, Cincinnati, Ohio
1806	1903	66	Tenth	Detroit, Mich.
1807	1903	66	Tenth	1 Grant Ave, Jefferson Bks, St. Louis, Mo.
1808	(SEP)	63	Twelfth	Ellington AFB, Houston, Tex.
1809	1903	66	Tenth	Buckley Fld, Denver, Colo.
1810	1905	61	Fourth	Portland Apt, Portland, Oreg.
1811	1905	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
1812	1905	61	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.

WEATHER STATIONS (TYPE A)

ORG	WING	AIR FORCE	
101	67	First	Logan Apt, Boston, Mass.
102	52	First	Floyd Bennett NAS, Brooklyn, N.Y.
103	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
104	53	Ninth	Baltimore Mun Apt, Baltimore, Md.
105	54	Fourteenth	Berry Fld, Nashville, Tenn.
106	54	Fourteenth	Birmingham Mun Apt, Birmingham, Ala.
107	66	Tenth	Detroit-Wayne Major Apt, Romulus, Mich.
108	66	Tenth	Chicago-Mun Apt, Chicago, Ill.
109	86	Tenth	Holman Fld, St. Paul, Minn.
110	71	Tenth	Lambert Fld, St. Louis, Mo.
111	63	Twelfth	Ellington AFB, Houston, Tex.
112	55	Ninth	Cleveland Mun Apt, Cleveland, Ohio
113	71	Tenth	Stout Fld, Indianapolis, Ind.
114	52	First	Floyd Bennett NAS, Brooklyn, N.Y.
115	62	Fourth	Lockheed Air Terminal, Burbank, Calif.
116	60	Fourth	Geiger Fld, Spokane, Wash.
117	53	Ninth	Philadelphia Inter Apt, Philadelphia, Pa.
118	67	First	Bradley Fld, Windsor Locks, N.H.
119	52	First	Newark Mun Apt, Newark, N.J.
120	86	Tenth	Buckley Fld, Denver, Colo.
121	53	Ninth	Andrews AFB, Washington, D.C.

WEATHER STATIONS (TYPE A) (Contd)

ORG	WING	AIR FORCE	LOCATION
174	71	Tenth	Sioux City Mun Apt, Sioux City, Ia.
175	86	Tenth	Sioux Falls Mun Apt, Sioux Falls, S.D.
176	66	Tenth	Truax Fld, Madison, Wis.
178	86	Tenth	Fargo Mun Apt, Fargo, N.D.
179	86	Tenth	Duluth Apt, Duluth, Minn.
180	66	Tenth	Rosecrans Fld, St. Joseph, Mo.
181	63	Twelfth	Hensley Fld, Dallas, Texas
182	63	Twelfth	Brooks AFB, Texas
185	63	Twelfth	Will Rogers Fld, Oklahoma City, Okla.
186	60	Fourth	Great Falls Mun Apt, Great Falls, Mont.
187	86	Tenth	Cheyenne Mun Apt, Cheyenne, Wyo.
188	63	Twelfth	Kirtland AFB, Kirtland, N.M.
190	60	Fourth	Boise Air Terminal, Boise, Idaho
191	61	Fourth	Salt Lake Mun Apt #1, Salt Lake City, Utah
192	61	Fourth	Reno AFB, Reno, Nev.
194	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
195	62	Fourth	Van Nuys Metro Apt, Van Nuys, Calif.
196	62	Fourth	San Bernadrino AFB, San Bernardino, Calif.
197	62	Fourth	Luke Fld, Phoenix, Ariz.
198			Isle Grande Apt, Puerto Rico
199			Bellows Fld, Oahu, T.H.
			WING BANDS
530	54	Fourteenth	Marietta AFB, Marietta, Ga.
531	63	Twelfth	Ellington AFB, Houston, Tex.
532	86	Tenth	Buckley Fld, Denver, Colo.
552	52	First	State Armory, White Plains, N.Y.
553	53	Ninth	Harrisburg Mun Apt, New Cumberland, Pa.
555	55	Ninth	NG Armory, Toledo, Ohio (965 Wall St)
560	60	Fourth	George Wright AFB, Spokane, Wash.
561	61	Fourth	NG Ctr, PO Box 356, Alameda, Calif.
562	62	Fourth	Lockheed Air Terminal, Burbank, Calif.
566	66	Tenth	O'Hare Intl Apt, Park Ridge, Ill.
567	67	First	Commonwealth Armory, Boston, Mass.
571	71	Tenth	1 Grant Ave, Jefferson Bks, St. Louis, Mo.

SECTION III

AIR NATIONAL GUARD UNITS BY WING

52D FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
52 Ftr Wg Hq & Hq Sq	State Armory, White Plains, N.Y.
552 USAF Band	State Armory, White Plains, N.Y.
102 USAF Comm Sq (Wg)	State Armory, White Plains, N.Y.
102 Radar Calib Det	State Armory, White Plains, N.Y.
602 Sig Lt Const Co (Avn)	Floyd Bennett NAS, Brooklyn, N.Y.
1901 EAB Hq & Sv Co	Floyd Bennett NAS, Brooklyn, N.Y.
1802 Eng Avn Co (1901 EAB)	Floyd Bennett NAS, Brooklyn, N.Y.
1801 Eng Avn Co (1901 EAB) (Atched 67 Ftr Wg)	Commonwealth Armory, Boston, Mass.
152 ACWW Gp Hq	State Armory, White Plains, N.Y.
106 AC Sq	State Armory, White Plains, N.Y.
107 ACWW Sq (IS)	State Armory, White Plains, N.Y.
108 ACWW Sq (F)	Hancock Apt, Syracuse, N.Y.
106 Bomb Gp (L) Hq	Floyd Bennett NAS, Brooklyn, N.Y.
102 Bomb Sq (L)	Floyd Bennett NAS, Brooklyn, N.Y.
102 Bomb Sq (L) Util Flt	Floyd Bennett NAS, Brooklyn, N.Y.
114 Bomb Sq (L)	Floyd Bennett NAS, Brooklyn, N.Y.
114 Bomb Sq (L) Util Flt	Floyd Bennett NAS, Brooklyn, N.Y.
107 Ftr Gp Hq	Niagara Falls Mun Apt, Niagara Falls, N.Y.
136 Ftr Sq (SE)	Niagara Falls Mun Apt, Niagara Falls, N.Y.
136 Ftr Sq (SE) Util Flt	Niagara Falls Mun Apt, Niagara Falls, N.Y.
137 Ftr Sq (SE)	Westchester Co Apt, White Plains, N.Y.
137 Ftr Sq (SE) Util Flt	Westchester Co Apt, White Plains, N.Y.
138 Ftr Sq (SE)	Hancock Apt, Syracuse, N.Y.
138 Ftr Sq (SE) Util Flt	Hancock Apt, Syracuse, N.Y.
139 Ftr Sq (SE)	Schenectady Co Apt, Schenectady, N.Y.
139 Ftr Sq (SE) Util Flt	Schenectady Co Apt, Schenectady, N.Y.
108 Ftr Gp Hq	Newark Mun Apt, Newark, N.J.
119 Ftr Sq (SE)	Newark Mun Apt, Newark, N.J.
119 Ftr Sq (SE) Util Flt	Newark Mun Apt, Newark, N.J.
141 Ftr Sq (SE)	Mercer Co Apt, Trenton, N.J.
141 Ftr Sq (SE) Util Flt	Mercer Co Apt, Trenton, N.J.
206 AS Gp (LB) Hq Det	Floyd Bennett NAS, Brooklyn, N.Y.
Det A	Floyd Bennett NAS, Brooklyn, N.Y.
Det B	Floyd Bennett NAS, Brooklyn, N.Y.
Det C (Atchd 217 ASG (Ftr))	Birmingham Mun Apt, Birmingham Ala.
Det D (Atchd 221 ASG (Ftr))	Cleveland Mun Apt, Cleveland, Ohio

53D FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
53 Ftr Wg Hq & Hq Sq	Harrisburg Mun Apt, New Cumberland, Pa.
553 USAF Band	Harrisburg Mun Apt, New Cumberland, Pa.
103 USAF Comm Sq (Wg)	Harrisburg Mun Apt, New Cumberland, Pa.
103 Radar Calib Det	Reading Mun Apt, Reading, Pa.
603 Sig Lt Const Co (Avn)	Philadelphia Int Apt, Philadelphia, Pa.
1902 EAB Hq & Sv Co	Johnstown, Pa.
1813 Eng Avn Co (1902 EAB)	Johnstown, Pa.
1805 Eng Avn Co (1902 EAB) (Atchd 55 Ftr Wg)	Lunken Apt, Cincinnati, Ohio
153 AC&W Gp Hq	Harrisburg Mun Apt, New Cumberland, Pa.
111 AC Sq	Harrisburg Mun Apt, New Cumberland, Pa.
112 AC&W Sq (LS)	State College, Pa.
113 AC&W Sq (F)	NG Armory, Washington, D.C.
111 Bomb Gp (L) Hq	Philadelphia Int Apt, Philadelphia, Pa.
103 Bomb Sq (L)	Philadelphia Int Apt, Philadelphia, Pa.
103 Bomb Sq (L) Util Flt	Philadelphia Int Apt, Philadelphia, Pa.
117 Bomb Sq (L)	Philadelphia Int Apt, Philadelphia, Pa.
117 Bomb Sq (L) Util Flt	Philadelphia Int Apt, Philadelphia, Pa.
112 Ftr Gp Hq	Greater Pittsburgh Apt, Coraopolis, Pa.
146 Ftr Sq (SE)	Greater Pittsburgh Apt, Coraopolis, Pa.
146 Ftr Sq (SE) Util Flt	Greater Pittsburgh Apt, Coraopolis, Pa.
147 Ftr Sq (SE)	Greater Pittsburgh Apt, Coraopolis, Pa.
147 Ftr Sq (SE) Util Flt	Greater Pittsburgh Apt, Coraopolis, Pa.
148 Ftr Sq (SE)	Reading Mun Apt, Reading, Pa.
148 Ftr Sq (SE) Util Flt	Reading Mun Apt, Reading, Pa.
113 Ftr Gp Hq	Andrews AFB, Washington, D.C.
104 Ftr Sq (SE)	Baltimore Mun Apt, Baltimore, Md.
104 Ftr Sq (SE) Util Flt	Baltimore Mun Apt, Baltimore, Md.
121 Ftr Sq (SE)	Andrews AFB, Washington, D.C.
121 Ftr Sq (SE) Util Flt	Andrews AFB, Washington, D.C.
142 Ftr Sq (SE)	New Castle Co, Apt, Wilmington, Del.
142 Ftr Sq (SE) Util Flt	New Castle Co, Apt, Wilmington, Del.
149 Ftr Sq (SE)	Byrd Fld, Richmond, Va.
149 Ftr Sq (SE) Util Flt	Byrd Fld, Richmond, Va.
211 AS Gp (LB) Hq Det	Philadelphia Int Apt, Philadelphia, Pa.
Det A	Philadelphia Int Apt, Philadelphia, Pa.
Det B	Philadelphia Int Apt, Philadelphia, Pa.
Det C (Atchd 236 ASG (FRT))	New Orleans Mun Apt, New Orleans, La.
Det D (Atchd 246 ASG (FTR))	Van Nuys Met Apt, Van Nuys, Calif.

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54TH FIGHTER WING

FOURTEENTH AIR FORCE

UNIT	LOCATION
54 Ftr Wg Hq & Hq Sq	Marietta AFB, Marietta, Ga.
530 USAF Band	Marietta AFB, Marietta, Ga.
104 USAF Comm Sq (Wg)	Marietta AFB, Marietta, Ga.
104 Radar Calib Det	Marietta AFB, Marietta, Ga.
604 Sig Lt Const Co (Avn)	Marietta AFB, Marietta, Ga.
1804 Eng Avn Co (Sep)	Marietta AFB, Marietta, Ga.
154 AC&W Gp Hq	Marietta AFB, Marietta, Ga.
116 AC Sq	Marietta AFB, Marietta, Ga.
117 AC&W Sq (LS)	Hunter Fld, Savannah, Ga.
118 AC&W Sq (F)	Douglas Fld, Charlotte, N.C.
116 Ftr Gp Hq	Marietta AFB, Marietta, Ga.
128 Ftr Sq (SE)	Marietta AFB, Marietta, Ga.
128 Ftr Sq (SE) Util Flt	Marietta AFB, Marietta, Ga.
157 Ftr Sq (SE)	Congaree AFB, Columbia, SC
157 Ftr Sq (SE) Util Flt	Congaree AFB, Columbia, SC
158 Ftr Sq (JP)	Hunter Fld, Savannah, Ga.
158 Ftr Sq (JP) Util Flt	Hunter Fld, Savannah, Ga.
159 Ftr Sq (JP)	Jacksonville Mun Apt #1, Jacksonville,Fla.
159 Ftr Sq (SE) Util Flt	Jacksonville Mun Apt #1, Jacksonville,Fla.
117 Ftr Gp Hq	Birmingham Mun Apt, Birmingham, Ala.
106 Bomb Sq (I)	Birmingham Mun Apt, Birmingham, Ala.
106 Bomb Sq (I) Util Flt	Birmingham Mun Apt, Birmingham, Ala.
153 Ftr Sq (SE)	Key Fld, Meridian, Miss.
153 Ftr Sq (SE) Util Flt	Key Fld, Meridian, Miss.
160 Ftr Sq (SE)	Birmingham Mun Apt, Birmingham Ala.
160 Ftr Sq (SE) Util Flt	Birmingham Mun Apt, Birmingham Ala.
118 Ftr Gp Hq	Berry Fld, Nashville, Tenn.
105 Ftr Sq (SE)	Berry Fld, Nashville, Tenn.
105 Ftr Sq (SE) Util Flt	Berry Fld, Nashville, Tenn.
155 Ftr Sq (SE)	Memphis Mun Apt, Memphis, Tenn.
155 Ftr Sq (SE) Util Flt	Memphis Mun Apt, Memphis, Tenn.
156 Ftr Sq (SE)	Douglas Fld, Charlotte, N.C.
156 Ftr Sq (SE) Util Flt	Douglas Fld, Charlotte, N.C.
216 ASGp (Ftr) Hq Det	Marietta AFB, Marietta, Ga.
Det A	Marietta AFB, Marietta, Ga.
Det B	Congaree AB , Columbia, SC
Det C	Hunter Fld, Savannah, Ga.
Det C, 217 ASG (Ftr)	Jacksonville Mun Apt #1, Jacksonville, Fla.
217 AS Gp (Ftr) Hq Det	Birmingham Mun Apt, Birmingham, Ala.
Det A	Key Fld, Meridian, Miss
Det B	Birmingham Mun Apt, Birmingham, Ala.
Det C (Atchd 216 ASG (Ftr))	Jacksonville Mun Apt #1,Jacksonville, Fla.
Det C, 206 ASG (LB)	Birmingham Mun Apt, Birmingham Ala.

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55TH FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
55 Ftr Wg Hq & Hq Sq	Lockbourne AFB, Columbus, Ohio
555 USAF Band	NG Armory, Toledo, Ohio (965 Wall St)
105 USAF Comm Sq (Wg)	Elberon Armory, Zanesville, Ohio
105 Radar Calib Det	Lockbourne AFB, Columbus, Ohio
605 Sig Lt Const Co (Avn)	110 E. Mulberry St., Springfield
1805 Eng Avn Co (1902 EAB) (Atchd fr 53 Ftr Wg)	Lunken Apt, Cincinnati, Ohio
155 AC&W Gp Hq	Ft Hayes, Columbus, Ohio
121 AC Sq	Ft Hayes, Colubmus, Ohio
123 AC&W Sq (F)	Lunken Apt, Cincinnati, Ohio
121 Ftr Gp Hq	Dayton Mun Apt, Vandalia, Ohio
112 Bomb Sq (L)	Cleveland Mun Apt, Cleveland, Ohio
112 Bomb Sq (L) Util Flt	Cleveland Mun Apt, Cleveland, Ohio
162 Ftr Sq (SE)	Dayton Mun Apt, Vandalia, Ohio
162 Ftr Sq (SE) Util Flt	Dayton Mun Apt, Vandalia, Ohio
164 Ftr Sq (SE)	Mansfield Mun Apt, Mansfield, Ohio
164 Ftr Sq (SE) Util Flt	Mansfield Mun Apt, Mansfield, Ohio
166 Ftr Sq (SE)	Lockbourne AFB, Columbus, Ohio
166 Ftr Sq (SE) Util Flt	Lockbourne AFB, Columbus, Ohio
123 Ftr Gp Hq	Standiford Fld, Louisville, Ky.
165 Ftr Sq (SE)	Standiford Fld, Louisville, Ky.
165 Ftr Sq (SE) Util Flt	Standiford Fld, Louisville, Ky.
167 Ftr Sq (SE)	Charleston Mun Apt, Charleston, W. Va.
167 Ftr Sq (SE) Util Flt	Charleston Mun Apt, Cahrleston, W. Va.
221 AS Gp (Ftr) Hq Det	Cleveland Mun Apt, Cleveland, Ohio
Det A	Dayton Mun Apt, Vandalia, Ohio
Det B	Mansfield Mun Apt, Mansfield, Ohio
Det C	Lockbourne AFB, Columbus, Ohio
Det D 206 ASG (LB)	Cleveland Mun Apt, Cleveland, Ohio
223 AS Gp (Ftr) Hq Det	Standiford Fld, Louisville, Ky.
Det A	Standiford Fld, Louisville, Ky.
Det B	Charleston Mun Apt, Charleston, W. Va.

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60TH FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
60 Ftr Wg Hq & Hq Sq	George Wright AFB, Spokane, Wash.
560 USAF Band	George Wright AFB, Spokane, Wash.
110 USAF Comm Sq (Wg)	George Wright AFB, Spokane, Wash.
110 Radar Calib Det	Boeing Fld, Seattle, Wash.
610 Sig Lt Const Co (Avn)	Boeing Fld, Seattle, Wash.
1810 Eng Avn Co (1905 EAB) (atchd fr 61st Ftr Wg)	Portland Apt, Portland, Oregon
160 AC&W Gp Hq	George Wrigth AFB, Spokane, Wash.
141 AC Sq	George Wright, Spokane, Wash.
142 AC&W Sq (LS)	Portland Apt, Portland, Oregon
143 AC&W Sq (F)	Boeing Fld, Seattle, Wash.
142 Ftr Gp Hq	Portland Apt, Portland, Oregon
116 Ftr Sq (SE)	Boiger Fld, Spokane, Wash.
116 Ftr Sq (SE) Util Flt	Geiger Fld, Spokane, Wash.
123 Ftr Sq (SE)	Portland Apt, Portland, Oregon
123 Ftr Sq (SE) Util Flt	Portland Apt, Portland, Oregon
190 Ftr Sq (SE)	Boise Air Terminal, Boise, Idaho
190 Ftr Sq (SE) Util Flt	Boise Air Terminal, Boise, Idaho
186 Ftr Sq (SE)	Great Falls Mun Apt, Great Falls, Mont.
186 Ftr Sq (SE) Util Flt	Great Falls Mun Apt, Great Falls, Mont.
242 AS Gp (Ftr) Hq Det	Portland Apt, Portland, Oregon
Det A	Portland Apt, Portland, Oregon
Det B	Geiger Fld, Spokane, Wash.
Det C	Boise Air Terminal, Boise, Idaho
Det C, 227 ASG (Ftr)	Great Falls Mun Apt, Great Falls, Mont.
116 Wea Sta (Type A)	Geiger Fld, Spokane, Wash.
123 Wea Sta (Type A)	Portland Apt, Portland, Oregon
186 Wea Sta (Type A)	Great Falls Mun Apt, Great Falls, Mont.
190 Wea Sta (Type A)	Boise Air Terminal, Boise, Idaho

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61ST FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
61 Ftr Wg Hq & Hq Sq	NG Ctr, PO Box 356, Alameda, Calif.
561 USAF Band	NG Ctr, PO Box 356, Alameda, Calif.
111 USAF Comm Sq (Wg)	NG Ctr, PO Box 356, Alameda, Calif.
111 Radar Calib Det	NG Ctr, PO Box 356, Alameda, Calif.
611 Sig Lt Const Co (Avn)	NG Ctr, PO Box 356, Alameda, Calif.
1905 EAB Hq & Sv Co	NG Ctr, PO Box 356, Alameda, Calif.
1810 Eng Avn Co (1905 EAB) (Atchd 60 Ftr Wg)	Portland Apt, Portland, Oregon
1811 Eng Avn Co (1905 EAB)	NG Ctr, PO Box 356, Alameda, Calif.
*1812 Eng Avn Co (1905 EAB)	Van Nuys Met Apt, PO Box 432,Van Nuys, Cal.
161 AC&W Gp Hq	NG Ctr, PO Box 356, Alameda, Calif.
144 AC Sq	NG Ctr, PO Box 356, Alameda, Calif.
145 AC&W Sq (IS)	Ft Funston, San Francisco, Calif.
146 AC&W Sq (F)	Camp Kohler, Sacramento, Calif.
144 Ftr Gp Hq	Oakland Mun Apt, Oakland, Calif.
191 Ftr Sq (SE)	Salt Lake Mun Apt #1, Salt Lake City,Utah
191 Ftr Sq (SE) Util Flt	Salt Lake Mun Apt #1, Salt Lake City,Utah
192 Ftr Sq (SE)	Reno AFB, Reno, Neb.
192 Ftr Sq (SE) Util Flt	Reno AFB, Reno, Neb.
194 Ftr Sq (SE)	NG Ctr, PO Box 356, Alamenda, Calif.
194 Ftr Sq (SE) Util Flt	Oakland Mun Apt, Oakland, Calif.
244 AS Gp (Ftr) Hq Det	NG Ctr, PO Box 356, Alameda, Calif.
Det A	NG Ctr, PO Box 356, Alameda, Calif.
Det B	Reno AFB, Reno, Nev.
Det C	Salt Lake Mun Apt #1, Salt Lake City,Utah
191 Wea Sta (Type A)	Salt Lake Mun Apt #1, Salt Lake City,Utah
192 Wea Sta (Type A)	Reno AFB, Reno, Nev.
194 Wea Sta (Type A)	NG Ctr, PO Box 356, Alameda, Calif.

* Atchd to 61st Ftr Wg

62ND FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
62 Ftr Wg Hq & Hq Sq	Lockheed Air Terminal, Burbank, Calif.
562 USAF Band	Lockheed Air Terminal, Burbank, Calif.
112 USAF Comm Sq (Wg)	Lockheed Air Terminal, Burbank, Calif.
112 Radar Calib Det	Lockheed Air Terminal, Burbank, Calif.
615 Sig Lt Const Co (Avn)	Lockheed Air Terminal, Burbank, Calif.
1812 Eng Avn Co (1905 EAB) (Atchd fr 61 Ftr Wg)	Van Nuys Metro Apt, Van Nuys, Calif.
162 AC&W Gp Hq	Lockheed Air Terminal, Burbank, Calif.
147 AC Sq	Lockheed Air Terminal, Burbank, Calif.
148 AC&W Sq (LS)	Compton Apt, Compton, Calif.
149 AC&W Sq (F)	Ontario Inter Apt, Ontario, Calif.
146 Ftr Gp Hq	Van Nuys Metro Apt, Van Nuys, Calif.
115 Bomb Sq (L)	Lockheed Air Terminal, Burbank, Calif.
115 Bomb Sq (L) Util Flt	Lockheed Air Terminal, Burbank, Calif.
195 Ftr Sq (SE)	Van Nuys Metro Apt, Van Nuys, Calif.
195 Ftr Sq (SE) Util Flt	Van Nuys Metro Apt, Van Nuys, Calif.
196 Ftr Sq (JF)	San Bernardino AFB, San Bernardino, Calif.
196 Ftr Sq (SE) Util Flt	San Bernardino AFB, San Bernardino, Calif.
197 Ftr Sq (SE)	Luke Fld, Phoenix, Ariz.
197 Ftr Sq (SE) Util Flt	Luke Fld, Phoenix, Ariz.
246 AS Gp (Ftr) Hq Det	Van Nuys Metro Apt, Van Nuys, Calif.
Det A	Van Nuys Metro Apt, Van Nuys, Calif.
Det B	San Bernardino AFB, San Bernardino, Calif.
Det C	Luke Fld, Phoenix, Ariz.
*Det D, 211 ASG (LB)	Lockheed Air Terminal, Burbank, Calif.
115 Wea Sta (Type A)	Lockheed Air Terminal, Burbank, Calif.
195 Wea Sta (Type A)	Van Nuys Metro Apt, Van Nuys, Calif.
196 Wea Sta (Type A)	San Bernardino AFB, San Bernardino, Calif.
197 Wea Sta (Type A)	Luke Fld, Phoenix, Ariz.

63D FIGHTER WING

TWELFTH AIR FORCE

UNIT	LOCATION
63 Ftr Wg Hq & Hq Sq	Ellington AFB, Houston, Texas
531 USAF Band	Ellington AFB, Houston, Texas
108 USAF Comm Sq (Wg)	Ellington AFB, Houston, Texas
108 Radar Calib Det	Ellington AFB, Houston, Texas
608 Sig Lt Const Co (Avn)	Ellington AFB, Houston, Texas
1808 Eng Avn Co (Sep)	Hensley Fld, Dallas, Texas
158 AC&W Gp Hq	Ellington AFB, Houston, Texas
134 AC Sq	LaPorte, Texas
135 AC&W Sq (LS)	Jackson Barracks, New Orleans, La.
136 AC& W Sq (F)	Jefferson Co Apt, Beaumont, Texas
136 Ftr Gp Hq	Hensley Fld, Dallas, Texas
111 Ftr Sq (SE)	Ellington AFB, Houston, Texas
111 Ftr Sq (SE) Util Flt	Ellington AFB, Houston, Texas
122 Bomb Sq (I)	New Orleans Mun Apt, New Orleans, La.
122 Bomb Sq (L) Util Flt	New Orleans Mun Apt, New Orleans, La.
181 Ftr Sq (SE)	Hensley Fld, Dallas, Texas
181 Ftr Sq (SE) Util Flt	Hensley Fld, Dallas, Texas
182 Ftr Sq (SE)	Brooks AFB, Texas
182 Ftr Sq (SE) Util Flt	Brooks AFB, Texas
137 Ftr Gp Hq	Will Rogers Fld, Oklahoma City, Okla.
125 Ftr Sq (SE)	Tulsa Mun Apt, Tulsa, Okla.
125 Ftr Sq (SE) Util Flt	Tulsa Mun Apt, Tulsa, Okla.
154 Ftr Sq (SE)	Adams Fld, Little Rock, Ark.
154 Ftr Sq (SE) Util Flt	Adams Fld, Little Rock, Ark.
185 Ftr Sq (SE)	Will Rogers Fld, Oklahoma City, Okla.
185 Ftr Sq (SE) Util Flt	Will Rogers Fld, Oklahoma City, Okla.
188 Ftr Sq (SE)	Kirtland AFB, N.M.
188 Ftr Sq (SE) Util Flt	Kirtland AFB, N.M.
236 AS Gp (Ftr) Hq Det	Hensley Fld, Dallas, Texas
Det A	Hensley Fld, Dallas, Texas
Det B	Ellington AFB, Houston, Texas
Det C	Brooks AFB, Texas
Det C, 211 ASG (LB)	New Orleans Mun Apt, New Orleans, La.
237 AS Gp (Ftr)Hq Det	Will Rogers Fld, Oklahoma City, Okla.
Det A	Tulsa Mun Apt, Tulsa, Okla.
Det B	Adams Fld, Little Rock, Ark.
Det C	Will Rogers Fld, Oklahoma City, Okla.
Det C, 228, ASG (Ftr)	Kirtland AFB, N.M.

63D FIGHTER WING

TWELFTH AIR FORCE

UNIT	LOCATION
111 Wea Sta (Type A)	Ellington AFB, Houston, Texas
122 Wea Sta (Type A)	New Orleans Mun Apt, New Orleans, La.
125 Wea Sta (Type A)	Tulsa Mun Apt, Tulsa, Okla.
154 Wea Sta (Type A)	Adams Fld, Little Rock, Ark.
181 Wea Sta (Type A)	Hensley Fld, Dallas, Texas
182 Wea Sta (Type A)	Brooks AFB, Texas
185 Wea Sta (Type A)	Will Rogers Fld, Oklahoma City, Okla.
183 Wea Sta (Type A)	Kirtland AFB, N.M.

66TH FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
66 Ftr Wg Hq & Hq Sq	O'Hare Intl Apt, Park Ridge, Ill.
566 USAF Band	O'Hare Intl Apt, Park Ridge, Ill.
106 USAF Comm Sq (Wg)	O'Hare Intl Apt, Park Ridge, Ill.
106 Radar Calib Det	Chicago Mun Apt, Chicago, Ill.
606 Sig Lt Const Co (Avn)	O'Hare Intl Apt, Park Ridge, Ill.
1903 EAB Hq & Sv Co	O'Hare Intl Apt, Park Ridge, Ill.
1806 Eng Avn Co (1903 EAB)	Detroit, Mich.
1807 Eng Avn Co (1903 EAB) (Atchd 71 Ftr Wg)	1 Grant Ave, Jefferson Bks, St.Louis,Mo.
1809 Eng Avn Co (1903 EAB) (Atchd 86 Ftr Wg)	Buckley Fld, Denver, Colo.
156 AC&W Gp Hq	O'Hare Intl Apt, Park Ridge, Ill.
126 AC Sq	O'Hare Intl Apt, Park Ridge, Ill.
127 AC&W Sq (IS)	Vickers Armory, Detroit, Mich.
128 AC&W Sq (F)	General Mitchell Fld, Milwaukee, Wisc.
126 Bomb Gp (L) Hq	O'Hare Intl Apt, Park Ridge, Ill.
108 Bomb Sq (L)	Chicago Mun Apt, Chicago, Ill.
108 Bomb Sq (L) Util Flt	Chicago Mun Apt, Chicago, Ill.
168 Bomb Sq (L)	O'Hare Intl Apt, Park Ridge, Ill.
168 Bomb Sq (L) Util Flt	O'Hare Intl Apt, Park Ridge, Ill.
180 Bomb Sq (L)	Rosecrans Fld, St. Joseph, Mo.
180 Bomb Sq (L) Util Flt	Rosecrans Fld, St. Joseph, Mo.
127 Ftr Gp Hq	Detroit-Wayne Major Apt, Romulus, Mich.
107 Bomb Sq (L)	Detroit-Wayne Major Apt, Romulus, Mich.
107 Bomb Sq (L) Util Flt	Detroit-Wayne Major Apt, Romulus, Mich.
171 Ftr Sq (SE)	Detroit-Wayne Major Apt, Romulus, Mich.
171 Ftr Sq (SE) Util Flt	Detroit-Wayne Major Apt, Romulus, Mich.
172 Ftr Sq (SE)	Kellogg Fld, Battle Creek, Mich.
172 Ftr Sq (SE) Util Flt	Kellogg Fld, Battle Creek, Mich.
128 Ftr Gp Hq	General Mitchell Fld, Milwaukee, Wisc.
126 Ftr Sq (SE)	General Mitchell Fld, Milwaukee, Wisc.
126 Ftr Sq (SE)Util Flt	General Mitchell Fld, Milwaukee, Wisc.
176 Ftr Sq (SE)	Truax Fld, Madison, Wisc.
176 Ftr Sq (SE) Util Flt	Truax Fld, Madison, Wisc.
226 AS Gp (LT) Hq Det	O'Hare Intl Apt, Park Ridge, Ill.
Det A	Chicago Mun Apt, Chicago, Ill.
Det B	O'Hare Intl Apt, Park Ridge, Ill.
Det C (Atchd 227 ASG (Gtr))	Detroit-Wayne Major Apt, Romulus, Mich.
Det D	Rosecrans Fld, St. Joseph, Mo.

67TH FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
67 Ftr Wg Hq & Hq Sq	Commonwealth Armory, Boston, Mass.
567 USAF Band	Commonwealth Armory, Boston, Mass.
101 USAF Comm Sq (Wg)	Commonwealth Armory, Boston, Mass.
101 Radar Calib Det	Commonwealth Armory, Boston, Mass.
601 Sig Lt Const Co (Avn)	State Armory, Worcester, Mass.
1801 Eng Avn Co (1901 EAB) (Atchd fr 52 Ftr Wg)	Commonwealth Armory, Boston, Mass.
151 AC&W Gp Hq	Commonwealth Armory, Boston, Mass.
101 AC Sq	Commonwealth Armory, Boston, Mass.
102 AC&W Sq (IS)	Cranston Street Armory, Providence, RI
103 AC&W Sq (F)	Brainerd Fld, Hartford, Conn.
101 Ftr Gp Hq	Camp Keys, Augusta, Me.
132 Ftr Sq (JE)	Dow AFB, Bangor, Me.
132 Ftr Sq (SE) Util Flt	Dow AFB, Bangor, Me.
133 Ftr Sq (SE)	Grenier AFB, Manchester, N.H.
133 Ftr Sq (SE) Util Flt	Grenier AFB, Manchester, N.H.
134 Ftr Sq (SE)	Burlington Mun Apt, Burlington, Vt.
134 Ftr Sq (SE) Util Flt	Burlington Mun Apt, Burlington, Vt.
102 Ftr Gp Hq	Logan Apt, Boston, Mass.
101 Ftr Sq (SE)	Logan Apt, Boston, Mass.
101 Ftr Sq (SE) Util Flt	Logan Apt, Boston, Mass.
131 Ftr Sq (SE)	Barnes Mun Apt, Westfield, Mass.
131 Ftr Sq (SE) Util Flt	Barnes Mun Apt, Westfield, Mass.
103 Ftr Gp Hq	Brainerd Fld, Hartford, Conn.
118 Ftr Sq (SE)	Bradley Fld, Windsor Locks, Conn.
118 Ftr Sq (SE) Util Flt	Bradley Fld, Windsor Locks, Conn.
152 Ftr Sq (SE)	Theodore F. Greene Apt, Hillsgrove, RI
152 Ftr Sq (SE) Util Flt	Theodore F. Greene Apt, Hillsgrove, RI
201 AS Gp (Ftr) Hq Det	Dow AFB, Bangor, Me.
Det A	Dow AFB, Bangor, Me.
Det B	Grenier AFB, Manchester, NH
Det C	Burlington Mun Apt, Burlington, Vt.
202 AS Gp (Ftr) Hq Det	Logan Apt, Boston, Mass.
Det A	Logan Apt, Boston, Mass.
Det B	Barnes Mun Apt, Westfield, Mass.
Det C, (Atchd 207 ASG (Ftr))	Schenectady Co Apt, Schenectday, N.Y.
203 AS Gp (Ftr) Hq Det	Bradley Fld, Windsor Locks, Conn.
Det A	Bradley Fld, Windsor Locks, Conn.
Det B	Theodore F. Greene Apt, Hillsgrove, RI

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71ST FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
71 Ftr Wg Hq & Hq Sq	1 Grant Ave, Jefferson Bks, St Louis, Mo.
571 USAF Band	1 Grant Ave Jefferson Bks, St Louis, Mo.
107 USAF Comm Sq (Wg)	1 Grant Ave Jefferson Bks, St Lohis, Mo.
107 Radar Calib Det	Lambert Fld, St Louis Mo.
607 Sig Lt Const Co (Avn)	1 Grant Ave Jefferson Bks, St Louis, Mo.
1807 Eng Avn Co (1903 EAB) (Atchd Ft 66 Ftr Wg)	1 Grant Ave Jefferson Bks, St Louis, Mo.
157 AC&W Gp Hq	1 Grant Ave, Jefferson Bks, St Louis,Mo.
122 AC&W Sq (IS)	Stout Fld, Indianapolis, Ind,
131 AC Sq	1 Grant Ave, Jefferson Bks, St.Louis,Mo.
133 AC&W Sq (F)	Fort Dodge, Iowa
131 Ftr Gp Hq	Lambert Fld, St. Louis, Mo.
110 Ftr Sq (SE)	Lambert Fld, St. Louis, Mo.
110 Ftr Sq (SE) Util Flt	Lambert Fld, St. Louis, Mo.
169 Ftr Sq (SE)	Peoria Mun Apt, Peoria, Ill.
169 Ftr Sq (SE) Util Flt	Peoria Mun Apt, Peoria, Ill.
170 Ftr Sq (SE)	Capital Apt, Springfield, Ill.
170 Ftr Sq (SE) Util Flt	Capital Apt, Springfield, Ill.
122 Ftr Gp Hq	Stout Fld, Indianapolis, Ind.
113 Ftr Sq (SE)	Stout Fld, Indianapolis, Ind.
113 Ftr Sq (SE) Util Flt	Stout Fld, Indianapolis, Ind.
163 Ftr Sq (SE)	Baer Fld, Ft Wayne, Ind.
163 Ftr Sq (SE) Util Flt	Baer Fld, Ft. Wayne, Ind.
132 Ftr Gp Hq	DesMoines Mun Apt, Des Moines, Ia.
124 Ftr Sq (SE)	DesMoines Mun Apt, Des Moines, Ia.
124 Ftr Sq (SE) Util Flt	DesMoines Mun Apt, Des Moines, Ia.
173 Ftr Sq (SE)	Lincoln Apt, Lincoln, Neb.
173 Ftr Sq (SE) Util Flt	Lincoln Apt, Lincoln, Neb.
174 Ftr Sq (SE)	Sioux City Mun Apt, Sioux City, Ia.
174 Ftr Sq (SE) Util Flt	Sioux City Mun Apt, Sioux City, Ia.
222 AS Gp (Ftr) Hq Det	Stout Fld, Indianapolis, Ind.
Det A	Stout Fld, Indianapolis, Ind.
Det B	Baer Fld, Ft Wayne, Ind.
Det C (Atcd 233 ASG)	Sioux Falls Mun Apt, Sioux Falls, SD
231 AS Gp (Ftr) Hq Det	Lambert Fld St Louis, Mo
Det A	Lambert Fld St Louis, Mo
Det B	Peoria Mun Apt, Peoria, Ill
Det C	Capitol Apt, Springfield, Ill

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86TH FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
86 Ftr Wg Hq & Hq Sq	Buckley Fld, Denver, Colo.
532 USAF Band	NG Armory, Denver, Colo.
109 USAF Comm Sq (Wg)	Buckley Fld, Denver, Colo.
109 Radar Calib Det	Buckley Fld, Denver, Colo.
609 Sig Lt Const Co (Avn)	Buckley Fld, Denver, Colo.
1809 Eng Avn Co (1903 EAB)	Buckley Fld, Denver, Colo.
159 AC&W Gp Hq	Buckley Fld, Denver, Colo.
132 AC&W Sq (IS)	Minneapolis Armory, Minneapolis, Minn.
137 AC Sq	Buckley Fld, Denver, Colo.
138 AC&W Sq (IS)	Denver Univ, Denver, Colo.
139 AC&W Sq (F)	State Armory, Boulder, Colo.
133 Ftr Gp Hq	Holman Fld, St Paul, Minn.
109 Ftr Sq (SE)	Holman Fld, St Paul, Minn.
109 Ftr Sq (SE) Util Flt	Holman Fld, St Paul, Minn.
175 Ftr Sq (SE)	Sioux Falls Mun Apt, Sioux Falls, SD
175 Ftr Sq (SE) Util Flt	Sioux Falls Mun Apt, Sioux Falls, SD
178 Ftr Sq (SE)	Fargo Mun Apt, Fargo, ND
178 Ftr Sq (SE) Util Flt	Fargo Mun Apt, Fargo, ND
179 Ftr Sq (SE)	Duluth Apt, Duluth, Minn.
179 Ftr Sq (SE) Util Flt	Duluth Apt, Duluth, Minn.
140 Ftr Gp Hq	Buckley Fld, Denver, Colo.
120 Ftr Sq (SE)	Buckley Fld, Denver, Colo.
120 Ftr Sq (SE) Util Flt	Buckley Fld, Denver, Colo.
127 Ftr Sq (SE)	Wichita Mun Apt, Wichita, Kans.
127 Ftr Sq (SE) Util Flt	Wichita Mun Apt, Wichita, Kans.
187 Ftr Sq (SE)	Cheyenne Mun Apt, Cheyenne, Wyo.
187 Ftr Sq (SE) Util Flt	Cheyenne Mun Apt, Cheyenne, Wyo.
233 AS Gp (Ftr) Hq Det	Holman Fld, St Paul, Minn.
Det A	Holman Fld, St Paul, Minn.
Det B	Fargo Mun Apt, Fargo, ND
Det C	Duluth Apt, Duluth, Minn.
Det C, (222 ASG (Ftr))	Sioux Falls Mun Apt, Sioux Falls, SD
240 AS Gp (Ftr) Hq Det	Buckley Fld, Denver, Colo.
Det A	Buckley Fld, Denver, Colo.
Det B	Cheyenne Mun Apt, Cheyenne, Wyo.
Det C	Wichita Mun Apt, Wichita, Kans.
109 Wea Sta(Type A)	Holman Fld, St Paul, Minn.
120 Wea Sta(Type A)	Buckley Fld, Denver, Colo.
127 Wea Sta(Type A)	Wichita Mun Apt, Wichita, Kans.
175 Wea Sta(Type A)	Sioux Falls Mun Apt, Sioux Falls, SD
176 Wea Sta(Type A)	Fargo Mun Apt, Fargo, ND
179 Wea Sta(Type A)	Duluth Apt, Duluth, Minn.
187 Wea Sta (Type A)	Cheyenne Mun Apt, Cheyenne, Wyo.

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CONTINENTAL AIR COMMAND

DIRECTORY OF AIR NATIONAL GUARD UNITS

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HEADQUARTERS
CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

DIRECTORY
OF
AIR NATIONAL GUARD UNITS

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ABBREVIATIONS

AACS - Airways & Air Communications Service
AC - Aircraft Control
AC&W - Aircraft Control & Warning
ADC - Air Defense Command
ADiv - Air Division
Adm - Administrative
AF - Air Force
AFB - Air Force Base
AFRTC - Air Training Command
AFRTC - Air Force Reserve Training Center
AMC - Air Materiel Command
Ap - Airplane
Apt - Airport
A/W - All Weather
Atchd - Attached
AU - Air University
Avn - Aviation
AWS - Air Weather Service
B Sv - Base Services
Bn - Battalion
Bomb - Bombardment
Calbr - Calibration
carr - Carrier
co - Company
comd - Command
comm - Communications
ConAC - Continental Air Command
Cons - Construction
Def - Defense
Det - Detachment
Div - Division
EADF - Eastern Air Defense Force
Engr - Engineering or Engineer
Fld - Field

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ABBREVIATIONS (contd)

Flt	-	Flight
Ftr	-	Fighter
Gp	-	Group
Hq	-	Headquarters
Jet P	-	Jet-Propelled
L	-	Light
LBomb	-	Light Bombardment
Loc	-	Location
Maint	-	Maintenance
MATS	-	Military Air Transport Service
M	-	Medium
Med	-	Medical
Muni	-	Municipal
Opr	-	Operations
Oprg	-	Operating
Photo	-	Photograph, Photography, etc.
PE	-	Port of Embarkation
R	-	Reconnaissance (when used as unit designation)
Res	-	Reserve
SAC	-	Strategic Air Command
SAM	-	Special Air Missions
Sch	-	School
SE	-	Single Engine
Sep	-	Separation
SEPE	-	Seattle Port of Embarkation
SFPE	-	San Francisco Port of Embarkation
Sig	-	Signal
Sq	-	Squadron
Sta	-	Station
Sv	-	Service(s)
TAC	-	Tactical Air Command
Tech	-	Technical
Trp	-	Troop
VLR	-	Very Long Range

ABBREVIATIONS (contd)

WADF	-	Western Air Defense Force
Wea	-	Weather
Wg	-	Wing
Wpns	-	Weapons
WRAMA	-	Warner Robins Air Materiel Area

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AIR NATIONAL GUARD UNITS

WING HEADQUARTERS AND HEADQUARTERS SQUADRON

WING	AIR FORCE	STATES INCLUDED	LOCATION
52	First	N.Y., N.J.	State Armory, White Plains, New York
53	Ninth	DC, Md, Pa., Va., Del.	Harrisburg Mun Apt, New Cumberland, Pa.
54	Fourteenth	Ala., Fla.,Ga.,Miss., NC,SC, Tenn.	Dobbins AFB, Marietta, Ga.
55	Ninth	Ky, Ohio, W.Va.	Lockbourne AFB, Columbus Ohio
60	Fourth	Idaho, Mont.,Oregon, Wash.	George Wright AFB, Spokane, Wash.
61	Fourth	Calif. (N of 35°47') Nev, Utah	National Guard Center, PO Box 356, Alameda, Calif.
62	Fourth	Ariz.,Calif.,(S of 35° 47')	Lockheed Air Terminal, Burbank, Calif.
63	Twelfth	Ark, La, NM, Oklahoma, Texas	Ellington AFB, Houston, Texas
66	Tenth	Ill, (Less 169 & 170 Ftr Sq) Wis,Mich, and the 180 L Bomb Sq of Missouri	O'Hare Int'l Apt, Park Ridge, Ill.
67	First	Conn, Mass, ME, NH, RI, Vt.	Commonwealth Armory, Boston, Mass.
71	Tenth	Iowa, Ind, Mo, (Less 180 Bomb Sq (L) Neb. and the 169 & 170 Ftr Sq of Ill.	1 Grant Ave, Jefferson Bks., St Louis, Mo.
86	Tenth	Colo.,Kans.,Minn.,ND,SD, and Wyo.	Buckley Fld, Denver, Colo.

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SECTION I

AIR NATIONAL GUARD UNITS BY AIR FORCE AND STATE

FIRST AIR FORCE
Fort Slocum, New York

UNIT	WING	LOCATION
		CONNECTICUT
103 Ftr Gp Hq	67	Brainard Fld, Hartford
103 AC&W Sq (F)	67	Brainard Fld, Hartford
118 Ftr Sq (SE)	67	Bradley Fld, Windsor Locks
118 Ftr Sq (SE) Util Flt	67	Bradley Fld, Windsor Locks
118 Wea Sta (Type A)	67	Bradley Fld, Windsor Locks
203 AS Gp (Ftr) Det A	67	Bradley Fld, Windsor Locks
203 AS Gp (Ftr) Hq Det	67	Bradley Fld, Windsor Locks
		MAINE
101 Ftr Gp Hq	67	Camp Keyes, Augusta
132 Ftr Sq (SE) Util Flt	67	Dow AFB, Bangor
132 Wea Sta (Type A)	67	Dow AFB, Bangor
201 AS Gp (Ftr) Det A	67	Dow AFB, Bangor
201 AS Gp (Ftr) Hq Det	67	Dow AFB, Bangor
		MASSACHUSETTS
67 Ftr Wg Hq & Hq Sq	67	Commonwealth Armory, Boston
151 AC&W Gp Hq	67	Commonwealth Armory,Boston
101 AC Sq	67	Commonwealth Armory, Boston
101 Radar Calbr Det	67	Commonwealth Armory, Boston
101 USAF Comm Sq (Wg)	67	Commonwealth Armory, Boston
102 Ftr Gp Hq	67	Logan Apt, Boston
101 Ftr Sq (SE)	67	Logan Apt, Boston
101 Ftr Sq (SE) Util Flt	67	Logan Apt, Boston
101 Wea Sta (Type A)	67	Logan Apt, Boston
131 Ftr Sq (SE)	67	Barnes Mun Apt, Westfield
131 Ftr Sq (SE) Util Flt	67	Barnes Mun Apt, Westfield
131 Wea Sta (Type A)	67	Barnes Mun Apt, Westfield
202 AS Gp (Ftr) Det A	67	Logan Apt, Boston
202 AS Gp (Ftr) Det B	67	Barnes Mun Apt, Westfield
202 AS Gp (Ftr) Hq Det	67	Logan Apt, Boston
567 USAF Band	67	Commonwealth Armory, Boston
601 Sig L Cons Co (Avn)	67	State Armory, Worcester
*1801 Engr Avn Co (1901 EAB)	52	Commonwealth Armory, Boston
		NEW HAMPSHIRE
133 Ftr Sq (SE)	67	Grenier AFB, Manchester
133 Ftr Sq (SE) Util Flt	67	Grenier AFB, Manchester
133 Wea Sta (Type A)	67	Grenier AFB, Manchester
201 AS Gp (Ftr) Det B	67	Grenier AFB, Manchester
		NEW JERSEY
108 Ftr Gp Hq	52	Newark Mun Apt, Newark
119 Ftr Sq (SE)	52	Newark Mun Apt, Newark
119 Ftr Sq (SE) Util Flt	52	Newark Mun Apt, Newark
119 Wea Sta (Type A)	52	Newark Mun Apt, Newark
208 AS Gp (Ftr) Det B	52	Newark Mun Apt, Newark
208 AS Gp (Ftr) Hq Det	52	Newark Mun Apt, Newark
141 Ftr Sq (SE)	52	Mercer Co. Apt, Trenton
141 Ftr Sq (SE) Util Flt	52	Mercer Co. Apt, Trenton
208 AS Gp (Ftr) Det A	52	Mercer Co. Apt, Trenton
		NEW YORK
52 Ftr Wg Hq & Hq Sq	52	State Armory, White Plains
152 AC&W Gp Hq	52	State Armory, White Plains
106 AC Sq	52	State Armory, White Plains
108 AC&W Sq (F)	52	Hancock Apt, Syracuse
107 AC&W Sq (LS)	52	State Armory, White Plains

*Atchd 67th Ftr Wg

FIRST AIR FORCE

UNIT	WING	LOCATION
		NEW YORK (contd)
102 USAF Comm Sq (Wg)	52	State Armory, White Plains
102 Radar Calbr Det	52	Westchester Co.Apt, White Plains
602 Sig Light Cons Co (Avn)	52	Floyd Bennett NAS, Brooklyn
106 Bomb Gp (L) Hq	52	Floyd Bennett NAS, Brooklyn
102 Bomb Sq (L)	52	Floyd Bennett NAS, Brooklyn
102 Bomb Sq (L) Util Flt	52	Floyd Bennett NAS, Brooklyn
102 Wea Sta (Type A)	52	Floyd Bennett NAS, Brooklyn
206 AS Gp (LB) Det A	52	Floyd Bennett NAS, Brooklyn
114 Bomb Sq (L)	52	Floyd Bennett NAS, Brooklyn
114 Bomb Sq (L) Util Flt	52	Floyd Bennett NAS, Brooklyn
114 Wea Sta (Type A)	52	Floyd Bennett NAS, Brooklyn
206 AS Gp (LB) Det B	52	Floyd Bennett NAS, Brooklyn
206 AS Gp (LB) Hq Det	52	Floyd Bennett NAS, Brooklyn
107 Ftr Gp Hq	52	Niagara Falls Mun Apt, Niagara Falls
136 Ftr Sq (SE)	52	Niagara Falls Mun Apt, Niagara Falls
136 Ftr Sq (SE) Util Flt	52	Niagara Falls Mun Apt, Niagara Falls
136 Wea Sta (Type A)	52	Niagara Falls Mun Apt, Niagara Falls
207 AS Gp (Ftr) Det A	52	Niagara Falls Mun Apt, Niagara Falls
137 Ftr Sq (SE)	52	Westchester Co.Apt, White Plains
137 Ftr Sq (SE) Util Flt	52	Westchester Co.Apt, White Plains
137 Wea Sta (Type A)	52	Westchester Co. Apt, White Plains
207 AS Gp (Ftr) Det B	52	Westchester Co.Apt, White Plains
138 Ftr Sq (SE)	52	Hancock Apt, Syracuse
138 Ftr Sq (SE) Util Flt	52	Hancock Apt, Syracuse
138 Wea Sta (Type A)	52	Hancock Apt, Syracuse
207 AS Gp (Ftr) Det C	52	Hancock Apt, Syracuse
139 Ftr Sq (SE)	52	Schenectady Co.Apt, Schenectady
139 Ftr Sq (SE) Util Flt	52	Schenectady Co.Apt, Schenectady
139 Wea Sta (Type A)	52	Schenectady Co.Apt, Schenectady
202 AS Gp (Ftr) Det C	67	Schenectady Co. Apt, Schenectady
207 AS Gp (Ftr) Hq Det	52	Niagara Falls Mun Apt, Niagara Falls
1901 EAB Hq & Sv Co	52	Floyd Bennett NAS, Brooklyn
1802 Eng Avn Co (1901 EAB)	52	Floyd Bennett NAS, Brooklyn
552 USAF Band	52	State Armory, White Plains
		RHODE ISLAND
152 Ftr Sq (SE)	67	Theodore Greene Apt, Hillsgrove
152 Ftr Sq (SE) Util Flt	67	Theodore Greene Apt, Hillsgrove
152 Wea Sta (Type A)	67	Theodore Greene Apt, Hillsgrove
203 AS Gp (Ftr) Det B	67	Theodore Greene Apt, Hillsgrove
102 AC&W Sq (LS)	67	Cranston St. Armory, Providence
		VERMONT
134 Ftr Sq (SE)	67	Burlington Mun Apt, Burlington
134 Ftr Sq (SE) Util Flt	67	Burlington Mun Apt, Burlington
134 Wea Sta (Type A)	67	Burlington Mun Apt, Burlington
201 AS Gp (Ftr) Det C	67	Burlington Mun Apt, Burlington

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FOURTH AIR FORCE
Hamilton AFB, Hamilton, California

UNIT	WING	LOCATION
		ARIZONA
197 Ftr Sq (SE)	62	Luke Fld, Phoenix
197 Ftr Sq (SE) Util Flt	62	Luke Fld, Phoenix
197 Wea Sta (Type A)	62	Luke Fld, Phoenix
246 AS Gp (Ftr) Det C	62	Luke Fld, Phoenix
		CALIFORNIA
61 Ftr Wg Hq & Hq Sq	61	PO Box 356, NG Ctr, Alameda
161 AC&W Gp Hq	61	PO Box 356, NG Ctr, Alameda
144 AC Sq	61	PO Box 356, NG Ctr, Alameda
146 AC&W Sq (F)	61	Camp Kohler, Sacramento
111 USAF Comm Sq (Wg)	61	PO Box 356, NG Ctr, Alameda
111 Radar Calbr Det	61	PO Box 356, NG Ctr, Alameda
611 Sig Light Cons Co (Avn)	61	PO Box 356, NG Ctr, Alameda
1905 Eng Avn Bn Hq & SvCo	61	PO Box 356, NG Ctr, Alameda
145 AC&W Sq (LS)	61	Ft Miley, San Francisco
144 Ftr Gp Hq	61	Oakland Mun Apt, Oakland
194 Ftr Sq (SE)	61	PO Box 356, NG Ctr, Alameda
194 Ftr Sq (SE) Util Flt	61	Oakland Mun Apt, Oakland
194 Wea Sta (Type A)	61	PO Box 356, NG Ctr, Alameda
244 AS Gp (Ftr) Det A	61	PO Box 356, NG Ctr, Alameda
244 AS Gp (Ftr) Hq Det	61	PO Box 356, NG Ctr, Alameda
1811 Eng Avn Co (1905 EAB)	61	PO Box 356, NG Ctr, Alameda
561 USAF Band	61	PO Box 356, NG Ctr, Alameda
62 Ftr Wg Hq & Hq Sq	62	Lockheed Air Terminal, Burbank
162 AC&W Gp Hq	62	Lockheed Air Terminal, Burbank
147 AC Sq	62	Lockheed Air Terminal, Burbank
148 AC&W Sq (LS)	62	13200 Francis Way, Compton
149 AC&W Sq (F)	62	Ontario Inter Apt, Ontario
112 USAF Comm Sq (Wg)	62	Lockheed Air Terminal, Burbank
112 Radar Calbr Det	62	Lockheed Air Terminal, Burbank
615 Sig L Cons Co (Avn)	62	Lockheed Air Terminal, Burbank
146 Ftr Gp Hq	62	Van Nuys Metro Apt, Van Nuys
115 Bomb Sq (L)	62	Lockheed Air Terminal, Burbank
115 Bomb Sq (L) Util Flt	62	Lockheed Air Terminal, Burbank
115 Wea Sta (Type A)	62	Lockheed Air Terminal, Burbank
*211 AS Gp (LB) Det D	53	Lockheed Air Terminal, Burbank
195 Ftr Sq (SE)	62	Van Nuys Metro Apt, Van Nuys
195 Ftr Sq (SE) Util Flt	62	Van Nuys Metro Apt, Van Nuys
195 Wea Sta (Type A)	62	Van Nuys Metro Apt, Van Nuys
246 AS Gp (Ftr) Det A	62	Van Nuys Metro Apt, Van Nuys
196 Ftr Sq, Jet	62	San Bernardino AFB, San Bernardino
196 Ftr Sq (SE) Util Flt	62	San Bernardino AFB, San Bernardino
196 Wea Sta (Type A)	62	San Bernardino AFB, San Bernardino
246 AS Gp (Ftr) Hq Det	62	Van Nuys Metro Apt, Van Nuys
1812 Eng Avn Co (1905 EAB)	61	Van Nuys Metro Apt, Van Nuys
562 USAF Band	62	Lockheed Air Terminal, Burbank
		IDAHO
190 Ftr Sq (SE)	60	Boise Air Terminal, Boise
190 Ftr Sq (SE) Util Flt	60	Boise Air Terminal, Boise
190 Wea Sta (Type A)	60	Boise Air Terminal, Boise
242 AS Gp (Ftr) Det C	60	Boise Air Terminal, Boise
		MONTANA
186 Ftr Sq (SE)	60	Great Falls Mun Apt, Great Falls
186 Ftr Sq (SE) Util Flt	60	Great Falls Mun Apt, Great Falls
186 Wea Sta (Type A)	60	Great Falls Mun Apt, Great Falls
227 AS Gp (Ftr) Det C	66	Great Falls Mun Apt, Great Falls
		NEVADA
192 Ftr Sq (SE)	61	Reno AFB, Reno
192 Ftr Sq (SE) Util Flt	61	Reno AFB, Reno

*Attached 246 ASG (Ftr)

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FOURTH AIR FORCE

UNIT	WING	LOCATION
		NEVADA (contd)
192 Wea Sta (Type A)	61	Reno AFB, Reno
244 AS Gp (Ftr) Det B	61	Reno AFB, Reno
		OREGON
142 AC&W Sq (LS)	60	Portland Apt, Portland
142 Ftr Gp Hq	60	Portland Apt, Portland
123 Ftr Sq (SE)	60	Portland Apt, Portland
123 Ftr Sq (SE) Util Flt	60	Portland Apt, Portland
123 Wea Sta (Type A)	60	Portland Apt, Portland
242 AS Gp (Ftr) Det A	60	Portland Apt, Portland
242 AS Gp (Ftr) Hq Det	60	Portland Apt, Portland
#1810 Eng Avn Co (1905 EAB)	61	Portland Apt, Portland
		UTAH
191 Ftr Sq (SE)	61	Salt Lake City Mun Apt #1, Salt Lake Cy
191 Ftr Sq (SE) Util Flt	61	Salt Lake City Mun Apt #1, Salt Lake Cy
191 Wea Sta (Type A)	61	Salt Lake City Mun Apt #1, Salt Lake Cy
244 AS Gp (Ftr) Det C	61	Salt Lake City Mun Apt #1, Salt Lake Cy
		WASHINGTON
60 Ftr Wg Hq & Hq Sq	60	George Wright AFB, Spokane
160 AC&W Gp Hq	60	George Wright AFB, Spokane
141 AC Sq	60	George Wright AFB, Spokane
143 AC&W Sq (F)	60	Boeing Fld, Seattle, Wash.
110 Radar Calbr Det	60	Boeing Fld, Seattle, Wash.
110 USAF Comm Sq (Wg)	60	George Wright AFB, Spokane
610 Sig L Cons Co (Avn)	60	Boeing Fld, Seattle, Wash.
116 Ftr Sq, Jet	60	Geiger Fld, Spokane
116 Ftr Sq (SE) Util Flt	60	Geiger Fld, Spokane
116 Wea Sta (Type A)	60	Geiger Fld, Spokane
242 AS Gp (Ftr) Det B	60	Geiger Fld, Spokane
560 USAF Band	60	George Wright AFB, Spokane

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NINTH AIR FORCE
Langley Air Force Base, Virginia

UNIT	WING	LOCATION
		DELAWARE
142 Ftr Sq Jet	53	New Castle Co Apt, Wilmington
142 Ftr Sq (SE) Util Flt	53	New Castle Co Apt, Wilmington
142 Wea Sta (Type A)	53	New Castle Co Apt, Wilmington
*208 AS Gp (Ftr) Det C	52	New Castle Co Apt, Wilmington
		DISTRICT OF COLUMBIA
113 AC&W Sq (F)	53	NG Armory, Wash, D.C.
119 Ftr Gp Hq	53	Andrews AFB, Wash, D.C.
121 Ftr Sq Jet	53	Andrews AFB, Wash, D.C.
121 Ftr Sq Util Flt	53	Andrews AFB, Wash, D.C.
121 Wea Sta (Type A)	53	Andrews AFB, Wash, D.C.
213 AS Gp (Ftr) Det A	53	Andrews AFB, Wash, D.C.
213 AS Gp (Ftr) Hq Det	53	Andrews AFB, Wash, D.C.
		KENTUCKY
123 Ftr Gp Hq	55	Standiford Fld, Louisville
165 Ftr Sq (SE)	55	Standiford Fld, Louisville
165 Ftr Sq (SE) Util Flt	55	Standiford Fld, Louisville
165 Wea Sta (Type A)	55	Standiford Fld, Louisville
223 AS Gp (Ftr) Det A	55	Standiford Fld, Louisville
223 AS Gp (Ftr) Hq Det	55	Standiford Fld, Louisville
		MARYLAND
104 Ftr Sq (SE)	53	Baltimore Mun Apt, Baltimore
104 Ftr Sq (SE) Util Flt	53	Baltimore Mun Apt, Baltimore
104 Wea Sta (Type A)	53	Baltimore Mun Apt, Baltimore
213 AS Gp (Ftr) Det B	53	Baltimore Mun Apt, Baltimore
		OHIO
55 Ftr Wg Hq & Hq Sq	55	Lockbourne AFB, Columbus (PO Box 1819, Columbus, Ohio)
155 AC&W Gp Hq	55	Ft Hayes, Columbus
121 AC Sq	55	Ft Hayes, Columbus
123 AC&W Sq (F)	55	Lunken Apt, Cincinnati
105 USAF Comm Sq (Wg)	55	Elberon Armory, Zanesville
105 Radar Calbr Det	55	Lockbourne AFB, Columbus (PO Box 1819, Columbus,Ohio)
605 Sig L Cons Co (Avn)	55	110 Mulberry St, Springfield
121 Ftr Gp Hq	55	Dayton Municipal Apt, Vandalia
112 Bomb Sq (L)	55	Cleveland Mun Apt, Cleveland
112 Bomb Sq (L) Util Flt	55	Cleveland Mun Apt, Cleveland
112 Wea Sta (Type A)	55	Cleveland Mun Apt, Cleveland
**206 AS Gp (LB) Det D	52	Cleveland Mun Apt, Cleveland
162 Ftr Sq (SE)	55	Dayton Mun Apt, Vandalia
162 Ftr Sq (SE) Util Flt	55	Dayton Mun Apt, Vandalia
162 Wea Sta (Type A)	55	Dayton Mun Apt, Vandalia
221 AS Gp (Ftr) Det A	55	Dayton Mun Apt, Vandalia
164 Ftr Sq (SE)	55	Mansfield Mun Apt, Mansfield
164 Ftr Sq (SE) Util Flt	55	Mansfield Mun Apt, Mansfield
164 Wea Sta (Type A)	55	Mansfield Mun Apt, Mansfield
221 AS Gp (Ftr) Det B	55	Mansfield Mun Apt, Mansfield
166 Ftr Sq (SE)	55	Lockbourne AFB, Columbus (PO Box 1819, Columbus)
166 Ftr Sq (SE) Util Flt	55	Lockbourne AFB, Columbus (PO Box 1819, Columbus)
166 Wea Sta (Type A)	55	Lockbourne AFB, Columbus (PO Box 1819, Columbus)
221 AS Gp (Ftr) Det C	55	Lockbourne AFB, Columbus (PO Box 1819, Columbus)
221 AS Gp (Ftr) Hq Det	55	Cleveland Mun Apt, Cleveland

*Attached 213 ASG (Ftr)
**Attached 221 ASG (FTR)

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NINTH AIR FORCE

UNIT	WING	LOCATION
		OHIO (contd)
***1805 Eng Avn Co (1902 EAB)	53	Lunken Apt, Cincinnati
555 USAF Band	55	NG Armory, Toledo (965 Wall St)
		PENNSYLVANIA
53 Ftr Wg Hq & Hq Sq	53	Harrisburg Mun Apt, New Cumberland
153 AC&W Gp Hq	53	Harrisburg Mun Apt, New Cumberland
111 AC Sq	53	Harrisburg Mun Apt, New Cumberland
112 AC&W Sq (LS)	53	State College
103 Radar Calbr Det	53	Reading Mun Apt, Reading
103 USAF Comm Sq (Wg)	53	Harrisburg Mun Apt, New Cumberland
603 Sig L Cons Co (Avn)	53	Philadelphia Int'l Apt, Philadelphia
111 Bomb Gp (L) Hq	53	Philadelphia Int'l Apt, Philadelphia
103 Bomb Sq (L)	53	Philadelphia Int'l Apt, Philadelphia
103 Bomb Sq (L) Util Flt	53	Philadelphia Int'l Apt, Philadelphia
103 Wea Sta (Type A)	53	Philadelphia Int'l Apt, Philadelphia
211 AS Gp (LB) Det A	53	Philadelphia Int'l Apt, Philadelphia
117 Bomb Sq (L)	53	Philadelphia Int'l Apt, Philadelphia
117 Bomb Sq (L) Util Flt	53	Philadelphia Int'l Apt, Philadelphia
117 Wea Sta (Type A)	53	Philadelphia Int'l Apt, Philadelphia
211 AS Gp (LB) Det B	53	Philadelphia Int'l Apt, Philadelphia
211 AS Gp (LB) Hq Det	53	Philadelphia Int'l Apt, Philadelphia
112 Ftr Gp Hq	53	Greater Pittsburgh Apt, Coraopolis
146 Ftr Sq (SE)	53	Greater Pittsburgh Apt, Coraopolis
146 Ftr Sq (SE) Util Flt	53	Greater Pittsburgh Apt, Coraopolis
146 Wea Sta (Type A)	53	Greater Pittsburgh Apt, Coraopolis
212 AS Gp (Ftr) Det A	53	Greater Pittsburgh Apt, Coraopolis
147 Ftr Sq (SE)	53	Greater Pittsburgh Apt, Coraopolis
147 Ftr Sq (SE) Util Flt	53	Greater Pittsburgh Apt, Coraopolis
147 Wea Sta (Type A)	53	Greater Pittsburgh Apt, Coraopolis
212 AS Gp (Ftr) Det B	53	Greater Pittsburgh Apt, Coraopolis
148 Ftr Sq (SE)	53	Reading Mun Apt, Reading
148 Ftr Sq (SE) Util Flt	53	Reading Mun Apt, Reading
148 Wea Sta (Type A)	53	Reading Mun Apt, Reading
212 AS Gp (Ftr) Det C	53	Reading Mun Apt, Reading
212 AS Gp (Ftr) Hq Det	53	Greater Pittsburgh Apt, Coraopolis
1902 EAB Hq & Sv Co	53	Johnstown
1803 Eng Avn Co (1902 EAB)	53	Johnstown
553 USAF Band	53	Harrisburg Mun Apt, New Cumberland
		VIRGINIA
149 Ftr Sq (SE)	53	Byrd Fld, Richmond
149 Ftr Sq (SE) Util Flt	53	Byrd Fld, Richmond
149 Wea Sta (Type A)	53	Byrd Fld, Richmond
213 AS Gp (Ftr) Det C	53	Byrd Fld, Richmond
		WEST VIRGINIA
167 Ftr Sq (SE)	55	Charleston Mun Apt, Charleston
167 Ftr Sq (SE) Util Flt	55	Charleston Mun Apt, Charleston
167 Wea Sta (Type A)	55	Charleston Mun Apt, Charleston
223 AS Gp (Ftr) Det B	55	Charleston Mun Apt, Charleston

***Attached 55th Ftr Wg

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TENTH AIR FORCE
Benjamin Harrison AFB, Ft Benjamin Harrison, Indiana

UNIT	WING	LOCATION
		COLORADO
86th Ftr Wg Hq & Hq Sq	86	Buckley Fld, Denver
159 AC&W Gp Hq	86	Buckley Fld, Denver
137 AC Sq	86	Buckley Fld, Denver
138 AC&W Sq (LS)	86	Denver Univ, Denver
139 AC&W Sq (F)	86	State Armory, Boulder
109 USAF Comm Sq (Wing)	86	Buckley Fld, Denver
109 Radar Calbr Det	86	Buckley Fld, Denver
609 Sig L Cons Co (Avn)	86	Buckley Fld, Denver
140 Ftr Gp Hq	86	Buckley Fld, Denver
120 Ftr Sq (SE)	86	Buckley Fld, Denver
120 Ftr Sq (SE) Util Flt	86	Buckley Fld, Denver
120 Wea Sta (Type A)	86	Buckley Fld, Denver
240 AS Gp (Ftr) Det A	86	Buckley Fld, Denver
240 AS Gp (Ftr) Hq Det	86	Buckley Fld, Denver
1809 Eng Avn Co (1903 EAB)	66	Buckley Fld, Denver
532 USAF Band	86	National Guard Armory, Denver
		ILLINOIS
66 Ftr Wg Hq & Hq Sq	66	O'Hare International Apt, Park Ridge
156 AC&W Gp Hq	66	O'Hare International Apt, Park Ridge
126 AC Sq	66	O'Hare International Apt, Park Ridge
106 USAF Comm Sq (Wing)	66	O'Hare International Apt, Park Ridge
106 Radar Calbr Det	66	O'Hare International Apt, Park Ridge
606 Sig L Cons Co (Avn)	66	O'Hare International Apt, Park Ridge
126 Bomb Gp (L) Hq	66	O'Hare International Apt, Park Ridge
108 Bomb Sq (L)	66	Chicago Mun Apt, Chicago
108 Bomb Sq (L) Util Flt	66	Chicago Mun Apt, Chicago
108 Wea Sta (Type A)	66	Chicago Mun Apt, Chicago
226 AS Gp (LB) Det A	66	Chicago Mun Apt, Chicago
168 Bomb Sq (L)	66	O'Hare International Apt, Park Ridge
168 Bomb Sq (L) Util Flt	66	O'Hare International Apt, Park Ridge
168 Wea Sta (Type A)	66	O'Hare International Apt, Park Ridge
226 AS Gp (LB) Det B	66	O'Hare International Apt, Park Ridge
226 AS Gp (LB) Hq Det	66	O'Hare International Apt, Park Ridge
169 Ftr Sq (SE)	71	Peoria Mun Apt, Peoria
169 Ftr Sq (SE) Util Flt	71	Peoria Mun Apt, Peoria
169 Wea Sta (Type A)	71	Peoria Mun Apt, Peoria
*231 AS Gp (Ftr) Det B	71	Peoria Mun Apt, Peoria
170 Ftr Sq (SE)	71	Capitol Apt, Springfield
170 Ftr Sq (SE) Util Flt	71	Capitol Apt, Springfield
170 Wea Sta (Type A)	71	Capitol Apt, Springfield
*231 AS Gp (Ftr) Det C	71	Capitol Apt, Springfield
1903 EAB Hq & Sv Co	66	O'Hare International Apt, Park Ridge
566 USAF Band	66	O'Hare International Apt, Park Ridge
		INDIANA
122 Ftr Gp Hq	71	Stout Fld, Indianapolis
122 AC&W Sq (LS)	71	Stout Fld, Indianapolis
113 Ftr Sq (SE)	71	Stout Fld, Indianapolis
113 Ftr Sq (SE) Util Flt	71	Stout Fld, Indianapolis
113 Wea Sta (Type A)	71	Stout Fld, Indianapolis
163 Ftr Sq (SE)	71	Baer Fld, Ft Wayne
163 Ftr Sq (SE) Util Flt	71	Baer Fld, Ft Wayne
163 Wea Sta (Type A)	71	Baer Fld, Ft Wayne
222 AS Gp (Ftr) Det A	71	Stout Fld, Indianapolis
222 AS Gp (Ftr) Det B	71	Baer Fld, Ft Wayne
222 AS Gp (Ftr) Hq Det	71	Stout Fld, Indianapolis
		IOWA
132 Ftr Gp Hq	71	Des Moines Mun Apt, Des Moines
133 AC&W Sq (F)	71	Fort Dodge

*Attd 226 ASG (Ftr)

TENTH AIR FORCE

UNIT	WING	LOCATION
		IOWA (continued)
124 Ftr Sq (SE)	71	Des Moines Mun Apt, Des Moines
124 Ftr Sq (SE) Util Flt	71	Des Moines Mun Apt, Des Moines
124 Wea Sta (Type A)	71	Des Moines Mun Apt, Des Moines
232 AS Gp (Ftr) Det A	71	Des Moines Mun Apt, Des Moines
174 Ftr Sq (SE)	71	Sioux City Mun Apt, Sioux City
174 Ftr Sq (SE) Util Flt	71	Sioux City Mun Apt, Sioux City
174 Wea Sta (Type A)	71	Sioux City Mun Apt, Sioux City
232 AS Gp (Ftr) Det B	71	Sioux City Mun Apt, Sioux City
232 AS Gp (Ftr) Hq Det	71	Des Moines Mun Apt, Des Moines
		KANSAS
127 Ftr Sq (SE)	86	Wichita Mun Apt, Wichita
127 Ftr Sq (SE) Util Flt	86	Wichita Mun Apt, Wichita
127 Wea Sta (Type A)	86	Wichita Mun Apt, Wichita
240 AS Gp (Ftr) Det C	86	Wichita Mun Apt, Wichita
		MICHIGAN
127 Ftr Gp Hq	66	Detroit-Wayne Major Apt, Romulus
127 AC&W Sq (LS)	66	Vickers Armory, Detroit
107 Bomb Sq (L)	66	Detroit-Wayne Major Apt, Romulus
107 Bomb Sq (L) Util Flt	66	Detroit-Wayne Major Apt, Romulus
107 Wea Sta (Type A)	66	Detroit-Wayne Major Apt, Romulus
226 AS Gp (LB) Det C	66	Detroit-Wayne Major Apt, Romulus
171 Ftr Sq Jet	66	Detroit-Wayne Major Apt, Romulus
171 Ftr Sq (SE) Util Flt	66	Detroit-Wayne Major Apt, Romulus
171 Wea Sta (Type A)	66	Detroit-Wayne Major Apt, Romulus
227 AS Gp (Ftr) Det A	66	Detroit-Wayne Major Apt, Romulus
172 Ftr Sq (SE)	66	Kellogg Fld, Battle Creek
172 Ftr Sq (SE) Util Flt	66	Kellogg Fld, Battle Creek
172 Wea Sta (Type A)	66	Kellogg Fld, Battle Creek
227 AS Gp (Ftr) Det B	66	Kellogg Fld, Battle Creek
227 AS Gp (Ftr) Hq Det	66	Detroit-Wayne Major Apt, Romulus
1806 Eng Avn Co (1903 EAB)	66	Detroit, Michigan
		MINNESOTA
133 Ftr Gp Hq	86	Holman Fld, St. Paul
132 AC&W Sq (LS)	86	Minneapolis Armory, Minneapolis
109 Ftr Sq (SE)	86	Holman Fld, St. Paul
109 Ftr Sq (SE) Util Flt	86	Holman Fld, St. Paul
109 Wea Sta (Type A)	86	Holman Fld, St. Paul
233 AS Gp (Ftr) Det A	86	Holman Fld, St. Paul
179 Ftr Sq (SE)	86	Duluth Apt, Duluth
179 Ftr Sq (SE) Util Flt	86	Duluth Apt, Duluth
179 Wea Sta (Type A)	86	Duluth Apt, Duluth
233 AS Gp (Ftr) Det C	86	Duluth Apt, Duluth
233 AS Gp (Ftr) Hq Det	86	Holman Fld, St. Paul
		MISSOURI
71 Ftr Wg Hq & Hq Sq	71	1 Grant Ave. Jefferson Bks, St Louis
157 AC&W Gp Hq	71	1 Grant Ave. Jefferson Bks, St Louis
131 AC Sq	71	1 Grant Ave, Jefferson Bks, St Louis
107 Radar Calbr Det	71	Lambert Fld, St. Louis
107 USAF Comm Sq (Wg)	71	1 Grant Ave. Jefferson Bks, St Louis
607 Sig L Cons Co (Avn)	71	1 Grant Ave. Jefferson Bks, St Louis
131 Ftr Gp Hq	71	Lambert Fld, St. Louis
180 Bomb Sq (L)	66	Rosecrans Fld, St. Joseph
180 Bomb Sq (L) Util Flt	66	Rosecrans Fld, St. Joseph
180 Wea Sta (Type A)	66	Rosecrans Fld, St. Joseph
**226 AS Gp (LB) Det D	66	Rosecrans Fld, St. Joseph
110 Ftr Sq (SE)	71	Lambert Fld, St. Louis
110 Ftr Sq (SE) Util Flt	71	Lambert Fld, St. Louis
110 Wea Sta (Type A)	71	Lambert Fld, St. Louis
231 AS Gp (Ftr) Det A	71	Lambert Fld, St. Louis

**Attached 231 ASG (Ftr)

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TENTH AIR FORCE

UNIT	WING	LOCATION
		MISSOURI (continued)
231 AS Gp (Ftr) Hq Det	71	Lambert Fld, St. Louis
1807 Eng Avn Co (1903 EAB)	66	1 Grant Ave. Jefferson Bks, St Louis
571 USAF Band	71	1 Grant Ave. Jefferson Bks, St Louis
		NEBRASKA
173 Ftr Sq, Jet	71	Lincoln Apt, Lincoln
173 Ftr Sq (SE) Util Flt	71	Lincoln Apt, Lincoln
173 Wea Sta (Type A)	71	Lincoln Apt, Lincoln
232 AS Gp (Ftr) Det C	71	Lincoln Apt, Lincoln
		NORTH DAKOTA
178 Ftr Sq (SE)	86	Fargo Mun Apt, Fargo
178 Ftr Sq (SE) Util Flt	86	Fargo Mun Apt, Fargo
178 Wea Sta (Type A)	86	Fargo Mun Apt, Fargo
233 AS Gp (Ftr) Det B	86	Fargo Mun Apt, Fargo
		SOUTH DAKOTA
175 Ftr Sq (SE)	86	Sioux Falls Mun Apt, Sioux Falls
175 Ftr Sq (SE) Util Flt	86	Sioux Falls Mun Apt, Sioux Falls
175 Wea Sta (Type A)	86	Sioux Falls Mun Apt, Sioux Falls
*222 AS Gp (Ftr) Det C	71	Sioux Falls Mun Apt, Sioux Falls
		WISCONSIN
128 AC&W Sq (F)	66	General Mitchell Fld, Milwaukee
128 Ftr Gp Hq	66	General Mitchell Fld, Milwaukee
126 Ftr Sq, Jet	66	General Mitchell Fld, Milwaukee
126 Ftr Sq (SE) Util Flt	66	General Mitchell Fld, Milwaukee
126 Wea Sta (Type A)	66	General Mitchell Fld, Milwaukee
228 AS Gp (Ftr) Det B	66	General Mitchell Fld, Milwaukee
176 Ftr Sq (SE)	66	Truax Fld, Madison
176 Ftr Sq (SE) Util Flt	66	Truax Fld, Madison
176 Wea Sta (Type A)	66	Truax Fld, Madison
228 AS Gp (Ftr) Det A	66	Truax Fld, Madison
228 AS Gp (Ftr) Hq Det	66	General Mitchell Fld, Milwaukee
		WYOMING
187 Ftr Sq (SE)	86	Cheyenne Mun Apt, Cheyenne
187 Ftr Sq (SE) Util Flt	86	Cheyenne Mun Apt, Cheyenne
187 Wea Sta (Type A)	86	Cheyenne Mun Apt, Cheyenne
240 AS Gp (Ftr) Det B	86	Cheyenne Mun Apt, Cheyenne

*Atchd Hq Det, 233 ASG

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TWELFTH AIR FORCE
Brooks Air Force Base, Texas

UNIT	WING	LOCATION
		ARKANSAS (continued)
154 Ftr Sq (SE)	63	Adams Fld, Little Rock
154 Ftr Sq (SE) Util Flt	63	Adams Fld, Little Rock
154 Wea Sta (Type A)	63	Adams Fld, Little Rock
237 AS Gp (Ftr) Det B	63	Adams Fld, Little Rock
		LOUISIANA
122 Bomb Sq (L)	63	New Orleans Mun Apt, New Orleans
122 Bomb Sq (L) Util Flt	63	New Orleans Mun Apt, New Orleans
122 Wea Sta (Type A)	63	New Orleans Mun Apt, New Orleans
*211 AS Gp (LB) Det C	53	New Orleans Mun Apt, New Orleans
135 AC&W Sq (LS)	63	Jackson Barracks, New Orleans
		NEW MEXICO
188 Ftr Sq (SE)	63	Kirtland AFB
188 Ftr Sq (SE) Util Flt	63	Kirtland AFB
188 Wea Sta (Type A)	63	Kirtland AFB
**228 AS Gp (Ftr) Det C	66	Kirtland AFB
		OKLAHOMA
137 Ftr Gp Hq	63	Will Rogers Fld, Oklahoma City
125 Ftr Sq (SE)	63	Tulsa Mun Apt, Tulsa
125 Ftr Sq (SE) Util Flt	63	Tulsa Mun Apt, Tulsa
125 Wea Sta (Type A)	63	Tulsa Mun Apt, Tulsa
237 AS Gp (Ftr) Det A	63	Tulsa Mun Apt, Tulsa
185 Ftr Sq (SE) Util Flt	63	Will Rogers Fld, Oklahoma City
185 Ftr Sq (SE)	63	Will Rogers Fld, Oklahoma City
185 Wea Sta (Type A)	63	Will Rogers Fld, Oklahoma City
237 AS Gp (Ftr) Det C	63	Will Rogers Fld, Oklahoma City
237 AS Gp (Ftr) Hq Det	63	Will Rogers Fld, Oklahoma City
		TEXAS
63 Ftr Wg Hq & Hq Sq	63	Ellington AFB, Houston
158 AC&W Gp Hq	63	Ellington AFB, Houston
134 AC Sq	63	LaPorte
136 AC&W Sq (F)	63	Jefferson Co.Apt, Beaumont
108 USAF Comm Sq (Wing)	63	Ellington AFB, Houston
608 Sig L Cons Co (Avn)	63	Ellington AFB, Houston
136 Ftr Gp Hq	63	Hensley Fld, Dallas
111 Ftr Sq (SE)	63	Ellington AFB, Houston
111 Ftr Sq (SE) Util Flt	63	Ellington AFB, Houston
111 Wea Sta (Type A)	63	Ellington AFB, Houston
236 AS Gp (Ftr) Det B	63	Ellington AFB, Houston
108 Radar Calbr Det	63	Ellington AFB, Houston
181 Ftr Sq (SE)	63	Hensley Fld, Dallas
181 Ftr Sq (SE) Util Flt	63	Hensley Fld, Dallas
181 Wea Sta (Type A)	63	Hensley Fld, Dallas
236 AS Gp (Ftr) Det A	63	Hensley Fld, Dallas
182 Ftr Sq (SE)	63	Brooks AFB,
182 Ftr Sq (SE) Util Flt	63	Brooks AFB,
182 Wea Sta (Type A)	63	Brooks AFB,
236 AS Gp (Ftr) Det C	63	Brooks AFB,
236 AS Gp (Ftr) Hq Det	63	Hensley Fld, Dallas
1808 Eng Avn Co (Sep)	63	Hensley Fld, Dallas
531 USAF Band	63	Ellington AFB, Houston

*Attached 236 ASG (Ftr)
**Attached 237 ASG (Ftr)

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FOURTEENTH AIR FORCE
Orlando Air Force Base, Orlando, Florida

UNIT	WING	LOCATION
		ALABAMA
117 Ftr Gp Hq	54	Birmingham Mun Apt, Birmingham
106 Bomb Sq (L)	54	Birmingham Mun Apt, Birmingham
106 Bomb Sq (L) Util Flt	54	Birmingham Mun Apt, Birmingham
106 Wea Sta (Type A)	54	Birmingham Mun Apt, Birmingham
*206 AS Gp (LB) Det C	52	Birmingham Mun Apt, Birmingham
160 Ftr Sq (SE)	54	Birmingham Mun Apt, Birmingham
160 Ftr Sq (SE) Util Flt	54	Birmingham Mun Apt, Birmingham
160 Wea Sta (Type A)	54	Birmingham Mun Apt, Birmingham
217 AS Gp (Ftr) Det B	54	Birmingham Mun Apt, Birmingham
217 AS Gp (Ftr) Hq Det	54	Birmingham Mun Apt, Birmingham
		FLORIDA
159 Ftr Sq, Jet	54	Jacksonville Mun Apt #1, Jacksonville
159 Ftr Sq (SE) Util Flt	54	Jacksonville Mun Apt #1, Jacksonville
159 Wea Sta (Type A)	54	Jacksonville Mun Apt #1, Jacksonville
**217 AS Gp (Ftr) Det C	54	Jacksonville Mun Apt #1, Jacksonville
		GEORGIA
54 Ftr Wg Hq & Hq Sq	54	Dobbins AFB, Marietta
154 AC&W Gp Hq	54	Dobbins AFB, Marietta
116 AC Sq	54	Dobbins AFB, Marietta
104 Radar Calbr Det	54	Dobbins AFB, Marietta
104 USAF Comm Sq (Wing)	54	Dobbins AFB, Marietta
604 Sig L Cons Co (Avn)	54	Dobbins AFB, Marietta
116 Ftr Gp Hq	54	Dobbins AFB, Marietta
128 Ftr Sq (SE)	54	Dobbins AFB, Marietta
128 Ftr Sq (SE) Util Flt	54	Marietta AFB, Marietta
128 Wea Sta (Type A)	54	Dobbins AFB, Marietta
216 AS Gp (Ftr) Det A	54	Dobbins AFB, Marietta
158 Ftr Sq, Jet	54	Hunter Fld, Savannah
158 Ftr Sq (SE) Util Flt	54	Hunter Fld, Savannah
158 Wea Sta (Type A)	54	Hunter Fld, Savannah
216 AS Gp (Ftr) Det C	54	Hunter Fld, Savannah
216 AS Gp (Ftr) Hq Det	54	Dobbins AFB, Marietta
1804 Eng Avn Co (Sep)	54	Dobbins AFB, Marietta
530 USAF Band	54	Dobbins AFB, Marietta
117 AC&W Sq (LS)	54	Hunter Fld, Savannah
		MISSISSIPPI
153 Ftr Sq (SE)	54	Key Fld,Meridian
153 Ftr Sq (SE) Util Flt	54	Key Fld, Meridian
153 Wea Sta (Type A)	54	Key Fld, Meridian
217 AS Gp (Ftr) Det A	54	Key Fld, Meridian
		NORTH CAROLINA
156 Ftr Sq (SE)	54	Douglas Fld, Charlotte
156 Ftr Sq (SE) Util Flt	54	Douglas Fld, Charlotte
156 Wea Sta (Type A)	54	Douglas Fld, Charlotte
218 AS Gp (Ftr) Det C	54	Douglas Fld, Charlotte
118 AC&W Sq (F)	54	Douglas Fld, Charlotte
		SOUTH CAROLINA
157 Ftr Sq (SE)	54	Congaree AB, Columbia
157 Ftr Sq (SE) Util Flt	54	Congaree AB, Columbia
157 Wea Sta (Type A)	54	Congaree AB, Columbia
216 AS Gp (Ftr) Det B	54	Congaree AB, Columbia
		TENNESSEE
118 Ftr Gp Hq	54	Berry Fld, Nashville
105 Ftr Sq (SE)	54	Berry Fld, Nashville

*Attached 217 ASG (Ftr)
**Attached 216 ASG (Ftr)

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FOURTEENTH AIR FORCE

UNIT	WING	LOCATION
		TENNESSEE (continued)
105 Ftr Sq (SE) Util Flt	54	Berry Fld, Nashville
105 Wea Sta (Type A)	54	Berry Fld, Nashville
218 AS Gp (Ftr) Det A	54	Berry Fld, Nashville
155 Ftr Sq (SE)	54	Memphis Mun Apt, Memphis
155 Ftr Sq (SE) Util Flt	54	Memphis Mun Apt, Memphis
155 Wea Sta (Type A)	54	Memphis Mun Apt, Memphis
218 AS Gp (Ftr) Det B	54	Memphis Mun Apt, Memphis
218 AS Gp (Ftr) Hq Det	54	Berry Fld, Nashville

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SECTION II

AIR NATIONAL GUARD UNITS BY WING

52D FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
52 Ftr Wg Hq & Hq Sq	State Armory, White Plains, N.Y.
552 USAF Band	State Armory, White Plains, N.Y.
102 USAF Comm Sq (Wg)	State Armory, White Plains, N.Y.
102 Radar Calib Det	State Armory, White Plains, N.Y.
602 Sig Lt Const Co (Avn)	Floyd Bennett NAS, Brooklyn, N.Y.
1901 EAB Hq & Sv Co	Floyd Bennett NAS, Brooklyn, N.Y.
1802 Eng Avn Co (1901 EAB)	Floyd Bennett NAS, Brooklyn, N.Y.
1801 Eng Avn Co (1901 EAB) (Atched 67 Ftr Wg)	Commonwealth Armory, Boston, Mass.
152 AC&W Gp Hq	State Armory, White Plains, N.Y.
106 AC Sq	State Armory, White Plains, N.Y.
107 AC&W Sq (LS)	State Armory, White Plains, N.Y.
108 AC&W Sq (F)	Hancock Apt, Syracuse, N.Y.
106 Bomb Gp (L) Hq	Floyd Bennett NAS, Brooklyn, N.Y.
102 Bomb Sq (L)	Floyd Bennett NAS, Brooklyn, N.Y.
102 Bomb Sq (L) Util Flt	Floyd Bennett NAS, Brooklyn, N.Y.
114 Bomb Sq (L)	Floyd Bennett NAS, Brooklyn, N.Y.
114 Bomb Sq (L) Util Flt	Floyd Bennett NAS, Brooklyn, N.Y.
107 Ftr Gp Hq	Niagara Falls Mun Apt, Niagara Falls, N.Y.
136 Ftr Sq (SE)	Niagara Falls Mun Apt, Niagara Falls, N.Y.
136 Ftr Sq (SE) Util Flt	Niagara Falls Mun Apt, Niagara Falls, N.Y.
137 Ftr Sq (SE)	Westchester Co Apt, White Plains, N.Y.
137 Ftr Sq (SE) Util Flt	Westchester Co Apt, White Plains, N.Y.
138 Ftr Sq (SE)	Hancock Apt, Syracuse, N.Y.
138 Ftr Sq (SE) Util Flt	Hancock Apt, Syracuse, N.Y.
139 Ftr Sq (SE)	Schenectady Co Apt, Schenectady, N.Y.
139 Ftr Sq (SE) Util Flt	Schenectady Co Apt, Schenectady, N.Y.
108 Ftr Gp Hq	Newark Mun Apt, Newark, N.J.
119 Ftr Sq (SE)	Newark Mun Apt, Newark, N.J.
119 Ftr Sq (SE) Util Flt	Newark Mun Apt, Newark, N.J.
141 Ftr Sq (SE)	Mercer Co Apt, Trenton, N.J.
141 Ftr Sq (SE) Util Flt	Mercer Co Apt, Trenton, N.J.
206 AS Gp (LB) Hq Det	Floyd Bennett NAS, Brooklyn, N.Y.
Det A	Floyd Bennett NAS, Brooklyn, N.Y.
Det B	Floyd Bennett NAS, Brooklyn, N.Y.
Det C (Atchd 217 ASG (Ftr))	Birmingham Mun Apt, Birmingham, Ala.
Det D (Atchd 221 ASG (Ftr))	Cleveland Mun Apt, Cleveland, Ohio
207 AS Gp (Ftr) Hq Det	Niagara Falls Mun Apt, Niagara Falls, N.Y.
Det A	Niagara Falls Mun Apt, Niagara Falls, N.Y.
Det B	Westchester Co Apt, White Plains, N.Y.
Det C	Hancock Apt, Syracuse, N.Y.
Det C, 202 ASG (Ftr)	Schenectady Co Apt, Schenectady, N.Y.
208 AS Gp (Ftr) Hq Det	Newark Mun Apt, Newark, N.Y.
Det A	Mercer Co Apt, Trenton, N.J.
Det B	Newark Mun Apt, Newark, N.J.
Det C (Atchd 213 ASG (Ftr))	New Castle Co Apt, Wilmington, Del.
102 Wea Sta (Type A)	Floyd Bennett NAS, Brooklyn, N.Y.
114 Wea Sta (Type A)	Floyd Bennett NAS, Brooklyn, N.Y.
119 Wea Sta (Type A)	Newark Mun Apt, Newark, N.J.
136 Wea Sta (Type A)	Niagara Falls Mun Apt, Niagara Falls, N.Y.

52D FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
137 Wea Sta (Type A)	Westchester Co Apt, White Plains, N.Y.
138 Wea Sta (Type A)	Hancock Apt, Syracuse, N.Y.
139 Wea Sta (Type A)	Schenectady Co Apt, Schenectady, N.Y.
141 Wea Sta (Type A)	Mercer Co Apt, Trenton, N.J.

53D FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
53 Ftr Wg Hq & Hq Sq	Harrisburg Mun Apt, New Cumberland, Pa.
553 USAF Band	Harrisburg Mun Apt, New Cumberland, Pa.
103 USAF Comm Sq (Wg)	Harrisburg Mun Apt, New Cumberland, Pa.
103 Radar Calib Det	Reading Mun Apt, Reading, Pa.
603 Sig Lt Const Co (Avn)	Philadelphia Int Apt, Philadelphia, Pa.
1902 EAB Hq & Sv Co	Johnstown, Pa.
1803 Eng Avn Co (1902 EAB)	Johnstown, Pa.
1805 Eng Avn Co (1902 EAB) (Atchd 55 Ftr Wg)	Lunken Apt, Cincinnati, Ohio
153 AC&W Gp Hq	Harrisburg Mun Apt, New Cumberland, Pa.
111 AC Sq	Harrisburg Mun Apt, New Cumberland, Pa.
112 AC&W Sq (LS)	State College, Pa.
113 AC&W Sq (F)	NG Armory, Washington, D.C.
111 Bomb Gp (L) Hq	Philadelphia Int Apt, Philadelphia, Pa.
103 Bomb Sq (L)	Philadelphia Int Apt, Philadelphia, Pa.
103 Bomb Sq (L) Util Flt	Philadelphia Int Apt, Philadelphia, Pa.
117 Bomb Sq (L)	Philadelphia Int Apt, Philadelphia, Pa.
117 Bomb Sq (L) Util Flt	Philadelphia Int Apt, Philadelphia, Pa.
112 Ftr Gp Hq	Greater Pittsburgh Apt, Coraopolis, Pa.
146 Ftr Sq (SE)	Greater Pittsburgh Apt, Coraopolis, Pa.
146 Ftr Sq (SE) Util Flt	Greater Pittsburgh Apt, Coraopolis, Pa.
147 Ftr Sq (SE)	Greater Pittsburgh Apt, Coraopolis, Pa.
147 Ftr Sq (SE) Util Flt	Greater Pittsburgh Apt, Coraopolis, Pa.
148 Ftr Sq (SE)	Reading Mun Apt, Reading, Pa.
148 Ftr Sq (SE) Util Flt	Reading Mun Apt, Reading, Pa.
113 Ftr Gp Hq	Andrews AFB, Washington, D.C.
104 Ftr Sq (SE)	Baltimore Mun Apt, Baltimore, Md.
104 Ftr Sq (SE) Util Flt	Baltimore Mun Apt, Baltimore, Md.
121 Ftr Sq (SE)	Andrews AFB, Washington, D.C.
121 Ftr Sq (SE) Util Flt	Andrews AFB, Washington, D.C.
142 Ftr Sq (SE)	New Castle Co. Apt, Wilmington, Del.
142 Ftr Sq (SE) Util Flt	New Castle Co. Apt, Wilmington, Del.
149 Ftr Sq (SE)	Byrd Fld, Richmond, Va.
149 Ftr Sq (SE) Util Flt	Byrd Fld, Richmond, Va.
311 AS Gp (LB) Hq Det	Philadelphia Int Apt, Philadelphia, Pa.
Det A	Philadelphia Int Apt, Philadelphia, Pa.
Det B	Philadelphia Int Apt, Philadelphia, Pa.
Det C (Atchd 236 ASG (Ftr))	New Orleans Mun Apt, New Orleans, La.
Det D (Atchd 236 ASG (Ftr))	Van Nuys Met Apt, Van Nuys, Calif.
212 AS Gp (Ftr) Hq Det	Greater Pittsburgh Apt, Coraopolis, Pa.
Det A	Greater Pittsburgh Apt, Coraopolis, Pa.
Det B	Greater Pittsburgh Apt, Coraopolis, Pa.
Det C	Reading Mun Apt, Reading, Pa.

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53D FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
213 AS Gp (Ftr) Hq Det	Andrews AFB, Washington, D.C.
Det A	Andrews AFB, Washington, D.C.
Det B	Baltimore Mun Apt, Baltimore, Md.
Det C	Byrd Fld, Richmond, Va.
Det C, 208 ASG (Ftr)	New Castle Co Apt, Wilmington, Del.
103 Wea Sta (Type A)	Philadelphia Int Apt, Philadelphia, Pa.
104 Wea Sta (Type A)	Baltimore Mun Apt, Baltimore, Md.
117 Wea Sta (Type A)	Philadelphia Int Apt, Philadelphia, Pa.
121 Wea Sta (Type A)	Andrews AFB, Washington, D.C.
142 Wea Sta (Type A)	New Castle Co Apt, Wilmington, Del.
146 Wea Sta (Type A)	Greater Pittsburgh Apt, Coraopolis, Pa.
147 Wea Sta (Type A)	Greater Pittsburgh Apt, Coraopolis, Pa.
148 Wea Sta (Type A)	Reading Mun Apt, Reading, Pa.
149 Wea Sta (Type A)	Byrd Fld, Richmond, Va.

54TH FIGHTER WING

FOURTEENTH AIR FORCE

UNIT	LOCATION
54 Ftr Wg Hq & Hq Sq	Dobbins AFB, Marietta, Ga.
530 USAF Band	Dobbins AFB, Marietta, Ga.
104 USAF Comm Sq (Wg)	Dobbins AFB, Marietta, Ga.
104 Radar Calib Det	Dobbins AFB, Marietta, Ga.
604 Sig Lt Const Co (Avn)	Dobbins AFB, Marietta, Ga.
1804 Eng Avn Co (Sep)	Dobbins AFB, Marietta, Ga.
154 AC&W Gp Hq	Dobbins AFB, Marietta, Ga.
116 AC Sq	Dobbins AFB, Marietta, Ga.
117 AC&W Sq (LS)	Hunter Fld, Savannah, Ga.
118 AC&W Sq (F)	Douglas Fld, Charlotte, N.C.
116 Ftr Gp Hq	Dobbins AFB, Marietta, Ga.
128 Ftr Sq (SE)	Dobbins AFB, Marietta, Ga.
128 Ftr Sq (SE) Util Flt	Dobbins AFB, Marietta, Ga.
157 Ftr Sq (SE)	Congaree AFB, Columbia, S.C.
157 Ftr Sq (SE) Util Flt	Congaree AFB, Columbia, S.C.
158 Ftr Sq, Jet	Hunter Fld, Savannah, Ga.
158 Ftr Sq (SE) Util Flt	Hunter Fld, Savannah, Ga.
159 Ftr Sq, Jet	Jacksonville Mun Apt #1, Jacksonville, Fla.
159 Ftr Sq (SE) Util Flt	Jacksonville Mun Apt #1, Jacksonville, Fla.
117 Ftr Gp Hq	Birmingham Mun Apt, Birmingham, Ala.
106 Bomb Sq (L)	Birmingham Mun Apt, Birmingham, Ala.
106 Bomb Sq (L) Util Flt	Birmingham Mun Apt, Birmingham, Ala.
153 Ftr Sq (SE)	Key Fld, Meridian, Miss.
153 Ftr Sq (SE) Util Flt	Key Fld, Meridian, Miss.
160 Ftr Sq (SE)	Birmingham Mun Apt, Birmingham, Ala.
160 Ftr Sq (SE) Util Flt	Birmingham Mun Apt, Birmingham, Ala.
118 Ftr Gp Hq	Berry Fld, Nashville, Tenn.
105 Ftr Sq (SE)	Berry Fld, Nashville, Tenn.
105 Ftr Sq (SE) Util Flt	Berry Fld, Nashville, Tenn.
155 Ftr Sq (SE)	Memphis Mun Apt, Memphis, Tenn.
155 Ftr Sq (SE) Util Flt	Memphis Mun Apt, Memphis, Tenn.
156 Ftr Sq (SE)	Douglas Fld, Charlotte, N.C.
156 Ftr Sq (SE) Util Flt	Douglas Fld, Charlotte, N.C.

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54TH FIGHTER WING

FOURTEENTH AIR FORCE

UNIT	LOCATION
216 AS Gp (Ftr) Hq Det	Dobbins AFB, Marietta, Ga.
Det A	Dobbins AFB, Marietta, Ga.
Det B	Congaree AB, Columbia, S.C.
Det C	Hunter Fld, Savannah, Ga.
Det C, 217 ASG (Ftr)	Jacksonville Mun Apt #1, Jacksonville, Fla.
217 AS Gp (Ftr) Hq Det	Birmingham Mun Apt, Birmingham, Ala.
Det A	Key Fld, Meridian, Miss.
Det B	Birmingham Mun Apt, Birmingham, Ala.
Det C (Atchd 216 ASG (Ftr))	Jacksonville Mun Apt #1, Jacksonville, Fla.
Det C, 206 ASG (LB)	Birmingham Mun Apt, Birmingham, Ala.
218 AS Gp (Ftr) Hq Det	Berry Fld, Nashville, Tenn.
Det A	Berry Fld, Nashville, Tenn.
Det B	Memphis Mun Apt, Memphis, Tenn.
Det C	Douglas Fld, Charlotte, N.C.
105 Wea Sta (Type A)	Berry Fld, Nashville, Tenn.
106 Wea Sta (Type A)	Birmingham Mun Apt, Birmingham, Ala.
128 Wea Sta (Type A)	Dobbins AFB, Marietta, Ga.
153 Wea Sta (Type A)	Key Fld, Meridian, Miss.
155 Wea Sta (Type A)	Memphis Mun Apt, Memphis, Tenn.
156 Wea Sta (Type A)	Douglas Fld, Charlotte, N.C.
157 Wea Sta (Type A)	Congaree AB, Columbia, S.C.
158 Wea Sta (Type A)	Hunter Fld, Savannah, Ga.
159 Wea Sta (Type A)	Jacksonville Mun Apt #1, Jacksonville, Fla.
160 Wea Sta (Type A)	Birmingham Mun Apt, Birmingham, Ala.

55TH FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
55 Ftr Wg Hq & Hq Sq	Lockbourne AFB, Columbus, Ohio
555 USAF Band	NG Armory, Toledo, Ohio (965 Wall St)
105 USAF Comm Sq (Wg)	Elberon Armory, Zanesville, Ohio
105 Radar Calib Det	Lockbourne AFB, Columbus, Ohio
605 Sig Lt Const Co (Avn)	110 E.Mulberry St., Springfield
1805 Eng Avn Co (1902 EAB) (Atchd fr 53 Ftr Wg)	Lunken Apt, Cincinnati, Ohio
155 AC&W Gp Hq	Ft Hayes, Columbus, Ohio
121 AC Sq	Ft Hayes, Columbus, Ohio
123 AC&W Sq (F)	Lunken Apt, Cincinnati, Ohio
121 Ftr Gp Hq	Dayton Mun Apt, Vandalia, Ohio
112 Bomb Sq (L)	Cleveland Mun Apt, Cleveland, Ohio
112 Bomb Sq (L) Util Flt	Cleveland Mun Apt, Cleveland, Ohio
162 Ftr Sq (SE)	Dayton Mun Apt, Vandalia, Ohio
162 Ftr Sq (SE) Util Flt	Dayton Mun Apt, Vandalia, Ohio
164 Ftr Sq (SE)	Mansfield Mun Apt, Mansfield, Ohio
164 Ftr Sq (SE) Util Flt	Mansfield Mun Apt, Mansfield, Ohio
166 Ftr Sq (SE)	Lockbourne AFB, Columbus, Ohio
166 Ftr Sq (SE) Util Flt	Lockbourne AFB, Columbus, Ohio

55TH FIGHTER WING

NINTH AIR FORCE

UNIT	LOCATION
221 AS Gp (Ftr) Hq Det	Cleveland Mun Apt, Cleveland, Ohio
Det A	Dayton Mun Apt, Vandalia, Ohio
Det B	Mansfield Mun Apt, Mansfield, Ohio
Det C	Lockbourne AFB, Columbus, Ohio
Det D 206 ASG (LB)	Cleveland Mun Apt, Cleveland, Ohio
223 AS Gp (Ftr) Hq Det	Standiford Fld, Louisville, Ky.
Det A	Standiford Fld, Louisville, Ky.
Det B	Charleston Mun Apt, Charleston, W. Va.
112 Wea Sta (Type A)	Cleveland Mun Apt, Cleveland, Ohio
162 Wea Sta (Type A)	Dayton Mun Apt, Vandalia, Ohio
164 Wea Sta (Type A)	Mansfield Mun Apt, Mansfield, Ohio
165 Wea Sta (Type A)	Standiford Fld, Louisville, Ky.
166 Wea Sta (Type A)	Lockbourne AFB, Columbus, Ohio
167 Wea Sta (Type A)	Charleston Mun Apt, Charleston, W. Va.

60TH FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
60 Ftr Wg Hq & Hq Sq	George Wright AFB, Spokane, Wash.
560 USAF Band	George Wright AFB, Spokane, Wash.
110 USAF Comm Sq (Wg)	George Wright AFB, Spokane, Wash.
110 Radar Calib Det	Boeing Fld, Seattle, Wash.
610 Sig Lt Const Co (Avn)	Boeing Fld, Seattle, Wash.
1810 Eng Avn Co (1905 EAB) (atchd fr 61st Ftr Wg)	Portland Apt, Portland, Oregon
160 AC&W Gp Hq	George Wright AFB, Spokane, Wash.
141 AC Sq	George Wright AFB, Spokane, Wash.
142 AC&W Sq (LS)	Portland Apt, Portland, Oregon
143 AC&W Sq (F)	Boeing Fld, Seattle, Wash.
142 Ftr Gp Hq	Portland Apt, Portland, Oregon
116 Ftr Sq, Jet	Geiger Fld, Spokane, Wash.
116 Ftr Sq (SE) Util Flt	Geiger Fld, Spokane, Wash.
123 Ftr Sq (SE)	Portland Apt, Portland, Oregon
123 Ftr Sq (SE) Util Flt	Portland Apt, Portland, Oregon
190 Ftr Sq (SE)	Boise Air Terminal, Boise, Idaho
190 Ftr Sq (SE) Util Flt	Boise Air Terminal, Boise, Idaho
186 Ftr Sq (SE)	Great Falls Mun Apt, Great Falls, Mont.
186 Ftr Sq (SE) Util Flt	Great Falls Mun Apt, Great Falls, Mont.
242 AS Gp (Ftr) Hq Det	Portland Apt, Portland, Oregon
Det A	Portland Apt Portland, Oregon
Det B	Geiger Fld, Spokane, Wash.
Det C	Boise Air Terminal, Boise, Idaho
Det C, 227 ASG (Ftr)	Great Falls Mun Apt, Great Falls, Mont.
116 Wea Sta (Type A)	Geiger Fld, Spokane, Wash.
123 Wea Sta (Type A)	Portland Apt, Portland, Oregon
186 Wea Sta (Type A)	Great Falls Mun Apt, Great Falls, Mont.
190 Wea Sta (Type A)	Boise Air Terminal, Boise, Idaho

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61ST FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
61 Ftr Wg Hq & Hq Sq	NG Ctr, PO Box 356, Alameda, Calif.
561 USAF Band	NG Ctr, PO Box 356, Alameda, Calif.
111 USAF Comm Sq (Wg)	NG Ctr, PO Box 356, Alameda, Calif.
111 Radar Calib Det	NG Ctr, PO Box 356, Alameda, Calif.
611 Sig Lt Const Co (Avn)	NG Ctr, PO Box 356, Alameda, Calif.
1905 EAB Hq & Sv Co	NG Ctr, PO Box 356, Alameda, Calif.
1810 Eng Avn Co (1905 EAB) (Atchd 60 Ftr Wg)	Portland Apt, Portland, Oregon
1811 Eng Avn Co (1905 EAB)	NG Ctr, PO Box 356, Alameda, Calif.
*1812 Eng Avn Co (1905 EAB)	Van Nuys Met Apt, PO Box 432, Van Nuys, Cal.
161 AC&W Gp Hq	NG Ctr, PO Box 356, Alameda, Calif.
144 AC Sq	NG Ctr, PO Box 356, Alameda, Calif.
145 AC&W Sq (LS)	Ft Miley, San Francisco, Calif.
146 AC&W Sq (F)	Camp Kohler, Sacramento, Calif.
144 Ftr Gp Hq	Oakland Mun Apt, Oakland, Calif.
191 Ftr Sq (SE)	Salt Lake Mun Apt #1, Salt Lake City, Utah
191 Ftr Sq (SE) Util Flt	Salt Lake Mun Apt #1, Salt Lake City, Utah
192 Ftr Sq (SE)	Reno AFB, Reno, Nev.
192 Ftr Sq (SE) Util Flt	Reno AFB, Reno, Nev.
194 Ftr Sq (SE)	NG Ctr, PO Box 356, Alameda, Calif.
194 Ftr Sq (SE) Util Flt	Oakland Mun Apt, Oakland, Calif.
244 AS Gp (Ftr) Hq Det	NG Ctr, PO Box 356, Alameda, Calif.
Det A	NG Ctr, PO Box 356, Alameda, Calif.
Det B	Reno AFB, Reno, Nev.
Det C	Salt Lake Mun Apt #1, Salt Lake City, Utah
191 Wea Sta (Type A)	Salt Lake Mun Apt #1, Salt Lake City, Utah
192 Wea Sta (Type A)	Reno AFB, Reno, Nev.
194 Wea Sta (Type A)	NG Ctr, PO Box 356, Alameda, Calif.

62ND FIGHTER WING

FOURTH AIR FORCE

UNIT	LOCATION
62 Ftr Wg Hq & Hq Sq	Lockheed Air Terminal, Burbank, Calif.
562 USAF Band	Lockheed Air Terminal, Burbank, Calif.
112 USAF Comm Sq (Wg)	Lockheed Air Terminal, Burbank, Calif.
112 Radar Calib Det	Lockheed Air Terminal, Burbank, Calif.
615 Sig Lt Const Co (Avn)	Lockheed Air Terminal, Burbank, Calif.
1812 Eng Avn Co (1905 EAB) (Atchd fr 61 Ftr Wg)	Van Nuys Metro Apt, Van Nuys, Calif.
162 AC&W Gp Hq	Lockheed Air Terminal, Burbank, Calif.
147 AC Sq	Lockheed Air Terminal, Burbank, Calif.
148 AC&W Sq (LS)	Compton Apt, Compton, Calif.
149 AC&W Sq (F)	Ontario Inter Apt, Ontario, Calif.
146 Ftr Gp Hq	Van Nuys Metro Apt, Van Nuys, Calif.
115 Bomb Sq (L)	Lockheed Air Terminal, Burbank, Calif.
115 Bomb Sq (L) Util Flt	Lockheed Air Terminal, Burbank, Calif.
195 Ftr Sq (SE)	Van Nuys Metro Apt, Van Nuys, Calif.
195 Ftr Sq (SE) Util Flt	Van Nuys Metro Apt, Van Nuys, Calif.
196 Ftr Sq (JF)	San Bernardino AFB, San Bernardino, Calif.
196 Ftr Sq (SE) Util Flt	San Bernardino AFB, San Bernardino, Calif.
197 Ftr Sq (SE)	Luke Fld, Phoenix, Ariz.
197 Ftr Sq (SE) Util Flt	Luke Fld, Phoenix, Ariz.

*Atchd to 62d Ftr Wg

62ND FIGHTER WING

FOURTH AIR FORCE

246 AS Gp (Ftr) Hq Det	Van Nuys Metro Apt, Van Nuys, Calif.
Det A	Van Nuys Metro Apt, Van Nuys, Calif.
Det B	San Bernardino AFB, San Bernardino, Calif.
Det C	Luke Fld, Phoenix, Ariz.
*Det D, 211 ASG (LB)	Lockheed Air Terminal, Burbank, Calif.
115 Wea Sta (Type A)	Lockheed Air Terminal, Burbank,Calif.
195 Wea Sta (Type A)	Van Nuys Metro Apt, Van Nuys, Calif.
196 Wea Sta (Type A)	San Bernardino AFB, San Bernardino, Calif.
197 Wea Sta (Type A)	Luke Fld, Phoenix, Ariz.

63D FIGHTER WING

TWELFTH AIR FORCE

UNIT	LOCATION
63 Ftr Wg Hq & Hq Sq	Ellington AFB, Houston, Texas
531 USAF Band	Ellington AFB, Houston, Texas
108 USAF Comm Sq (Wg)	Ellington AFB, Houston, Texas
108 Radar Calib Det	Ellington AFB, Houston, Texas
608 Sig Lt Const Co (Avn)	Ellington AFB, Houston, Texas
1808 Eng Avn Co (Sep)	Hensley Fld, Dallas, Texas
158 AC&W Gp Hq	Ellington AFB, Houston, Texas
134 AC Sq	LaPorte, Texas
135 AC&W Sq (LS)	Jackson Barracks, New Orleans, La.
136 AC&W Sq (F)	Jefferson Co Apt, Beaumont, Texas
136 Ftr Gp Hq	Hensley Fld, Dallas, Texas
111 Ftr Sq (SE)	Ellington AFB, Houston, Texas
111 Ftr Sq (SE) Util Flt	Ellington AFB, Houston, Texas
122 Bomb Sq (L)	New Orleans Mun Apt, New Orleans, La.
122 Bomb Sq (L) Util Flt	New Orleans Mun Apt, New Orleans, La.
181 Ftr Sq (SE)	Hensley Fld, Dallas, Texas
181 Ftr Sq (SE) Util Flt	Hensley Fld, Dallas, Texas
182 Ftr Sq (SE)	Brooks AFB, Texas
182 Ftr Sq (SE) Util Flt	Brooks AFB, Texas
137 Ftr Gp Hq	Will Rogers Fld, Oklahoma City, Okla.
125 Ftr Sq (SE)	Tulsa Mun Apt, Tulsa, Okla.
125 Ftr Sq (SE) Util Flt	Tulsa Mun Apt, Tulsa, Okla
154 Ftr Sq (SE)	Adams Fld, Little Rock, Ark.
185 Ftr Sq	Will Rogers Fld, Oklahoma City, Okla.
185 Ftr Sq (SE) Util Flt	Will Rogers Fld, Oklahoma City, Okla.
188 Ftr Sq (SE)	Kirtland AFB, N.M.
188 Ftr Sq (SE) Util Flt	Kirtland AFB, N.M.
236 AS Gp (Ftr) Hq Det	Hensley Fld, Dallas, Texas
Det A	Hensley Fld, Dallas, Texas
Det B	Ellington AFB, Houston, Texas
Det C	Brooks AFB, Texas
Det C, 211 ASG (LB)	New Orleans Mun Apt, New Orleans, La.
237 AS Gp (Ftr) Hq Det	Will Rogers Fld, Oklahoma City, Okla.
Det A	Tulsa Mun Apt, Tulsa, Okla.
Det B	Adams Fld, Little Rock, Ark.
Det C	Will Rogers Fld, Oklahoma City, Okla.
Det C, 228, ASG (Ftr)	Kirtland AFB, N.M.
111 Wea Sta (Type A)	Ellington AFB, Houston, Texas
122 Wea Sta (Type A)	New Orleans Mun Apt, New Orleans, La.
154 Wea Sta (Type A)	Adams Fld, Little Rock, Ark.
181 Wea Sta (Type A)	Hensley Fld, Dallas, Texas
182 Wea Sta (Type A)	Brooks AFB, Texas
185 Wea Sta (Type A)	Will Rogers Fld, Oklahoma City, Okla.
188 Wea Sta (Type A)	Kirtland AFB, N.M.

66TH FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
66 Ftr Wg Hq & Hq Sq	O'Hare Intl Apt, Park Ridge, Ill.
566 USAF Band	O'Hare Intl Apt, Park Ridge, Ill.
106 USAF Comm Sq (Wg)	O'Hare Intl Apt, Park Ridge, Ill.
106 Radar Calib Det	O'Hare Intl Apt, Park Ridge, Ill.
606 Sig Lt Const Co (Avn)	O'Hare Intl Apt, Park Ridge, Ill.
1903 EAB Hq & Sv Co	O'Hare Intl Apt, Park Ridge, Ill.
1806 Eng Avn Co (1903 EAB)	Detroit, Mich.
1807 Eng Avn Co (1903 EAB) (Atchd 71 Ftr Wg)	1 Grant Ave, Jefferson Bks, St.Louis, Mo.
1809 Eng Avn Co (1903 EAB) (Atchd 86 Ftr Wg)	Buckley Fld, Denver, Colo.
156 AC&W Gp Hq	O'Hare Intl Apt, Park Ridge, Ill.
126 AC Sq	O'Hare Intl Apt, Park Ridge, Ill.
127 AC&W Sq (LS)	Vickers Armory, Detroit, Mich.
128 AC&W Sq (F)	General Mitchell Fld, Milwaukee, Wisc.
126 Bomb Gp (L) Hq	O'Hare Intl Apt, Park Ridge, Ill.
108 Bomb Sq (L)	Chicago Mun Apt, Chicago, Ill.
108 Bomb Sq (L) Util Flt	Chicago Mun Apt, Chicago, Ill.
168 Bomb Sq (L)	O'Hare Intl Apt, Park Ridge, Ill.
168 Bomb Sq (L) Util Flt	O'Hare Intl Apt, Park Ridge, Ill.
180 Bomb Sq (L)	Rosecrans Fld, St.Joseph, Mo.
180 Bomb Sq (L) Util Flt	Rosecrans Fld, St. Joseph, Mo.
127 Ftr Gp Hq	Detroit-Wayne Major Apt, Romulus, Mich.
107 Bomb Sq (L)	Detroit-Wayne Major Apt, Romulus, Mich.
107 Bomb Sq (L) Util Flt	Detroit-Wayne Major Apt, Romulus, Mich.
171 Ftr Sq, Jet	Detroit-Wayne Major Apt, Romulus, Mich.
171 Ftr Sq (SE) Util Flt	Detroit-Wayne Major Apt, Romulus, Mich.
172 Ftr Sq (SE)	Kellogg Fld, Battle Creek, Mich.
172 Ftr Sq (SE) Util Flt	Kellogg Fld, Battle Creek, Mich.
128 Ftr Gp Hq	General Mitchell Fld, Milwaukee, Wisc.
126 Ftr Sq (SE)	General Mitchell Fld, Milwaukee, Wisc.
126 Ftr Sq (SE) Util Flt	General Mitchell Fld, Milwaukee, Wisc.
176 Ftr Sq (SE)	Truax Fld, Madison, Wisc.
176 Ftr Sq (SE) Util Flt	Truax Fld, Madison, Wisc.
226 AS Gp (LB) Hq Det	O'Hare Intl Apt, Park Ridge, Ill.
Det A	Chicago Mun Apt, Chicago, Ill.
Det B	O'Hare Intl Apt, Park Ridge, Ill.
Det C (Atchd 227 ASG (Gtr))	Detroit-Wayne Major Apt, Romulus, Mich.
Det D	Rosecrans Fld, St. Joseph, Mo.
227 AS Gp (Ftr) Hq Det	Detroit-Wayne Major Apt, Romulus, Mich.
Det A	Detroit-Wayne Major Apt, Romulus, Mich.
Det B	Kellogg Fld, Battle Creek, Mich.
Det C (Atchd 242 ASG (Ftr))	Great Falls Mun Apt, Great Falls, Mont.
Det C, 226 ASG (LB)	Detroit-Wayne Major Apt, Romulus, Mich.
228 AS Gp (Ftr) Hq Det	General Mitchell Fld, Milwaukee, Wisc.
Det A	General Mitchell Fld, Milwaukee, Wisc.
Det B	Truax Fld, Madison, Wisc.
Det C (Atchd 237 ASG (Ftr))	Kirtland AFB, N.M.
107 Wea Sta (Type A)	Detroit-Wayne Major Apt, Romulus, Mich.
108 Wea Sta (Type A)	Chicago Mun Apt, Chicago, Ill.
126 Wea Sta (Type A)	General Mitchell Fld, Milwaukee, Wisc.
168 Wea Sta (Type A)	O'Hare Inter Apt, Park Ridge, Ill.
171 Wea Sta (Type A)	Detroit-Wayne Major Apt, Romulus, Mich.
172 Wea Sta (Type A)	Kellogg Fld, Battle Creek, Mich.
176 Wea Sta (Type A)	Truax Fld, Madison, Wisc.
180 Wea Sta (Type A)	Rosecrans Fld, St. Joseph, Mo.

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67TH FIGHTER WING

FIRST AIR FORCE

UNIT	LOCATION
67 Ftr Wg Hq & Hq Sq	Commonwealth Armory, Boston, Mass.
567 USAF Band	Commonwealth Armory, Boston, Mass.
101 USAF Comm Sq (Wg)	Commonwealth Armory, Boston, Mass.
101 Radar Calib Det	Commonwealth Armory, Boston, Mass.
601 Sig Lt Const Co (Avn)	State Armory, Worcester, Mass.
1801 Eng Avn Co (1901 EAB) (Atchd fr 52 Ftr Wg)	Commonwealth Armory, Boston, Mass.
151 AC&W Gp Hq	Commonwealth Armory, Boston, Mass.
101 AC Sq	Commonwealth Armory, Boston, Mass.
102 AC&W Sq (LS)	Cranston Street Armory, Providence, R.I.
103 AC&W Sq (F)	Brainard Fld, Hartford, Conn.
101 Ftr Gp Hq	Camp Keys, Augusta, Me.
132 Ftr Sq, Jet	Dow AFB, Bangor, Me.
132 Ftr Sq (SE) Util Flt	Dow AFB, Bangor, Me.
133 Ftr Sq (SE)	Grenier AFB, Manchester, N.H.
133 Ftr Sq (SE) Util Flt	Grenier AFB, Manchester, N.H.
134 Ftr Sq (SE)	Burlington Mun Apt, Burlington, Vt.
134 Ftr Sq (SE) Util Flt	Burlington Mun Apt, Burlington, Vt.
102 Ftr Gp Hq	Logan Apt, Boston, Mass.
101 Ftr Sq (SE)	Logan Apt, Boston, Mass.
101 Ftr Sq (SE) Util Flt	Logan Apt, Boston, Mass.
131 Ftr Sq (SE)	Barnes Mun Apt, Westfield, Mass.
131 Ftr Sq (SE) Util Flt	Barnes Mun Apt, Westfield, Mass.
103 Ftr Gp Hq	Brainard Fld, Hartford, Conn.
118 Ftr Sq (SE)	Bradley Fld, Windsor Locks, Conn.
118 Ftr Sq (SE) Util Flt	Bradley Fld, Windsor Locks, Conn.
152 Ftr Sq (SE)	Theodore F. Greene Apt., Hillsgrove, R.I.
152 Ftr Sq (SE) Util Flt	Theodore F. Greene Apt, Hillsgrove, R.I.
201 AS Gp (Ftr) Hq Det	Dow AFB, Bangor, Me.
Det A	Dow AFB, Bangor, Me.
Det B	Grenier AFB, Manchester, N.H.
Det C	Burlington Mun Apt, Burlington, Vt.
202 AS Gp (Ftr) Hq Det	Logan Apt, Boston, Mass.
Det A	Logan Apt, Boston, Mass.
Det B	Barnes Mun Apt, Westfield, Mass.
Det C, (Atchd 207 ASG (Ftr))	Schenectady Co Apt, Schenectady, N.Y.
203 AS Gp (Ftr) Hq Det	Bradley Fld, Windsor Locks, Conn.
Det A	Bradley Fld, Windsor Locks, Conn.
Det B	Theodore F. Greene Apt, Hillsgrove, R.I.
101 Wea Sta (Type A)	Logan Apt, Boston, Mass.
118 Wea Sta (Type A)	Bradley Fld, Windsor Locks, Conn.
131 Wea Sta (Type A)	Barnes Mun Apt, Westfield, Mass.
132 Wea Sta (Type A)	Dow AFB, Bangor, Me.
133 Wea Sta (Type A)	Grenier AFB, Manchester, N.H.
134 Wea Sta (Type A)	Burlington Mun Apt, Burlington, Vt.
152 Wea Sta (Type A)	Theodore F. Greene Apt, Hillsgrove, R.I.

71ST FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
71 Ftr Wg Hq & Hq Sq	1 Grant Ave, Jefferson Bks, St Louis, Mo.
571 USAF Band	1 Grant Ave, Jefferson Bks, St Louis, Mo.

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71ST FIGHTER WING

TENTH AIR FORCE

107 USAF Comm Sq (Wg)	1 Grant Ave, Jefferson Bks, St Louis, Mo.
107 Radar Calib Det	Lambert Fld, St Louis, Mo.
607 Sig Lt Const Co (Avn)	1 Grant Ave, Jefferson Bks, St Louis, Mo.
157 AC&W Gp Hq	1 Grant Ave, Jefferson Bks, St Louis, Mo.
122 AC&W Sq (LS)	Stout Fld, Indianapolis, Ind.
131 AC Sq	1 Grant Ave, Jefferson Bks, St Louis, Mo.
133 AC&W Sq (F)	Fort Dodge, Iowa
131 Ftr Gp Hq	Lambert Fld, St Louis, Mo.
110 Ftr Sq (SE)	Lambert Fld, St.Louis, Mo.
110 Ftr Sq (SE) Util Flt	Lambert Fld, St.Louis, Mo.
169 Ftr Sq (SE)	Peoria Mun Apt, Peoria, Ill.
169 Ftr Sq (SE) Util Flt	Peoria Mun Apt, Peoria, Ill.
170 Ftr Sq (SE)	Capitol Apt, Springfield, Ill.
170 Ftr Sq (SE) Util Flt	Capitol Apt, Springfield, Ill.
122 Ftr Gp Hq	Stout Fld, Indianapolis, Ind.
113 Ftr Sq (SE)	Stout Fld, Indianapolis, Ind.
113 Ftr Sq (SE) Util Flt	Stout Fld, Indianapolis, Ind.
163 Ftr Sq (SE)	Baer Fld, Ft Wayne, Ind.
163 Ftr Sq (SE) Util Flt	Baer Fld, Ft. Wayne, Ind.
132 Ftr Gp Hq	Des Moines Mun Apt, Des Moines, Ia.
124 Ftr Sq (SE)	Des Moines Mun Apt, Des Moines, Ia.
124 Ftr Sq (SE) Util Flt	Des Moines Mun Apt, Des Moines, Ia.
173 Ftr Sq (SE)	Lincoln Apt, Lincoln, Neb.
173 Ftr Sq (SE) Util Flt	Lincoln Apt, Lincoln, Neb.
174 Ftr Sq (SE)	Sioux City Mun Apt, Sioux City, Ia.
174 Ftr Sq (SE) Util Flt	Sioux City Mun Apt, Sioux City, Ia.
222 AS Gp (Ftr) Hq Det	Stout Fld, Indianapolis, Ind.
Det A	Stout Fld, Indianapolis, Ind.
Det B	Baer Fld, Ft Wayne, Ind.
Det C (Atcd 233 ASG)	Sioux Falls Mun Apt, Sioux Falls, S.D.
231 AS Gp (Ftr) Hq Det	Lambert Fld, St Louis, Mo.
Det A	Lambert Fld, St Louis, Mo.
Det B	Peoria Mun Apt, Peoria, Ill.
Det C	Capitol Apt, Springfield, Ill.
232 AS Gp (Ftr) Hq Det	Des Moines Mun Apt, Des Moines, Ia.
Det A	Des Moines Mun Apt, Des Moines, Ia.
Det B	Sioux City Mun Apt, Sioux City, Ia.
Det C	Lincoln Apt, Lincoln, Neb.
110 Wea Sta (Type A)	Lambert Fld, St. Louis, Mo.
113 Wea Sta (Type A)	Stout Fld, Indianapolis, Ind.
124 Wea Sta (Type A)	Des Moines Mun Apt, Des Moines,Ia.
163 Wea Sta (Type A)	Baer Fld, Ft Wayne, Ind.
169 Wea Sta (Type A)	Peoria Mun Apt, Peoria, Ill.
170 Wea Sta (Type A)	Capitol Apt, Springfield, Ill.
173 Wea Sta (Type A)	Lincoln Apt, Lincoln, Neb.
174 Wea Sta (Type A)	Sioux City Mun Apt, Sioux City, Ia.

86TH FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
86 Ftr Wg Hq & Hq Sq	Buckley Fld, Denver, Colo.
532 USAF Band	NG Armory, Denver, Colo.
109 USAF Comm Sq (Wg)	Buckley Fld, Denver, Colo.
109 Radar Calib Det	Buckley Fld, Denver, Colo.
609 Sig Lt Const Co (Avn)	Buckley Fld, Denver, Colo.

86TH FIGHTER WING

TENTH AIR FORCE

UNIT	LOCATION
1809 Eng Avn Co (1903 EAB)	Buckley Fld, Denver, Colo.
159 AC&W Gp Hq	Buckley Fld, Denver, Colo.
132 AC&W Sq (LS)	Minneapolis Armory, Minneapolis, Minn.
137 AC Sq	Buckley Fld, Denver, Colo.
138 AC&W Sq (LS)	Denver Univ, Denver, Colo.
139 AC&W Sq (F)	State Armory, Boulder, Colo.
133 Ftr Gp Hq	Holman Fld, St Paul, Minn.
109 Ftr Sq (SE)	Holman Fld, St Paul, Minn.
109 Ftr Sq (SE) Util Flt	Holman Fld, St Paul, Minn.
175 Ftr Sq (SE)	Sioux Falls Mun Apt, Sioux Falls, S.D.
175 Ftr Sq (SE) Util Flt	Sioux Falls Mun Apt, Sioux Falls, S.D.
178 Ftr Sq (SE)	Fargo Mun Apt, Fargo, N.D.
178 Ftr Sq (SE) Util Flt	Fargo Mun Apt, Fargo, N.D.
179 Ftr Sq (SE)	Duluth Apt, Duluth, Minn.
179 Ftr Sq (SE) Util Flt	Duluth Apt, Duluth, Minn.
140 Ftr Gp Hq	Buckley Fld, Denver, Colo.
120 Ftr Sq (SE)	Buckley Fld, Denver, Colo.
120 Ftr Sq (SE) Util Flt	Buckley Fld, Denver, Colo.
127 Ftr Sq (SE)	Wichita Mun Apt, Wichita, Kans.
127 Ftr Sq (SE) Util Flt	Wichita Mun Apt, Wichita, Kans.
187 Ftr Sq (SE)	Cheyenne Mun Apt, Cheyenne, Wyo.
187 Ftr Sq (SE) Util Flt	Cheyenne Mun Apt, Cheyenne, Wyo.
233 AS Gp (Ftr) Hq Det	Holman Fld, St Paul, Minn.
Det A	Holman Fld, St Paul, Minn.
Det B	Fargo Mun Apt, Fargo, N.D.
Det C	Duluth Apt, Duluth, Minn.
Det C, (222 ASG (Ftr))	Sioux Falls Mun Apt, Sioux Falls, S.D.
240 AS Gp (Ftr) Hq Det	Buckley Fld, Denver, Colo.
Det A.	Buckley Fld, Denver, Colo.
Det B	Cheyenne Mun Apt, Cheyenne, Wyo.
Det C	Wichita Mun Apt, Wichita, Kans.
109 Wea Sta (Type A)	Holman Fld, St Paul, Minn.
120 Wea Sta (Type A)	Buckley Fld, Denver, Colo.
127 Wea Sta (Type A)	Wichita Mun Apt, Wichita, Kans.
175 Wea Sta (Type A)	Sioux Falls Mun Apt, Sioux Falls, S.D.
176 Wea Sta (Type A)	Fargo Mun Apt, Fargo, N.D.
179 Wea Sta (Type A)	Duluth Apt, Duluth, Minn.
187 Wea Sta (Type A)	Cheyenne Mun Apt, Cheyenne, Wyo.

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OF
AIR NATIONAL GUARD UNITS
SECTION III
LIST OF STATE ADJUTANTS GENERAL

STATE	NAME	STATE STATUS	ADDRESS, PHONE NO., & TWO NO.
Alabama	Saliba, James S.	Brig Gen	Montgomery (5); 3-5761; MG 100
Arizona	Tuthill, A.M.	Maj Gen	Phoenix; 3-1176; PX 180
Arkansas	Rick, Earl T.	Brig Gen	Little Rock; 4-3667; LR 184
California	O'Sullivan, Curtis D.	*Maj Gen	Sacramento (14) 2-4711 Ex 2958; SC 46
Colorado	Schaefer, Irving O.	*Brig Gen	Denver (9); Pearl 4624;DN 364
Connecticut	Reincke, Frederick G.	*Brig Gen	Hartford (6): 7-6341; Ex. 896; HF 98
Delaware	Rinard, Paul R.	**Brig Gen	Wilmington; 4-7587; New Cas Del 730
Dist. of Col	Nevitt, Peyton G.	*Colonel	(a) Washington (3); Ex. 2333
Florida	Lance, Mark W.	*Brig Gen	St Augustine: 1540; St Augustine, Fla 185
Georgia	Vandiver, Ernest	Brig Gen	Atlanta (3): Alpine 2273
Hawaii	Makinney, Fred W.	Brig Gen	Honolulu; 65458
Idaho	Walsh, John E.	*Brig Gen	Boise; 3779: BE 84
Illinois	Boyle, Leo M.	**Maj Gen	Springfield; 6651; SI 193
Indiana	Hitchock, Robinson	Brig Gen	Indianapolis; Riley 8571; IP 465
Iowa	Grahl, Charles H.	*Brig Gen	Des Moines (19); 4-9111; Ex 8; DM 297
Kansas	McLean, Milton R.	Brig Gen	Topeka: 7753; TOP 45
Kentucky	Murray, Roscoe L.	Brig Gen	Frankfort: 1001; FKFT 462
Louisiana	Hufft, Raymond F.	*Brig Gen	New Orleans (12); CR 6681 NO 397
Maine	Carter, Geo M	*Brig Gen	Augusta: 1200 Ex 305; AUG ME 470
Maryland	Reokord, Milton A.	Maj Gen	Baltimore (1); Mulberry 3388, 3389, BA 90
Massachusetts	Harrison, Wm. H., Jr.	*Maj Gen	Boston: Capitol 7-4600
Michigan	Moran, Geo C. (Actg)	**Brig Gen	Lansing (1); 49451; LG 15
Minnesota	Walsh, Ellard A.	Maj Gen	St Paul (1); Cedar 3013 STP 95
Mississippi	Wilson, William P.	Brig Gen	Jackson (103; 2-5544: JN 98
Missouri	Harris, John A.	Brig Gen	Jefferson City; 336: JFS CY 365
Montana	Mitchell, Spencer H.	*Brig Gen	Helena: 761; HL 14
Nebraska	Henninger, Guy N.	*Brig Gen	Lincoln; 2-7571, LINC NEB 391
Nevada	May, James A.	**Brig Gen	Carson City; 101; CARSON CITY NEV 193
New Hampshire	Bowen, Charles	*Brig Gen	Concord: Concord 800; CD 50
New Jersey	Rose, Edward C.	*Brig Gen	Trenton (7); Trenton 2-2131; TREN 441
New Mexico	Sage, Charles G.	*Brig Gen	Santa Fe: 2867; SANTA FE NM 108
New York	Brown, Ames T.	*Brig Gen	Albany (7); Albany 4-1131; AL 373
N.Carolina	Metts, J. VanB.	Brig Gen	Raleigh: RAL 6611 Ex 380; RALGH 287
N. Dakota	Edwards, Herbert L.	*Brig Gen	Bismarck; 2801; BM 4
Ohio	Kreber, Leo M	*Maj Gen	Columbus: MA 5161: Cl 595
Oklahoma	Kenny, Roy W.	*Brig Gen	Okla City (5); 58-2116 OC 583

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STATE	NAME	STATE STATUS	ADDRESS, PHONE NO., & TWO NO.
Oregon	Riles, Thomas E.	Brig Gen	Salem; 4171 Ex 464; SAL ORE 258
Pennsylvania	Weber, Frank A.	Brig Gen	Harrisburg; HBG 515 Ex 3040; LEB 193
Puerto Rico	Esteves, Luis R.	*Brig Gen	San Juan (18); 2-5473
Rhode Island	Murphy, James A. (Actg)	Brig Gen	Providence; Jackson 7100 Ex 264; PR 64
S. Carolina	Dozier, James C.	*Brig Gen	Columbia (10); 9784: CLBA SC 492
S. Dakota	Arndt, Theodore A.	*Brig Gen	Rapid City; 2601RPD CY 74
Tennessee	Anderson, Carl A.	Brig Gen	Nashville (3) 6-267; NV 62
Texas	Berry, Kearie L.	Maj Gen	Austin (11); AUS TEX 2-2086
Utah	West, J. Wallace	*Brig Gen	Ft Douglas; 3-4612; UVGW
Vermont	Campbell, Murdock A.	*Brig Gen	Montpelier; Mont 1500 Ex 24; MPLR 46
Virginia	Waller, Samuel G.	Maj Gen	Richmond (19); 2-7217; RG 181
Washington	Llewellyn, Ensly M.	**Brig Gen	Camp Murray; Fort Lewis Lakewood 2177
West Virginia	Fox, Charles R.	*Brig Gen	Charleston (5); 34-631; CH 96
Wisconsin	Mullen, John F.	*Brig Gen	Madison (2): Badger 2299; MN 9
Wyoming	Esmay, Rhodolph L.	*Colonel	Cheyenne; 4941; CY 14

*Federally Recognized same grade
**Federally Recognized in lower grade

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SECTION IV

NUMBER AND TYPE OF AUTHORIZED AND FEDERALLY RECOGNIZED AIR NATIONAL GUARD UNITS

	1st AF	4th AF	9th AF	10th AF	12th AF	14th AF	Puerto Rico	Hawaii	Total
	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth	Rec & Auth
Ftr Wing Hq	2	3	2	3	1	1			12
Ftr Group Hq	5	3	4	7	2	3			24
Ftr Sq	13	10	12	19	7	9	1	1	72
Utility Flt (Ftr)	13	10	12	19	7	9	1	1	72
Air Sv Gp, Hq Det (Ftr)	5	3	4	7	2	3			24
Air Sv Gp Det (Ftr)	13	10	12	19	7	9	1	1	72
Lt Bomb Gp Hq	1	0	1	1	0	0			3
Lt Bomb Sq	2	1	3	4	1	1			12
Utility Flt (Lt Bomb)	2	1	3	4	1	1			12
Air Sv Gp Hq Det (Lt Bomb)	1	0	1	1	0	0			3
Air Sv Gp Det (Lt Bomb)	2	1	3	4	1	1			12
AF Comm Sq	2	3	2	3	1	1			12
Signal Lt Constr Co	2	3	2	3	1	1			12
A/C & Wng Gp Hq	2	3	2	3	1	1			12
Aircraft Control Sq	2	3	2	3	1	1			12
A/C & Wng Sq (Lgs)	2	3	1	4	1	1			12
A/C & Wng Sq (FND)	2	3	2	3	1	1			12
Radar Calib Det	2	3	2	3	1	1			12
Engr Aviation Bn	1	1	1	1	0	0			4
Engr Aviation Co	2	3	2	3	1	1			12
Weather Stations	15	11	15	23	8	10	1	1	84
Band	2	3	2	3	1	1			12
TOTAL	93	81	90	140	46	56	4	4	514

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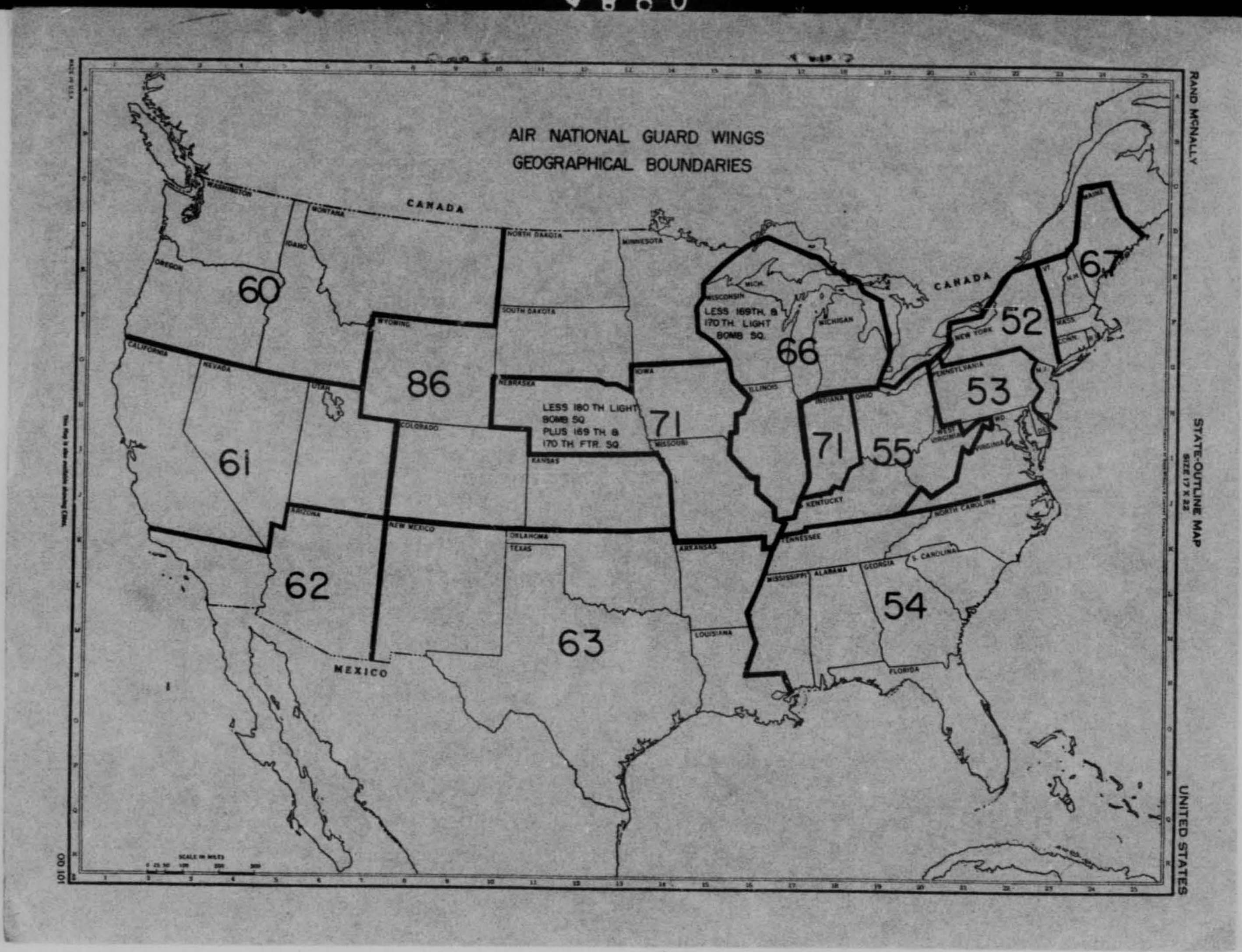

AIR NATIONAL GUARD WINGS
GEOGRAPHICAL BOUNDARIES

RAND McNALLY
STATE-OUTLINE MAP
SIZE 17 X 22
UNITED STATES
CANADA
MEXICO
60
61
62
63
86
71
LESS 180 TH LIGHT BOMB SQ. PLUS 169 TH & 170 TH FTR. SQ.
66
LESS 169TH. & 170TH. LIGHT BOMB SQ.
71
55
53
52
67
54
WASHINGTON
OREGON
CALIFORNIA
IDAHO
NEVADA
MONTANA
WYOMING
UTAH
ARIZONA
COLORADO
NEW MEXICO
NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
KANSAS
OKLAHOMA
TEXAS
MINNESOTA
IOWA
MISSOURI
ARKANSAS
LOUISIANA
WISCONSIN
MICH.
MICHIGAN
ILLINOIS
INDIANA
OHIO
KENTUCKY
TENNESSEE
MISSISSIPPI
ALABAMA
GEORGIA
FLORIDA
S. CAROLINA
NORTH CAROLINA
VIRGINIA
WEST VIRGINIA
PENNSYLVANIA
NEW YORK
VT.
N.H.
MAINE
MASS.
CONN.
N.J.
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UNITED STATES AIR FORCE RESERVE

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Mitchel Air Force Base, N.Y.
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CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

FIRST AIR FORCE

AIR FORCE RESERVE TRAINING CENTER UNITS

2230th Air Force Reserve Training Center, Floyd Bennett NAS, New York

- 63rd Troop Carrier Wing (M) Hq & Hq Sq
  - 63rd Troop Carrier Gp (M) Hq
    - 3rd Troop Carrier Sq (M)
    - 9th Troop Carrier Sq (M)
    - 52nd Troop Carrier Sq (M)
    - 60th Troop Carrier Sq (M)
  - 63rd Maint & Supp Gp Hq
    - 63rd Maint Sq
    - 63rd Supp Sq
  - 63rd Air Base Gp Hq & Hq Sq
    - 63rd Fin Disb Unit
    - 63rd Comm Sq
- *63rd Medical Gp

2234th Air Force Reserve Training Center, Hanscom Apt, Bedford, Mass.

- 89th Troop Carrier Wing (M) Hq & Hq Sq
  - 89th Troop Carrier Gp (M) Hq
    - 24th Troop Carrier Sq (M)
    - 25th Troop Carrier Sq (M)
    - 26th Troop Carrier Sq (M)
    - 30th Troop Carrier Sq (M)
  - 89th Maint & Supp Gp Hq
    - 89th Maint Sq
    - 89tn Supp Sq
  - 89th Air Base Gp Hq & Hq Sq
    - 89th Fin Disb Unit
    - 89th Comm Sq
- *89th Medical Gp

COROLLARY UNITS T/O&E

Otis AFB, Falmouth, Massachusetts

Corollary Unit	Parent Unit
50th Fighter Wing Hq & Hq Sq	33rd Fighter Wing Hq & Hq Sq
50th Fighter Gp Hq	33rd Fighter Gp Hq
81st Fighter Sq, Jet	58th Fighter Sq, Jet
50th Maint & Supp Gp Hq	33rd Maint & Supp Gp Hq
50th Maint Sq, Ftr Jet	33rd Maint Sq Ftr, Jet
50th Supp Sq Ftr Jet	33rd Supp Sq Ftr Jet
50th Air Base Gp Hq & Hq Sq	33rd Air Base Gp Hq & Hq Sq

McGuire AFB, Fort Dix, New Jersey

- *66th Strat Recon Gp
  - *30th Strat Recon Sq, Elec

* Not yet activated

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CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

First Air Force (Contd)

COROLLARY UNITS T/O&E

Mitchel Air Force Base, Hempstead, New York

Corollary Unit	Parent Unit
84th Fighter Wing (AW) Hq & Hq Sq	52nd Ftr Wing (AW) Hq & Hq Sq
84th Fighter Gp (All Wea) Hq	52nd Ftr Gp (All Wea)
496th Fighter Sq (All Wea)	2nd Fighter Sq (All Wea)
84th Maint & Supp Gp Hq	52nd Maint & Supp Gp
84th Maint Sq Ftr (All Wea)	52nd Maint .Sq Ftr (All Wea)
84th Supp Sq Ftr (All Wea)	52nd Supp Sq Ftr (All Wea)
84th Motor Vehicle Sq Ftr (All Wea)	52nd Motor Vehicle Sq Ftr (All
84th Air Base Gp Hq & Hq Sq	52nd Air Base Gp Hq & Hq Sq
84th Fin Disb Unit (Ftr) (All Wea)	52nd Fin Disb Unit (Ftr) (All
84th Comm Sq Ftr (All Wea)	52nd Comm Sq Ftr (All Wea)
84th Inst Sq Ftr (All Wea)	52nd Inst Sq
*84th Medical Gp	52nd Medical Gp
45th Comm Sq AF	28th Comm Sq

COROLLARY UNITS T/D

Westover AFB, Chicopee Falls, Mass.

8516th Air Transp Sq	1253rd Air Transp Sq
*8530th AACS Sq	
8510th Air Transp Gp Hq & Hq Sq	1600th Air Transp Gp Hq & Hq Sq
8515th Air Transp Sq	1252nd Air Transp Sq

Mitchel AFB, Hempstead, New York

*8531st AACS Sq	
8502nd Air Wea Gp Hq	2102nd Air Wea Gp

VOLUNTEER AIR RESERVE TRAINING UNITS

Unit	Location
9001st VART Wg Hq & Hq Sq	Boston Army Base, Boston, Mass.
9050th VART Gp Hq & Hq Sq	Bldg 23, Ft Preble, S. Portland, Me.
9279th VART Sq	Bldg 23, Ft Preble, S. Portland, Me.
Flt B, 9279th VART Sq	Bldg 23, Ft Preble, S. Portland, Me.
Flt C 9279th VART Sq	Bldg 23, Ft Preble, S. Portland, Me.
Flt D 9279th VART Sq	Bldg 23, Ft. Preble, S. Portland, Me
9280th VART Sq	Dow AFB, Bangor, Maine
Flt A, 9280th VART Sq	Dow AFB, Bangor, Maine
Flt B 9280th VART Sq	181 St., Presque Isle, Maine
Flt C 9280th VART Sq	Dow AFB, Bangor, Maine
Flt D, 9280th VART Sq	Waterville Armory, Waterville, Me.

* Not yet activated

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

First Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS

Unit	Location
9051st VART Gp Hq & Hq Sq	Concord, N.H.
9234th VART Sq	Concord, N.H.
Flt A 9234th VART Sq	Pette Hall, Univ of N.H., Durham N.H.
Flt B 9234 VART Sq	American Legion Hqll, Laconia, N.H.
9247th VART Sq	V.F.W. 799, 85 Spruce St, Claremont,
9052nd VART Gp Hq & Hq Sq	Amer Legion Post #32, Winooski, Vt.
9236 VART Sq Hq	c/o ORC, Rutland, Vt.
9249th VART Sq	Amer Legion Post #32, Winooski, Vt.
9248th VART Sq	Rm 6 PO Bldg, Montpelier, Vt.
Flt A 9248th VART Sq	Rm 6 PO Bldg, Montpelier, Vt.
9002nd VART Wg Hq & Hq Sq	Boston Army Base, Boston, Mass.
9053rd VART Gp Hq & Hq Sq	Boston Army Base, Boston, Mass.
9230th VART Sq	Boston Army Base, Boston, Mass.
9227th VART Sq	Boston Army Base, Boston, Mass.
9221st VART Sq	Boston Army Base, Boston, Mass.
9222nd VART Sq	Boston Army Base, Boston, Mass.
9224th VART Sq	Amer Leg Hall 208 Broadwy St. Methuen, M
9054th VART Gp Hq & Hq Sq	Boston Army Base, Boston, Mass.
9225th VART Sq	Boston Army Base, Boston, Mass.
Flt A, 9225th VART Sq	Boston Army Base, Boston, Mass.
Flt B, 9225th VART Sq	Boston Army Base, Boston, Mass.
Flt C, 9225th VART Sq	Boston Army Base, Boston, Mass.
Flt D, 9225th VART Sq	S. Weymouth NAF, S. Weymouth, Mass.
9231st VART Sq (Intell)	Boston Army Base, Boston, Mass.
9232nd VART Sq	Boston Army Base, Boston, Mass.
9229th VART Sq	Boston Army Base, Boston, Mass.
9228th VART Sq	Boston Army Base, Boston, Mass.
9055th VART Gp Hq & Hq Sq	68 Court Sq, Springfield, Mass.
9286th VART Sq	Greenfield, Mass.
9246th VART Sq	68 Court Sq, Springfield, Mass.
9244th VART Sq	Rm 208 - 211 PO Bldg, Holyoke, Mass.
9243rd VART Sq	107 S. St. Pittsfield, Mass.
Flt A 9243rd VART Sq	107 S. St. Pittsfield, Mass.
9056th VART Gp Hq & Hq Sq	Providense, RI
9235th VART Sq	New Bedford Mun Apt, Bedford, Mass.
9223rd VART Sq	Cheapside Bld, Providence, RI
9226th VART Sq	58 Pearl St. Worchester, Mass.
9003rd VART Wing Hq & Hq Sq	Stewart Fld, Newburgh, N.Y.
9057thVART Gp Hq & Hq Sq	470th Capitol Ave, Hartford, Conn.
9245th VART Sq (Intell)	470th Capitol Ave, Hartford, Conn.
Flt A 9245th VART Sq	470th Capitol Ave, Hartford, Conn.
9287th VART Sq	Hartford, Conn.
9242nd VART Sq	Gorton-Trumbull Apt, New London, Co
9238th VART Sq Hq	Willimantic, Conn.
9312th VART Sq, Hq	470th Capitol Ave, Hartford, Conn.

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CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

First Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
9058th VART Gp Hq & Hq Sq	Rm 309, 294 Cedar St, New Haven, Conn
9241st VART Sq	174 Grand St, Waterbury, Conn.
Flt A 9241st VART Sq	174 Grand St, Waterbury, Conn.
9316th VART Sq Hq	Bridgeport, Conn.
9240th VART Sq	New Haven, Conn.
9239th VART Sq Hq	New Haven, Conn.
9322nd VART Sq, Hq	Stamford, Conn.
9263rd VART Sq	Stamford, Conn.
9004th VART Wg Hq & Hq Sq	Stewart Fld, Newburgh N.Y.
9059th VART Gp Hq & Hq Sq	Stewart Fld, Newburgh, N.Y.
9262nd VART Sq Hq	Stewart Fld, Newburgh, N.Y.
9265th VART Sq	Stewart Fld, Newburgh, N.Y.
9267th VART Sq	Kingston, N.Y.
9060th VART Gp Hq & Hq Sq	Albany, N.Y.
9261st VART Sq Hq	Albany, N.Y.
9264th VART Sq	Albany, N.Y.
9268th VART Sq	Hudson, N.Y.
9291st VART Sq	Troy, N.Y.
9308th VART Sq Hq	Plattsburg, N.Y.
9321st VART Sq Hq	Schenectady, N.Y.
9061st VART Gp Hq & Hq Sq	Syracuse, N.Y.
9302nd VART Sq Hq	Rome N.Y.
9277th VART Sq	Watertown, N.Y.
9260th VART Sq Hq	Syracuse, N.Y.
9259th VART Sq Hq	Utica, N.Y.
9005th VART Wg Hq & Hq Sq	Stewart Fld, Newburgh, N.Y.
9062nd VART Gp Hq & Hq Sq	Elmira, N.Y.
9314th VART Sq Hq	Binghamton Armory, Binghamton, N.Y.
9313th VART Sq Hq	Elmira, N.Y.
9276th VART Sq	Cornell, N.Y.
9275th VART Sq	Corning, N.Y.
9274th VART Sq	Ithaca, N.Y.
9273rd VART Sq	Endicott, N.Y.
9272nd VART Sq	Elmira, N.Y.
9063rd VART Gp Hq & Hq Sq	Rochester, N.Y.
9310th VART Sq Hq	Rochester, N.Y.
Flt A 9310th VART Sq	Rochester, N.Y.
9271st VART Sq	Dansville, N.Y.
9270th VART Sq	Rochester, N.Y.
9064th VART Gp Hq & Hq Sq	Buffalo, N.Y.
9304th VART Sq Hq	Buffalo, N.Y.
Flt A 9304th VART Sq	Buffalo, N.Y.
9278th VART Sq	Niagara Falls, N.Y.
Flt A 9278th VART Sq	Niagara Falls, N.Y.
9269th VART Sq	Buffalo, N.Y.
9006th VART Wg Hq & Hq Sq	67 Broad St, New York, N.Y.

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

First Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

9065th VART Gp Hq & Hq Sq	67 Broad St. New York, New York
9216th VART Sq	67 Broad St. New York, New York
9212th VART Sq	67 Broad St. New York, New York
9201st VART Sq	67 Broad St New York, New York
9205th VART Sq	67 Broad St. New York, New York
9203rd VART Sq	67 Broad St. New York, New York
9066th VART Gp Hq & Hq Sq	67 Broad St. New York, New York
9214th VART Sq (Comm & Elec)	67 Broad St. New York, New York
9213th VART Sq (Photo)	67 Broad St, New York, New York
9211th VART Sq (Tng & Oper)	67 Broad St New York, New York
9209th VART Sq	67 Broad St, New York, New York
9208th VART Sq	67 Broad St. New York, New York
9007th VART Wing Hq & Hq Sq	67 Broad St. New York, New York
9067th VART Gp Hq & Hq Sq	67 Broad St. New York, New York
9220th VART Sq (Bgt & Fisc)	67 Broad St. New York, New York
9219th VART Sq (Air Insp)	67 Broad St. New York, New York
9218th VART Sq Hq (AG)	67 Broad St. New York, New York
9206th VART Sq	67 Broad St. New York, New York
9204th VART Sq	67 Broad St. New York, New York
9068th VART Gp Hq & Hq Sq	67 Broad St. New York, New York
9325th VART Sq (Mil Law)	67 Broad St. New York, New York
9207th VART Sq	67 Broad St. New York, New York
9069th VART Gp	67 Broad St. New York, New York
9210th VART Sq (Proc & Supp)	67 Broad St. New York, New York
Flt A (Air Chem) 9210th VART Sq	67 Broad St, New York, New York
9202nd VART Sq	67 Broad St. New York, New York
Flt B (Petr Spec) 9202nd VART Sq	67 Broad St. New York, New York
9217th VART Sq (Armament)	67 Broad St. New York, New York
9215th VART Sq (Maint)	67 Broad St. New York, New York
9073rd VART Gp Hq & Hq Sq	67 Broad St. New York, New York
9266th VART Sq (Intell)	Stewart Fld, Newburg, New York
9074th VART Gp Hq & Hq Sq	67 Broad St. New York, New York
9008th VART Wing Hq & Hq Sq	Kearney, N.J.
9070th VART Gp Hq & Hq Sq	Kearney, N.J.
9301st VART Sq	Newark Mun Apt, Newark, N.J.
9254th VART Sq	Staten Island, N.Y.
9255th VART Sq	Morristown, N.J.
9258th VART Sq	Patterson, N.J.
9252nd VART Sq	Newark Mun Apt, Newark, N.J.
9071st VART Gp Hq & Hq Sq	Kearney, N.J.
9256th VART Sq	Kearney, N.J.
9330thVART Sq	Kearney, N.J.
9072nd VART Gp Hq & Hq Sq	Atlantic, City, N.J.
9317th VART Sq Hq	Camden, N.J.
Flt A 9317th VART Sq	Camden, N.J.
9327th VART Sq Hq	Atlantic, City, N.J.
Flt A 9327th VART Sq	Atlantic City, N.J.
Flt B 9327th VART Sq	Atlantic City, N.J.

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

First Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

9253rd VART Sq	Atlantic City, N.J.
9250th VART Sq	Red Bank, N.J.
9251st VART Sq	Camden, N.J.
9257th VART Sq	Trenton, N.J.
9200th VART Sq	Mitchel AFB, New York

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CONTINENTAL AIR COMMAND AIR FORCE RESERVE OFFICERS TRAINING CENTER

FIRST AIR FORCE

Institution	Address
*Trinity College	Hartford, Connecticut
(University of Conn.	Storrs, Conn.
(Subsidiary Unit-Basic	New London, Conn.
(Training only)	
Yale University	New Haven, Conn.
Boston University	Boston, Mass.
Harvard University	Cambridge, Mass.
Massachusetts Institute of Technology	Cambridge, Mass.
University of Massachusetts	Amherst, Mass.
*Williams College	Williamstown, Mass.
University of New Hampshire	Durham, New Hampshire
Newark College of Engineering	Newark, N.J.
Stevens Institute of Technology	Newark, N.J.
Rutgers University	New Brunswick, N.J.
*Colgate University	Hamilton, N.Y.
Cornell University	Ithaca, N.Y.
Fordham University	New York, N.Y.
New York University	New York, N.Y.
Syracuse University	Syracuse, N.Y.
Union College	Schenectady, N.Y.
Rensselaer Polytechnic Institute	Troy, N.Y.

* Indicates institutions having Air ROTC ONLY

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

FOURTH AIR FORCE

AIR FORCE RESERVE TRAINING CENTER UNITS

2347th Air Force Reserve Training Center, Long Beach Mun Apt, Long Beach, Cal

- 448th Bomb Wing (L) Hq & Hq Sq
  - 448th Bomb Gp (L) Hq
    - 711th Bomb Sq (L)
    - 712th Bomb Sq (L)
    - 713th Bomb Sq (L)
    - 714th Bomb Sq (L)
  - 448th Maint & Supp Gp Hq
    - 448th Maint Sq Bomb (L)
    - 448th Supp Sq Bomb (L)
  - 448th Air Base Gp Hq & Hq Sq
    - 448th Fin Disb Unit
    - 448th Comm Sq Bomb (L)
  - 448th Medical Gp

- 452nd Bomb Wing (L) Hq & Hq Sq
  - 452nd Bomb Gp (L) Hq
    - 729 Bomb Sq (L)
    - 728th Bomb Sq (L)
    - 730th Bomb Sq (L)
    - 731st Bomb Sq (L)
  - 452nd Maint & Supp Gp Hq
    - 452nd Maint Sq
    - 452nd Supp Sq
  - 452nd Air Base Gp Hq & Hq Sq
    - 452nd Fin Disb Unit
    - 452nd Comm Sq
  - 452nd Medical Gp

2343rd Air Force Reserve Training Center, Portland Apt, Portland, Oregon

- 403rd Troop Carrier Wing (M) Hq & Hq Sq
  - 403rd Troop Carrier Gp (M) Hq
    - 63rd Troop Carrier Sq (M)
    - 64th Troop Carrier Sq (M)
    - 65th Troop Carrier Sq (M)
    - 66th Troop Carrier Sq (M)
  - 403rd Maint & Supp Gp Hq
    - 403rd Maint Sq TCM
    - 403rd Supp Sq TCM
  - 403rd Air Base Gp Hq & Hq Sq
    - 403rd Fin Disb Unit TCM
    - 403rd Comm Sq TCM
  - *403rd Medical Gp

*Not Yet activated

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourth Air Force (Contd)

AIR FORCE RESERVE TRAINING CENTER UNITS (CONTD)

2346th Air Force Reserve Training Center, Hamilton AFB, San Rafael, Calif.

- 349th Troop Carrier Wing (M) Hq & Hq Sq
  - 349th Troop Carrier Gp (M) Hq
    - 311th Troop Carrier Sq
    - 312th Troop Carrier Sq
    - 313th Troop Carrier Sq
    - 314th Troop Carrier Sq
  - 349th Maintenance & Supp Gp Hq
    - 349th Maint Sq TCM
    - 349th Supp Sq TCM
  - 349th Air Base Gp Hq & Hq Sq
    - 349th Fin Disb Unit TCM
    - 349th Comm Sq TCM
  - 349th Medical Gp

COROLLARY UNITS T/O&E

March AFB, Riverside, Calif.

Corollary Unit	Parent Unit
330th Bomb Wg (M) Hq & Hq Sq	
330th Bomb Gp (M) Hq	
457th Bomb Sq (M)	
330th Air Base Gp Hq & Hq Sq	

McChord AFB, Tacoma, Washington

302nd Troop Carrier Wing (M) Hq & Hq Sq	62nd Troop Carrier Wg M Hq & Hq
302nd Troop Carrier Gp (M) Hq	62nd Troop Carrier Gp M Hq
355th Troop Carrier Sq (M)	7th Troop Carrier Sq M
356th Troop Carrier Sq (M)	4th Troop Carrier Sq M
302nd Maint & Supp Gp Hq	62nd Main & Supp Gp Hq
302nd Maint Sq TCM	62nd Main Sq TCM
302 Supp Sq TCM	62nd Supp Sq TCM
302nd Air Base Gp Hq & Hq Sq	62nd Air Base Gp Hq & Hq Sq
302nd Comm Sq TCM	62nd Comm Sq TCM
302nd Fin Disb Unit TCM	62nd Fin Disb Unit TCM
302nd Medical Gp	62nd Medical Gp

Castle AFB, Merced, Calif.

447th Air Base Gp Hq & Hq Sq	
447th Maint & Supp Gp Hq	
447th Bomb Gp (M) Hq	
708th Bomb Sq M	

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourth Air Force (Contd)

COROLLARY UNITS T/O&E

Douglas Acft, Co. Inc, Santa Monica, Calif.

Corollary Unit | Parent Unit

88th Air Base Gp Depot Hq & Hq Sq
88th Aircraft Rpr Sq, Depot
88th Air Depot Wg Hq & Hq Sq
88th Inst Sq Depot
88th Air Police Sq Depot
88th Comm Sq Depot
88th Fin Disb Unit Depot
88th Maint Gp Depot Hq
88th Vehicle Rpr Sq Depot
88th Medical Gp Depot

Boeing Airplane Co, Seattle, Washington

497th Air Base Gp Depot Hq & Hq Sq
497th Air Police Sq Depot
497th Fin Disb Unit Depot
497th Comm Sq, Depot
497th Inst Sq Depot
497th Medical Gp Depot
497th Aircraft Rpr Sq Depot

Hill AFB, Ogden Utah

497th Tech Supp Sq Depot
497th General Supp Sq Depot

Lockheed Acft Corp, Burbank, Calif.

496th Air Base Gp Depot Hq & Hq Sq
496th Fin Disb Unit Depot
496th Comm Sq Depot
496th Inst Sq Depot
496th Air Police Sq Depot
496th Aircraft Rpr Sq Depot
496th Medical Gp

McClelland AFB, Sacramento, Calif.

496th Vehiclà Rpr Sq Depot
496th General Supp Sq Depot
496th Tech Supp Sq Depot

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourth Air Force (Contd)

COROLLARY UNITS T/O&E

Hamilton AFB, San Rafael, Calif.

Corollary Unit	Parent Unit
83rd Medical Gp	78th Medical Gp
83rd Air Base Gp Hq & Hq Sq	78th Air Base Gp Hq & Hq Sq
83rd Fin Disb Unit Ftr Jet	78th Fin Disb Unit Ftr Jet
52nd Ftr Sq, Jet	83rd Ftr Sq Jet

Davis-Monthan AFB, Tuscon, Arizona

459th Bomb Gp (M) Hq
759th Bomb Sq M

Spokane AFB, Spokane, Washington

454th Bob Gp (M) Hq
736th Bomb Sq M

Fairfield-Suisun AFB, Fairfield, Calif.

549th Recon Tech Sq

COROLLARY UNITS T/D

Williams AFB, Chandler, Arizona

Corollary Unit	Parent Unit
8603rd Pilot Training Gp Hq & Hq Sq	3525th Pilot Tng Gp Hq & Hq Sq
8615th Training Sq	3525th Training Sq
8532nd AACS Sq	1903rd AACS Sq

Mather AFB, Sacramento, Calif.

8604th Bomb Training Gp Hq & Hq Sq	3535th Bomb Training Gp Hq & Hq
8617th Bomb Training Sq	3535th Bomb Training Sq

McClelland AFB, Sacramento, Calif.

8501st Air Weather Gp Hq	2101st Air Wea Gp Hq

Fairfield-Suisun AFB, Fairfield, Calif.

8521st Air Transp Sq	1733rd Air Transp Sq
8533rd AACS Sq	1901st AACS Sq

Hamilton AFB, San Rafael, Calif.

8534th AACS Sq	1902nd AACS Sq
8560th Air Rescue Unit	2150th Air Rescue Unit

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourth Air Force (Contd)

COROLLARY UNITS T/D

Corollary Unit		Parent Unit
	March AFB, Riverside, Calif.	
8535th AACS Sq		1907th AACS Sq
	Hill AFB, Ogden, Utah	
8536th AACS Sq		1906th AACS Sq
	McChord AFB, Tacoma, Washington	
8537th AACS Sq		1905th AACS Sq
	Great Falls AFB, Great Falls, Montana	
8538th AACS Sq		1904th AACS Sq
8523rd Air Transp Sq		1272nd Air Transp Sq

VOLUNTEER AIR RESERVE TRAINING UNITS

9009th VART Wg Hq & Hq Sq	Long Beach Apt, Calif.
9075th VART Gp Hq & Hq Sq	Los Angles, Calif.
9334th VART Sq Hq (Intell)	Los Angeles, Calif.
9335th VART Sq Hq	Burbank, Calif.
9336th VART Sq Hq	Los Angeles, Calif.
9337th VART Sq, Hq	Los Angeles, Calif.
9338th VART Sq Hq	Los Angeles, Calif.
9339th VART Sq Hq	Hollywood, Calif.
9076th VART Gp Hq & Hq Sq	Santa Monica, Calif.
9340th VART Sq Hq	Beverly Hills, Calif.
9341st VART Sq Hq	Los Angeles, Calif.
9342nd VART Sq Hq	Santa Monica, Calif.
9343rd VART Sq Hq	Los Angeles, Calif.
9344th VART Sq Hq	Hollywood, Calif.
9077th VART Gp Hq & Hq Sq	San Bernardino, Calif.
9345th VART Sq Hq	San Bernardino, Calif.
9346th VART Sq Hq	Santa Ana, Calif.
9347th VART Sq Hq	San Diego, Calif.
9348th VART Sq Hq	Riverside, Calif.
9349th VART Sq Hq	El Centro, Calif.
9078th VART Gp Hq & Hq Sq	Long Beach Apt, Calif.
9350th VART Sq Hq	Long Beach Calif.
9351st VART Sq Hq	Pomona, Calif.
9352nd VART Sq Hq	Glendale, Calif.
9353rd VART Sq Hq	Pasadena, Calif.
9354th VART Sq Hq	San Gabriel, Calif.
9355th VART Sq Hq	Long Beach, Calif.
9010th VART Wg Hq & Hq Sq	Hamilton AFB, Calif.
9080th VART Gp Hq & Hq Sq	Berkeley, Calif.
9359th VART Sq Hq	Berkeley, Calif.

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS

Unit	Location
9360th VART Sq Hq	Vallejo, Calif.
9081st VART Gp Hq & Hq Sq	San Francisco, Calif.
9361st VART Sq Hq	San Francisco, Calif.
9362nd VART Sq Hq	San Francisco, Calif.
9363rd VART Sq Hq (Intell)	San Francisco, Calif.
9364th VART Sq Hq	San Rafael, Calif.
9082nd VART Gp Hq & Hq Sq	San Jose, Calif.
9365th VART Sq Hq	Palo Alto, Calif.
9366th VART Sq Hq	San Mateo, Calif.
9367th VART Sq Hq	San Jose, Calif.
9011th VART Wg Hq & Hq Sq	Castle AFB, Calif.
9083rd VART Gp Hq & Hq Sq	Merced, Calif.
9368th VART Sq Hq	Reno, Nevada
9370th VART Sq Hq	Sacramento, Calif.
9371st VART Sq Hq	Chico, Calif.
9382nd VART Sq	Eureka, Calif.
9369th VART Sq	Stockton, Calif
9084th VART Gp Hq & Hq Sq	Fresno, Calif.
9372nd VART Sq	Fresno, Calif.
9373rd VART Sq Hq	Salinas, Calif.
9374th VART Sq Hq	Merced, Calif.
9375th VART Sq Hq	Visalia, Calif.
9376th VART Sq Hq	Poterville, Calif.
9085th VART Gp Hq & Hq Sq	Bakersfield, Calif.
9377th VART Sq Hq	Las Vegas, Nevada
9378th VART Sq Hq	Santa Barbara, Calif.
9379th VART Sq Hq	San Luis Obispo, Calif.
9380th VART Sq Hq	Bakersfield, Calif.
9381st VART Sq	Hanford, Calif.
9012th VART Wg Hq & Hq Sq	McChord AFB, Wash.
9086th VART Gp Hq & Hq Sq	Seattle, Wash.
9394th VART Sq Hq	Bellingham, Wash.
9395th VART Sq Hq	Seattle Washington
9396th VART Sq Hq	Seattle Washington
9397th VART Sq Hq	Seattle Washington
9087th VART Gp Hq & Hq Sq	Tacoma, Wash.
9398th VART Sq Hq	Olympia, Wash.
9399th VART Sq Hq	Tacoma Wash.
9400th VART Sq Hq	McChord, Wash.
9088th VART Gp Hq & Hq Sq	Spokane, Wash.
9401st VART Sq Hq	Pullman, Wash.
9402nd VART Sq Hq	Spokane, Wash.
9403rd VART Sq Hq	Spokane, Wash.
9404th VART Sq Hq (Intell)	Spokane, Wash.
9089th VART Gp Hq & Hq Sq	Walla Walla, Wash.
9405th VART Sq Hq	Yakima, Wash.
9406th VART Sq Hq	Walla Walla, Wash.

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CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
9407th VART Sq Hq	Richland, Wash.
9090th VART Gp Hq & Hq Sq	Portland, Ore.
9408th VART Sq Hq	Portland, Ore.
9409th VART Sq Hq	Tacoma, Wash.
9410th VART Sq Hq	Portland, Oregon
9411th VART Sq Hq	Portland, Oregon
9091st VART Gp Hq & Hq Sq	Medford, Oregon
9412th VART Sq Hq	Bend, Oregon
9413th VART Sq Hq	Corvallis, Oregon
9414th VART Sq Hq	Salem, Oregon
9415th VART Sq Hq	North Bend, Oregon
9416th VART Sq Hq	Eugene, Oregon
9417th VART Sq	Medford, Oregon
9013th VART Wg Hq & Hq Sq	Hill AFB, Utah
9092nd VART Gp Hq & Hq Sq	Salt Lake City, Utah
9424th VART Sq Hq	Provo, Utah
9425th VART Sq Hq	St. George, Utah
9426th VART Sq Hq	Ogden, Utah
9427th VART Sq Hq (Intell)	Salt Lake City, Utah
9093rd VART Gp Hq & Hq Sq	Tucson, Ariz.
9428th VART Sq Hq	Tucson, Ariz
9429th VART Sq Hq (Intell)	Phoenix, Ariz.
9094th VART Gp Hq & Hq Sq	Boise, Ida.
9431st VART Sq Hq	Pocatello, Ida.
9432nd VART Sq Hq	Boise, Idaho
9433rd VART Sq Hq	Logan, Utah
9095th VART Gp Hq & Hq Sq	Helena, Mont.
9434th VART Sq Hq	Billings Mont
9435th VART Sq Hq	Bozeman, Mont.
9436th VART Sq Hq	Butte, Mont.
9437th VART Sq Hq	Missoula, Mont.
9438th VART Sq Hq	Helena, Mont

CONTINENTAL AIR COMMAND AIR FORCE RESERVE OFFICERS TRAINING CENTER

FOURTH AIR FORCE

Institution	Address
Arizona State College	Tempe, Arizona
University of Arizona	Tucson, Arizona
*Fresno State College	Fresno, Calif.
*Loyola University of Los Angeles	Los Angeles, Calif.
San Jose State College	San Jose, Calif
Stanford University	Stanford, Calif.
University of California at Los Angeles	Los Angeles, Calif
*University of Southern California	Los Angeles, Calif.
University of Idaho	Moscow, Idaho
Montana State College	Bozeman, Montana
Montana State University	Missoula, Montana
Montana School of Mines	Butte, Montana
University of Nevada	Reno, Nevada
Oregon State College	Corvallis, Oregon
University of Oregon	Eugene, Oregon
Utah State Agricultural College	Logan, Utah
University of Utah	Salt Lake City, Utah
State College of Washington	Pullman, Washington
University of Washington	Seattle, Washington

* Indicates institutions having Air ROTC ONLY

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

NINTH AIR FORCE

AIR FORCE RESERVE TRAINING CENTER UNITS

2236th Air Force Reserve Training Center, Godman Air Force Base, Fort Knox,

436th Troop Carrier Wing (M) Hq & Hq Sq
436th Troop Carrier Gp (M) Hq
79th Troop Carrier Sq (M)
80th Troop Carrier Sq (M)
81st Troop Carrier Sq (M)
82nd Troop Carrier Sq (M)
436th Maint & Supp Gp Hq
436th Maint Sq TCM
436th Supp Sq TCM
436th Air Base Gp Hq & Hq Sq
436th Fin Disb Unit TCM
436th Comm Sq TCM
436th Medical Gp

2239th Air Force Reserve Training Center, Greater Pittsburgh Apt, Coraopolis,

375th Troop Carrier Wing (M) Hq & Hq Sq
375th Troop Carrier Gp (M) Hq
55th Troop Carrier Sq (M)
56th Troop Carrier Sq (M)
57th Troop Carrier Sq (M)
58th Troop Carrier Sq (M)
375th Maint & Supp Gp Hq
375th Main Sq TCM
375th Supp Sq TCM
375th Air Base Gp Hq & Hq Sq
375th Fin Disb Unit TCM
375th Comm Sq TCM
375th Medical Gp

2240th Air Force Reserve Training Center, Cleveland Mun Apt, Cleveland, Ohio

433rd Troop Carrier Wing (M) Hq & Hq Sq
433rd Troop Carrier Gp (M) Hq
67th Troop Carrier Sq (M)
68th Troop Carrier Sq (M)
69th Troop Carrier Sq (M)
70th Troop Carrier Sq (M)
433rd Maint & Supp Gp Hq
433rd Main Sq TCM
433rd Supp Sq TCM
433rd Air Base Gp Hq & Hq Sq
433rd Fin Disb Unit TCM
433rd Comm Sq TCM
433rd Medical Gp

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Ninth Air Force (Contd)

AIR FORCE RESERVE TRAINING CENTER UNITS (CONTD)

2237th Air Force Reserve Training Center, Reading Mun Apt, Reading, Pa.

- 319th Bomb Wg (L) Hq & Hq Sq
  - 319th Bomb Gp (L) Hq
    - 46th Bomb Sq (L)
    - 50th Bomb Sq (L)
    - 51st Bomb Sq (L)
    - 59th Bomb Sq (L)
  - 319th Maint & Supp Gp Hq
    - 319th Maint Sq
    - 319th Supp Sq
  - 319th Air Base Gp Hq & Hq Sq
    - 319th Fin Disb Unit
    - 319th Comm Sq
  - 319th Medical Gp

COROLLARY UNITS T/O&E

Corollary Unit	Parent Unit
Wright-Patterson AFB, Dayton, Ohio	
342nd Air Base Gp Depot Hq & Hq Sq	
342nd Comm Sq Depot	
342nd Fin Disb Unit Depot	
Langley Air Force Base, Hampton, Virginia	
10th Tact Recon Sq Photo-Jet	101st Tac Recon Sq (Photo Jet)

COROLLARY UNITS T/E

Wright-Patterson AFB, Dayton, Ohio

8512th Air Transp Gp Hq & Hq Sq
8525th Air Transp Sq
8548th AACS Sq

Washington National Apt, Gravelly Pt, Va.

8522nd Air Transp Sq

Olmsted AFB, Middletown, Pa.

8524th Air Transp Sq
8549th AACS Sq

Langley AFB, Hampton, Va.

8550th AACS Sq

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Ninth Air Force (Contd)

COROLLARY UNITS T/D

Corollary Unit	Parent Unit
6551st AACS Sq	Andrews AFB, Camp Springs, Maryland
8552nd AACS Sq	South Post, Ft. Myer, Virginia

VOLUNTEER AIR RESERVE TRAINING UNITS

Unit	Location
9463rd VART Sq	Washington DC
9464th VART Sq	Washington DC
9472nd VART Sq	Richmond, Virginia
9473rd VART Sq	Roanoke, Virginia
9474th VART Sq	Norfolk, Virginia
9488th VART Sq	Charleston, W. Va.
9489th VART Sq	Wheeling, W. Va.
9490th VART Sq	Huntington, W. Va.
9498th VART Sq	Wilmington Del.
9508th VART Sq	Baltimore Md.
9509th VART Sq	Baltimore, Md.
9510tn VART Sq	Salisburg, Md.
9518th VART Sq	Columbus, Ohio
9519th VART Sq	Canton, Ohio
9520th VART Sq	Youngstown, Ohio
9521st VART Sq	Mansfield, Ohio
9522nd VART Sq	Toledo, Ohio
9523rd VART Sq	Cleveland, Ohio
9524th VART Sq	Ironton, Ohio
Flt A 9524th VART Sq	Portsmouth, Ohio
9525th VART Sq	Dayton, Ohio
9526th VART Sq	Middletown, Ohio
9527th VART Sq	Cincinnati, Ohio
9528th VART Sq	Cincinnati, Ohio
9538th VART Sq	Erie, Pa.
9539th VART Sq (Intell)	Pittsburg, Pa.
Flt A 9539th VART Sq (Intell)	Coraopolis, Pa.
9540th VART Sq	Johnstown, Pa.
9541st VART Sq	Williamsport, Pa.
9542nd VART Sq	Harrisburg Pa.
9543rd VART Sq	Wilkes Barre, Pa.
9544th VART Sq	Allentown, Pa.
9545th VART Sq	Philadelphia, Pa.
9546th VART Sq (Intell)	Philadelphia, Pa.
9547th VART Sq	Scranton, N. Pa.

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Ninth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
9548th VART Sq	Bloomburg, Pa.
9563rd VART Sq	Owensboro, Ky.
9564th VART Sq	Lexington, Ky.
9565th VART Sq	Paducah, Ky.
9462nd VART Sq	Washington DC
Flt A 9462nd VART Sq (Intell)	Washington, DC
Flt B 9462nd VART Sq (Hist)	Washington DC

CONTINENTAL AIR COMMAND AIR FORCE RESERVE OFFICERS TRAINING CENTER

NINTH AIR FORCE

Institution	Address
University of Louisville	Louisville, Kent.
University of Kentucky	Lexington, Kent.
West Kentucky State Teachers	Bowling Green, Kent.
Johns Hopkins Universtiy	Baltimore, Md.
University of Maryland	College Park, Md.
Miami University	Oxford, Ohio
Ohio Wesleyan University	Delaware, Ohio
Ohio State University	Columbus Ohio
Ohio University	Athens, Ohio
University of Akron	Akron, Ohio
University of Cincinnati	Cincinnati, Ohio
Duquesne University	Pittsburgh, Pa.
Gettysburg College	Gettysburg, Pa.
Lehigh University	Bethlehem Pa.
Penn State College	State College, Pa.
University of Pennsylvania	Philadelphia, Pa.
University of Pittsburgh	Pittsburgh, Pa.
Virginia Military Institute	Lexington, Va
Virginia Polytechnic Institute	Blacksburg, Va.
W. Virginia University	Morgantown, W. Va.
Georgetown University	Washington DC
Howard University	Washington DC

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

TENTH AIR FORCE

AIR FORCE RESERVE TRAINING CENTER UNITS

2471st Air Force Reserve Training Center, Chicago-Orchard Apt, Park Ridge, Il

- 437th Troop Carrier Wing (M) Hq & Hq Sq
  - 437th Troop Carrier Gp (M) Hq
    - 83rd Troop Carrier Sq (M)
    - 84th Troop Carrier Sq (M)
    - 85th Troop Carrier Sq (M)
    - 86th Troop Carrier Sq (M)
  - 437th Maint & Supp Gp Hq
    - 437th Maint Sq TCM
    - 437th Supp Sq TCM
  - 437th Air Base Gp Hq & Hq Sq
    - 437th Fin Disb Unit TCM
    - 437th Comm Sq TCM
  - 437th Medical Gp

- 441st Troop Carrier Wing (M) Hq & Hq Sq
  - 441st Troop Carrier Gp (M) Hq
    - 99th Troop Carrier Sq (M)
    - 100th Troop Carrier Sq (M)
    - 301st Troop Carrier Sq (M)
    - 302nd Troop Carrier Sq (M)
  - 441st Maint & Supp Gp Hq
    - 441st Maint Sq TCM
    - 441st Supp Sq TCM
  - 441st Air Base Gp Hq & Hq Sq
    - 441st Fin Disb Unit TCM
    - 441st Comm Sq TCM
  - 441st Medical Gp

2465th Air Force Reserve Training Center, Wold-Chamberlain Fld, Minn.

- 440th Troop Carrier Wing (M) Hq & Hq Sq
  - 440th Troop Carrier Gp (M) Hq
    - 95th Troop Carrier Sq (M)
    - 96th Troop Carrier Sq (M)
    - 97th Troop Carrier Sq (M)
    - 98th Troop Carrier Sq (M)
  - 440th Maint & Supp Gp Hq
    - 440th Maint Sq TCM
    - 440th Supp Sq TCM
  - 440th Air Base Gp Hq & Hq Sq
    - 440th Fin Disb Unit TCM
    - 440th Comm Sq TCM
  - 440th Medical Gp

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Tenth Air Force (Contd)

AIR FORCE RESERVE TRAINING CENTER UNITS (CONTD)

2242nd Air Force Reserve Training Center, Selfridge AFB, Mt Clemens, Michigan

- 439th Troop Carrier Wing (M) Hq & Hq Sq
  - 439th Troop Carrier Gp (M) Hq
    - 91st Troop Carrier Sq (M)
    - 92nd Troop Carrier Sq (M)
    - 93rd Troop Carrier Sq (M)
    - 94th Troop Carrier Sq (M)
  - 439th Maint & Supp Gp Hq
    - 439th Maint Sq TCM
    - 439th Supp Sq TCM
  - 439th Air Base Gp Hq & Hq Sq
    - 439th Fin Disb Unit TCM
    - 439th Comm Sq TCM
  - 439th Medical Gp

2473rd Air Force Reserve Training Center, Offutt AFB, Fort Crook, Nebr.

- 438th Troop Carrier Wing (M) Hq & Hq Sq
  - 438th Troop Carrier Gp (M) Hq
    - 87th Troop Carrier Sq (M)
    - 88th Troop Carrier Sq (M)
    - 89th Troop Carrier Sq (M)
    - 90th Troop Carrier Sq (M)
  - 438th Maint & Supp Gp Hq
    - 438th Maint Sq TCM
    - 438th Supp Sq TCM
  - 438th Air Base Gp Hq & Hq Sq
    - 438th Fin Disb Unit TCM
    - 438th Comm Sq TCM
  - 438th Medical Gp

2472nd Air Force Reserve Training Center, Fairfax.Fld, Kansas City, Kansas

- 442nd Troop Carrier Wing (M) Hq & Hq Sq
  - 442nd Troop Carrier Gp (M) Hq
    - 303rd Troop Carrier Sq (M)
    - 304th Troop Carrier Sq (M)
    - 305th Troop Carrier Sq (M)
    - 306th Troop Carrier Sq (M)
  - 442nd Maint & Supp Gp Hq
    - 442nd Maint Sq TCM
    - 442nd Supp Sq TCM
  - 442nd Air Base Gp Hq & Hq Sq
    - 442nd Fin Disb Unit TCM
    - 442nd Comm Sq TCM
  - 442nd Medical Gp

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Tenth Air Force (Contd)

AIR FORCE RESERVE TRAINING CENTER UNITS (CONTD)

2466th Air Force Reserve Training Center, Atterbury AFB, Columbus, Ind.

- 434th Troop Carrier Wing (M) Hq & Hq Sq
  - 434th Troop Carrier Gp (M) Hq
    - 71st Troop Carrier Sq (M)
    - 72nd Troop Carrier Sq (M)
    - 73rd Troop Carrier Sq (M)
    - 74th Troop Carrier Sq (M)
  - 434th Maint & Supp Gp Hq
    - 434th Maint Sq TCM
    - 434th Supp Sq TCM
  - 434th Air Base Gp Hq & Hq Sq
    - 434th Fin Disb Unit TCM
    - 434th Comm Sq TCM
  - 434th Medical Gp

2469th Air Force Reserve Training Center, Scott AFB, Bellville, Ill

- 419th Troop Carrier Wing (M) Hq& Hq Sq
  - 419th Troop Carrier Gp (M) Hq
    - 339th Troop Carrier Sq (M)
    - 340th Troop Carrier Sq (M)
    - 341st Troop Carrier Sq (M)
    - 432nd Troop Carrier Sq (M)
  - 419th Maint & Supp Gp Hq
    - 419th Maint Sq TCM
    - 419th Supp Sq TCM
  - 419th Air Base Gp Hq & Hq Sq
    - 419th Fin Disb Unit TCM
    - 419th Comm Sq TCM
  - 419th Medical Gp

COROLLARY UNITS T/O&E

Topeka AFB, Topeka, Kansas

Corollary Unit	Parent Unit
20th Strat Recon Sq, Photo-Mapping	343rd Strat Recon Sq Photo-Map
Smoky Hill AFB, Salina, Kansas	
756th Bomb Sq M	353rd Bomb Sq (M)

COROLLARY UNITS T/D

Scott AFB, Bellville, Illinois

8602nd Tech Tng Gp Hq & Hq Sq
8602nd Tech Tng Wg Hq & Hq Sq
8543rd AACS Sq

Chanute AFB, Rantoul, Illinois

8607th Base Serv Sq
8607th Air Base Gp Hq & Hq Sq

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Tenth Air Force (Contd)

COROLLARY UNITS T/D

Corollary Unit	Parent Unit
	Lowry AFB, Denver, Colorado
8606th Air Base Gp Hq & Hq Sq	
8542nd AACS Sq	
8561st Air Rescue Unit	

VOLUNTEER AIR RESERVE TRAINING UNITS

Unit	Location
9591st VART Sq	Indianapolis, Indiana
Flt A 9591st VART Sq	Indianapolis, Indiana
Flt B 9591st VART Sq	Bloomington, Indiana
Flt C 9591st VART Sq	La Fayette, Indiana
9601st VART Sq	Baer Fld, Ft. Wayne, Ind.
Flt A 9601st VART Sq	Baer Fld, Ft Wayne, Ind.
Flt B 9601st VART Sq	South Bend, Ind.
Flt C 9601st VART Sq	Elkhart, Ind.
Flt D, 9601st VART Sq	Elkhart, Ind.
Flt E 9601st VART Sq	Goshen, Ind.
Flt F 9601st VART Sq	Michigan City. Ind.
9602nd VART Sq Sq	Evansville, Indiana
Flt A 9602nd VART Sq	Evansville, Indiana
9607th VART Sq	Detroit, Mich
Flt A 9607th VART Sq (Intell)	Detroit, Mich.
Flt B 9607th VART Sq	Detroit, Mich.
9608th VART Sq	Grand Rapids, Mich.
Flt A 9608th VART Sq	Grand Rapids, Mich.
Flt B 9608th VART Sq	Kalamazoo, Mich.
Flt C 9608th VART Sq	Battle Creek, Mich.
9609th VART Sq	Flint, Mich.
Flt A 9609th VART Sq	Flint, Mich.
Flt B 9609th VART Sq	Pontiac, Mich.
Flt C 9609th VART Sq	Lansing, Mich.
9610th VART Sq	Midland, Mich.
Flt A 9610th VART Sq	Midland, Mich.
Flt B 9610th VART Sq	Bay City, Mich.
Flt C, 9610th VART Sq	Sault Ste Marie, Mich.
9623rd VART Sq (Intell)	Chicago, Ill
Flt A 9623rd VART Sq	Chicago, Ill
Flt B 9623rd VART Sq	Chicago, Ill
Flt C 9623rd VART Sq	Chicago, Ill
Flt D 9623rd VART Sq	Chicago, Ill
9624th VART Sq	Chicago, Ill
Flt A 9624th VART Sq	Chicago, Ill
Flt B 9624th VART Sq	Chicago, Ill
Flt C 9624th VART Sq	Chicago, Ill

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Tenth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
Flt D 9624th VART Sq	Chicago, Ill.
Flt D 9626th VART Sq	Gary, Ind.
9625th VART Sq	Rockford, Ill.
Flt A 9625th VART Sq	Rockford, Ill.
Flt B 9625th VART Sq	Rockford, Ill.
Flt C 9625th VART Sq	Rockford, Ill.
Flt D 9625th VART Sq	Freeport, Ill.
Flt E 9625th VART Sq	Oregon, Ill.
9626th VART Sq	Champaign, Ill.
Flt A 9626th VART Sq	Champaign, Ill
Flt B 9626th VART Sq	Matoon, Ill.
Flt C 9626th VART Sq	Danville, Ill.
9627th VART Sq	Moline, Ill.
Flt A 9627th VART Sq	Moline, Ill
Flt B 9627th VART Sq	Moline, Ill.
9639th VART Sq	E. St. Louis, Ill
Flt A 9639th VART Sq	St. Louis, Mo.
Flt B 9639th VART Sq (Intell)	St. Louis, Mo.
Flt C 9639th VART Sq	Bellville, Ill
9640th VART Sq	Mt Vernon, Ill
Flt A 9640th VART Sq	Mt Vernon, Ill
Flt B 9640th VART Sq	Lawrenceville, Ill
9641st VART Sq	Decatur, Ill
Flt A 9641st VART Sq	Decatur, Ill
Flt B 9641st VART Sq	Decatur, Ill
Flt C 9641st VART Sq	Bloomington; Ill
9642nd VART Sq	Peoria, Ill
Flt A 9642nd VART Sq	Peoria, Ill
Flt B 9642nd VART Sq	Peoria, Ill
9643rd VART Sq	Springfield, Ill
Flt A 9643rd VART Sq	Springfield, Ill
Flt B 9643rd VART Sq	Springfield, Ill
Flt C 9643rd VART Sq	Quincy, Ill
9656th VART Sq	Madison, Wisc.
Flt A 9656th VART Sq	Madison, Wisc
Flt B 9656th VART Sq	Madison, Wisc.
Flt C 9656th VART Sq	Beloit, Wisc.
Flt D 9656th VART Sq	Portage, Wisc.
Flt B 9663rd VART Sq	Wisconsin Rapids, Wisc.
Flt C 9663rd VART Sq	Stevens Point, Wisc.
9657th VART Sq	LaCrosse, Wisc
Flt A 9657th VART Sq	LaCrosse, Wisc
Flt B 9657th VART Sq	Eau Claire, Wisc
9658th VART Sq	Milwaukee, Wisc
Flt A 9658th VART Sq	Milwaukee, Wisc
Flt B 9658th VART Sq	Milwaukee, Wisc

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Tenth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
Flt C 9658th VART Sq	Milwaukee, Wisc
Flt D 9658th VART Sq	Milwaukee, Wisc
9659th VART Sq	Racine, Wisc
Flt A 9659th VART Sq	Racine, Wisc
Flt B 9659th VART Sq	Racine, Wisc
Flt C 9659th VART Sq	Kenosha, Wisc
9660th VART Sq	Green Bay, Wisc
Flt A 9660th VART Sq	Green Bay, Wisc
Flt B 9660th VART Sq	Green Bay, Wisc
Flt C 9660th VART Sq	Bonduel, Wisc
Flt D 9660th VART Sq	Sturgeon Bay, Wisc
9661st VART Sq	Oshkosh, Wisc.
Flt A 9661st VART Sq	Oshkosh, Wisc
Flt B 9661st VART Sq	Appleton, Wisc
Flt C 9661st VART Sq	Fond Du Lac, Wisc
Flt A 9663rd VART Sq	Wausau, Wisc.
Flt E 9660th VART Sq	Iron Mt. Wisc,
9662nd VART Sq	Sheboygan, Wisc.
Flt A 9662nd VART Sq	Sheboygan, Wisc
Flt B 9662nd VART Sq	Sheboygan, Wisc.
Flt C 9662nd VART Sq	Manitowac, Wisc
9672nd VART Sq	Columbia, Mo
Flt A 9672nd VART Sq	Columbia, Mo
Flt B 9672nd VART Sq	Columbia, Mo
9687th VART Sq	Des Moines, Iowa
Flt A 9698th VART Sq	Des Moines, Iowa
Flt B 9687th VART Sq	Des Moines, Iowa
Flt C 9687th VART Sq (Intell)	Des Moines, Iowa
9688th VART Sq	Cedar Rapids, Iowa
Flt A 9688th VART Sq	Cedar Rapids, Iowa
Flt B 9688th VART Sq	Cedar Rapids, Iowa
Flt C 9688th VART Sq	Cedar Rapids, Iowa
Flt D 9688th VART Sq	Cedar Rapids, Iowa
9689th VART Sq	Dubuque, Iowa
Flt A 9689th VART Sq	Dubuque, Iowa
Flt B 9689thVART Sq	Dubuque, Iowa
9690th VART Sq	Sioux City, Iowa
Flt A 9690th VART Sq (Intell)	Sioux City, Iowa
Flt B 9690th VART Sq	Sioux City, Iowa
Flt C 9690th VART Sq	Sioux City, Iowa
Flt D 9690th VART Sq	Sioux City, Iowa
9691st VART Sq	Burlington, Iowa
Flt A 9691st VART Sq	Burlington, Iowa
Flt B 9691st VART Sq	Burlington, Iowa
9703rd VART Sq	Duluth, Minn.
Flt A 9703rd VART Sq	Duluth, Minn.

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Tenth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
Flt B 9703rd VART Sq	Bemidji, Minn.
9704th VART Sq	Minneapolis, Minn
Flt A 9704th VART Sq	Minneapolis, Minn.
Flt B 9704th VART Sq	Rochester, Minn.
Flt C 9704th VART Sq	St. Cloud, Minn.
Flt D 9704th VART Sq	Mankateo, Minn.
9719th VART Sq	Kansas City, Kans
Flt A 9719th VART Sq	Kansas City, Kans
Flt B 9719th VART Sq	Topeka, Kans.
Flt C 9719th VART Sq	Kirksville, Mo.
Flt D 9719th VART Sq	Springfield, Mo.
9720th VART Sq	Wichita, Kans
Flt A 9720th VART Sq	Wichita, Kans
Flt B 9720th VART Sq	Great Bend, Kans
Flt C 9720th VART Sq	Hutchinson, Kans
Flt D 9720th VART Sq	Pratt Kans
9721st VART Sq	Arkansas City, Kans
Flt A 9721st VART Sq	Arkansas City, Kans
Flt B 9721st VART Sq	Pittsburgh, Kans
Flt C 9721st VART Sq	Coffeyville, Kans
9734th VART Sq	Omaha, Nebr.
Flt A 9734th VART Sq	Omaha, Nebr
Flt B 9734th VART Sq	Omahu, Nebr
9735th VART Sq	Hastings, Nebr.
Flt A 9735th VART Sq	Hastings, Nebr
Flt B 9735th VART Sq	Hastings, Nebr
Flt C 9735th VART Sq	Hastings, Nebr
9749th VART Sq	Fargo, N. D.
Flt A 9749th VART Sq	Fargo, N.D.
Flt B 9749th VART Sq	Sioux Falls, S. D.
9750th VART Sq	Bismarck N. D.
Flt A 9750th VART Sq	Bismarck, N.D.
Flt B 9750th VART Sq	Minot, N. D.
Flt C 9750th VART Sq	Rapid City, S. D.
9764th VART Sq	Denver, Colo
Flt A 9764th VART Sq	Denver, Colo
Flt B 9764th VART Sq	Denver, Colo
9765th VART Sq	Colorado Springs, Colo
Flt A 9765th VART Sq	Colorado Springs, Colorado
Flt B 9765th VART Sq	Pueblo, Colo
Flt C 9765th VART Sq	Durango, Colo
9766th VART Sq	Boulder, Colo
Flt A 9766th VART Sq	Boulder Colo
Flt B 9766th VART Sq	Grand Junction, Colo

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Tenth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
Flt C 9703rd VART Sq	Bovey, Minn.
Flt E, 9750th VART Sq	Aberdeen, S. D.
Flt F, 9750th VART Sq	Mitchell, S. D
Flt G 9704th VART Sq	Austin, Minn
Flt E, 9704th VART Sq	St. Paul, Minn.
Flt F, 9704th VART Sq	Winona, Minn.
Flt C 9657th VART Sq	Menominic, Wisc
Flt D 9750th VART Sq	Jamestown, N.D.
9671st VART Sq	Cape Girardeau, Missonri
Flt A 9671st VART Sq	Cape Girardeau, Missouri
Flt B 9671st VART Sq	Cape Girardeau, Missouri
Flt C 9640th VART Sq	Marion, Ill.
Flt C 9642nd VART Sq	Macomb, Ill.
Flt D 9639th VART Sq	Vandalia, Ill.
Flt E, 9639th VART Sq	E. St. Louis, Ill.
Flt C 9672nd VART Sq	Jefferson City, Missouri
9626th VART Sq	Gary Indiana
Flt A 9626th VART Sq	Gary, Indiana
Flt B 9626th VART Sq	Gary, Indiana
Flt C 9626th VART Sq	Gary, Indiana
9663rd VART Sq	Wausau, Wisc.
Flt F 9625th VART Sq	Ottawa, Ill.
Flt E 9688th VART Sq	Iowa City, Iowa
Flt F 9688th VART Sq	Iowa City, Iowa
Flt G 9688th VART Sq	Waterloo, Iowa
Flt H 9688th VART Sq	Waterloo, Iowa
Flt I 9688th VART Sq	Ottumwa, Iowa
Flt J 9688th VART Sq	Ottumwa, Iowa
9692th VART Sq	Des Moines, Iowa
Flt A, 9692nd VART Sq	Des Moines, Iowa
Flt B 9692nd VART Sq	Ames, Iowa
Flt C 9692nd VART Sq	Ames, Iowa
Flt D 9692nd VART Sq	Newton, Iowa
Flt E 9692nd VART Sq	Marshalltown, Iowa
Flt F 9692nd VART Sq	Webster City, Iowa
Flt G 9692nd VART Sq	Creston, Iowa
Flt H, 9692nd VART Sq	Oskaloosa, Iowa
Flt I 9692nd VART Sq	Mason City, Iowa
Flt J 9692nd VART Sq	Mason City, Iowa
Flt D 9755th VART Sq	Kearney, Nebr.
Flt E, 9735th VART Sq	Grand Island, Nebr
Flt F 9735th VART Sq	McCook, Nebr.
Flt G 9735th VART Sq	Scottsbluff, Nebr.
Flt H 9735th VART Sq	Scottsbluff, Nebr
Flt I 9735th VART Sq	Scottsbluff, Nebr
Flt J 9735th VART Sq	Scottsbluff, Nebr
9736th VART Sq	Lincoln, Nebr
Flt A 9736th VART Sq	Lincoln, Nebr
Flt B 9736th VART Sq	Lincoln, Nebr

CONTINENTAL AIR COMMAND AND AIR FORCE RESERVE OFFICERS TRAINING CENTER

TENTH AIR FORCE

Institution	Address
Colorado State College of A&M Arts	Fort Collins, Colorado
University of Denver	Denver, Colorado
*Bradley University	Peoria, Ill.
University of Illinois	Champaign, Ill.
*Ball State Teachers College	Muncie, Ind
*Butler University	Indianapolis, Ind.
Indiana University	Bloomington, Ind.
Purdue University	Lafayette, Ind.
*University of Notre Dame	South Bend, Indiana
*Coe College	Cedar Rapids, Iowa
Iowa State College	Ames, Iowa
State University of Iowa	Iowa City, Iowa
Kansas State College	Manhattan, Kans
University of Kansas	Lawrence, Kansas
University of Wichita	Wichita, Kans
Washburn Municipal University	Topeka, Kans
*College of St Thomas	St. Paul, Minn
(University of Minnesota	Minneapolis, Minn.
(Subsidiary - Basic and Adv (Training)	Duluth, Minn.
*(St. Louis University	St. Louis, Missouri
(Parks College - Subsidiary Unit- Basic and Adv Training)	St. Louis, Missouri
University of Missouri	Columbia, Missouri
University of Nebraska	Lincoln, Nebr.
North Dakota Agricultural College	Fargo, N. D.
University of North Dakota	Grand Forks, North Dakota
South Dakota State College	Brookings, S. D.
*Superior State Teachers College	Superior, Wisc
University of Wisconsin	Madison, Wisc.
University of Wyoming	Laramie, Wyoming
University of Detroit	Detroit, Mich.
(Michigan College of M&T	Houghton, Mich.
(Subsidiary Unit - Basic Training (Only)	Sault St. Marie, Mich.

CONTINENTAL AIR COMMAND AIR FORCE RESERVE OFFICERS TRAINING CENTER

Tenth Air Force (Contd)

Institution	Address
Michigan State College of A.S	East Lansing Mich.
University of Michigan	Ann Arbor, Mich.
* Wayne University	Detroit, Mich.

* Indicates institutions having Air ROTC ONLY

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

TWELFTH AIR FORCE

AIR FORCE RESERVE TRAINING CENTER UNITS

2596th Air Force Reserve Training Center, Hensley Field, Dallas, Texas

- 443rd Troop Carrier Wing (M) Hq & Hq Sq
  - 443rd Troop Carrier Gp (M) Hq
    - 309th Troop Carrier Sq (M)
    - 310th Troop Carrier Sq (M)
    - 343rd Troop Carrier Sq (M)
    - 344th Troop Carrier Sq (M)
  - 443rd Maint & Supp Gp Hq
    - 443rd Maint Sq TCM
    - 443rd Supp Sq TCM
  - 443rd Air Base Gp Hq & Hq Sq
    - 443rd Fin Disb Unit TCM
    - 443rd Comm Sq TCM
- *443rd Medical Gp

2592nd Air Force Reserve Training Center, Tinker AFB, Oklahoma City, Oklahoma

- 323rd Bomb Wing (L) Hq & Hq Sq
  - 323rd Bomb Gp (L) Hq
    - 453rd Bomb Sq (L)
    - 454th Bomb Sq (L)
    - 455th Bomb Sq (L)
    - 456th Bomb Sq (L)
  - 323rd Maint & Supp Gp Hq
    - 323rd Maint Sq
    - 323rd Supp Sq
  - 323 Air Base Gp Hq & Hq Sq
    - 323rd Fin Disb Unit T
    - 323rd Comm Sq
- *323rd Medical Gp

COROLLARY UNITS T/O&E

Corollary Unit	Parent Unit
Barksdale AFB, Shreveport, La.	
392nd Bomb Wg (L) Hq & Hq Sq	47th Bomb Wg (L) Hq & Hq Sq
392nd Bomb Gp (L) Hq	47th Bomb Gp L Hq
576th Bomb Sq (L) Jet	85th Bomb Sq L Jet
578th Bomb Sq (L) Jet	84th Bomb Sq L Jet
Carswell AFB, Fort Worth Texas	
446th Bomb Gp (H)	
705thBomb Sq (H)	
704th Bomb Sq (H)	

*Not yet activated

CONTINENTAL AIR COMD AND UNITED STATES AIR FORCE RESERVE UNITS

Twelfth Air Force (Contd)

COROLLARY UNITS (CONTD) T/O&E

Corollary Unit	Parent Unit
Kelly AFB, San Antonio, Texas	
481st Aircraft Rpr Sq Depot	
481st Vehicle Rpr Sq Depot	
481st General Supp Sq Depot	
481st Tech Supp Sq Depot	
Bergstrom AFB, Austin, Texas	
87th Fighter Gp Hq	27th Fighter Gp Hq
87th Comm Sq Ftr Two Eng	27th Comm Sq Ftr Two Eng
87th Fin Disb Unit Ftr Two Eng	27th Fin Disb Unit Ftr Two Eng
535th Ftr Sq Two Eng	524th Ftr Sq Two Eng
87th Medical Gp	
Biggs AFB, El Paso, Texas	
401st Bomb Gp (M) Hq	97th Bomb Gp (M) Hq
612th Bomb Sq (M)	340th Bomb Sq (M)
Tinker AFB, Oklahoma City, Oklahoma	
342nd Aircraft Rpr Sq Depot	
342nd Vehicle Rpr Sq Depot	
342nd General Supp Sq Depot	
342nd Tech Supp Sq Depot	

COROLLARY UNITS T/D

Corollary Unit	Parent Unit
Tinker AFB, Oklahoma City, Oklahoma	
8520th Air Transp Sq	
8500th Air Res Wg Hq & Hq Sq	
Enid AFB, Enid, Oklahoma	
8600th Pilot Tng Gp Hq	3575th Pilot Tng Wg Hq & Hq Sq
8600th Pilot Training Wing Hq & Hq Sq	3575th Pilot Training Wg Hq & Hq
Goodfellow AFB, San Angelo, Texas	
8609th Basic Pilot Tng Gp Hq & Hq Sq	3545th Basic Pilot Tng Gp Hq &
Waco AFB, Waco, Texas	
8610th Basic Pilot Tng Gp Hq & Hq Sq	3565th Basic Pilot Tng Gp Hq & H.
Randolph AFB, San Antonio, Texas	
8601st Basic Pilot Tng Wg Hq & Hq Sq	3510th Basic Pilot Tng Wg Hq&Hq S
8601st Basic Pilot Tng Gp Hq & Hq Sq	3510th Basic Pilot Tng Gp Hq&Hq
8601st Maint & Supp Gp Hq & Hq Sq	3510th Maint & Supp Gp Hq & Hq
8610th Training Sq	3510th Training Sq

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Twelfth Air Force (Contd)

COROLLARY UNITS T/D (CONTD)

Kelly AFB, San Antonio, Texas

Corollary Unit	Parent Unit
8503rd Air Res Gp Hq	
8547th AACS Sq	
8518th Air Transp Sq	
8517th Air Transp Sq	
8511th Air Transp Gp Hq & Hq Sq	
	Barksdale AFB, Shreveport, La.
8544th AACS Sq	
	Carswell AFB, Fort Worth, Texas
8545th AACS Sq	1921st AACS Sq
	Biggs AFB, El Paso, Texas
8546th AACS Sq	1900th AACS Sq

VOLUNTEER AIR RESERVE TRAINING UNITS

Unit	Location
9038th VART Wg	New Orleans, La.
9162nd VART Gp	Baton Rouge, La
9794th VART Sq	Baton Rouge, La.
Flt A (Admin) 9794th VART Sq	Baton Rouge, La.
Flt B (Oper & Tng) 9794th VART Sq	Baton Rouge, La.
Flt C (Maint) 9794th VART Sq	Baton Rouge, La.
9795th VART Sq	New Orleans, La.
Flt A (Admin) 9795th VART Sq	New Orleans, La.
Flt B (Oper & Tng) 9795th VART Sq	New Orleans, La.
Flt C (Maint) 9795th VART Sq	New Orleans, La.
Flt D (Supp) 9795th VART Sq	New Orleans, La.
Flt E (Comm & Elec) 9795th VART Sq	New Orleans, La.
Flt F (Intell) 9795th VART Sq	New Orleans, La.
9796th VART Sq	Lafayette, La.
Flt A (Admin) 9796th VART Sq	Lafayette, La.
Flt B (Oper & Tng) 9796th VART Sq	Lafayette, La.
9163rd VART Gp	Shreveport, La
9797th VART Sq	Shreveport, La.
Flt A (Admin) 9797th VART Sq	Shreveport, La.
Flt B (Oper & Tng) 9797th VART Sq	Shreveport, La.
Flt C (Maint) 9797th VART Sq	Shreveport, La.
9798th VART Sq	Monroe, La.
Flt A (Admin) 9798th VART Sq	Monroe, La.
Flt B (Oper & Tng) 9798th VART Sq	Monroe, La.
Flt C (Maint) 9798th VART Sq	Monroe, La.
9799th VART Sq	Alexandria, La.
Flt A (Admin) 9799th VART Sq	Alexandria, La.

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CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Twelfth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING CENTER UNITS (CONTD)

Unit	Location
Flt B (Oper & Tng) 9799th VART Sq	Alexandria, La.
9800th VART Sq	Tyler, Texas
Flt A (Admin) 9800th VART Sq	Tyler, Texas
Flt B (Oper & Tng) 9800th VART Sq	Tyler, Texas
Flt C (Maint) 9800th VART Sq	Tyler, Texas
9039th VART Wg	Little Rock, Ark.
9164th VART Gp	Little Rock, Ark.
9801st VART Sq	Little Rock, Ark.
Flt A (Admin) 9801st VART Sq	Little Rock, Ark.
Flt B (Oper & Tng) 9801st VART Sq	Little Rock, Ark.
Flt C (Maint) 9801st VART Sq	Little Rock, Ark.
9802nd VART Sq	Pine Bluff, Ark.
Flt A (Admin) 9802nd VART Sq	Pine Bluff, Ark.
Flt B (Oper & Tng) 9802nd VART Sq	Pine Bluff, Ark.
9803rd VART Sq	Hot Springs, Ark.
9803rd VART Sq Flt A (Admin)	Hot Springs, Ark.
Flt B (Oper & Tng) 9803rd VART Sq	Hot Springs, Ark.
9804th VART Sq	El Dorado, Ark.
Flt A (Admin) 9804th VART Sq	El Dorado, Ark.
Flt B (Oper & Tng) 9804th VART Sq	El Dorado, Ark.
9805th VART Sq	Texarkana, Ark.
Flt A (Admin) 9805th VART Sq	Texarkana, Ark.
Flt B (Oper & Tng) 9805th VART Sq	Texarkana, Ark.
Flt C (Maint) 9805th VART Sq	Texarkana, Ark.
9840th VART Sq	Fort Smith, Ark.
Flt A 9840th VART Sq	Fort Smith, Arkansas
Flt B 9840th VART Sq	Fayetteville, Ark
Flt C 9840th VART Sq	Rogers, Ark
9040th VART Wg	Harlingen, Texas
9165th VART Gp	Houston, Texas
9806th VART Sq	Houston, Texas
Flt A 9806th VART Sq	Houston, Texas
Flt B 9806th VART Sq	Wharton, Texas
Flt C 9806th VART Sq	Lufkin, Texas
Flt D 9806th VART Sq	Houston, Texas
9807th VART Sq	Bryan, Texas
Flt A 9807th VART Sq	Bryan, Texas
Flt B 9807th VART Sq	Brenham Texas
Flt C 9807th VART Sq	Huntsville, Texas
9809th VART Sq	Beaumont, Texas
Flt A 9809th VART Sq	Beaumont, Texas
Flt B 9809th VART Sq	Port Arthur, Texas
Flt C 9809th VART Sq	Lake Charles, La.
9881st VART Sq	Houston, Texas
Flt A 9881st VART Sq	Houston, Texas
Flt B 9881st VART Sq	Houston, Texas

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Twelfth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
Flt C 9881st VART Sq	Houston Texas
Flt D 9881st VART Sq	Houston, Texas
9166th VART Gp	Harlingen, Texas
9810th VART Sq	Harlingen, Texas
Flt A 9810th VART Sq	Harlingen, Texas
Flt B 9810th VART Sq	Harlingen, Texas
9811th VART Sq	Mcallen, Texas
Flt A 9811th VART Sq	Mcallen, Texas
Flt B 9811th VART Sq	Mcallen, Texas
9167th VART Gp	Corpus Christi, Texas
9812th VART Sq	Corpus Christi, Texas
Flt A 9812th VART Sq	Corpus Christi, Texas
Flt B 9812th VART Sq	Corpus Christi, Texas
9813th VART Sq	Alice, Texas
Flt A 9813th VART Sq	Alice, Texas
Flt B 9813th VART Sq	Alice, Texas
Flt C 9813th VART Sq	Alice, Texas
9168th VART Gp	San Antonio, Texas
9814th VART Sq	Austin, Texas
Flt A 9814th VART Sq	Austin, Texas
Flt B 9814th VART Sq	San Marcos, Texas
9817th VART Sq	San Antonio, Texas
Flt A 9817th VART Sq	San Antonio, Texas
Flt B 9817th VART Sq	San Antonio, Texas
9818th VART Sq	Victoria, Texas
Flt A 9818th VART Sq	Victoria, Texas
Flt B 9818th VART Sq	Victoria, Texas
9041st VART Wg	Austin, Texas
9170th VART Gp	Dallas, Texas
9819th VART Sq	Dallas, Texas
Flt A 9819th VART Sq	Dallas, Texas
Flt B 9819th VART Sq	Dallas, Texas
Flt C 9819th VART Sq	Dallas, Texas
Flt D 9819th VART Sq	Greenville, Texas
Flt E 9819th VART Sq	Greenville, Texas
9821st VART Sq	Dallas, Texas
Flt A 9821st VART Sq	Dallas, Texas
Flt B 9821st VART Sq	Dallas, Texas
Flt C 9821st VART Sq	Dallas, Texas
Flt D 9821st VART Sq	Commerce, Texas
Flt E 9821st VART Sq	Paris, Texas
9822nd VART Sq	Waco, Texas
Flt A 9822nd VART Sq	Waco, Texas
Flt B 9822nd VART Sq	Waco, Texas
Flt C 9822nd VART Sq	Waco, Texas
Flt D 9822nd VART Sq	Palestine, Texas

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Twelfth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
9171st VART Gp	Fort Worth, Texas
9823rd VART Sq	Fort Worth, Texas
Flt A 9823rd VART Sq	Fort Worth, Texas
Flt B 9823rd VART Sq	Fort Worth, Texas
Flt C 9823rd VART Sq	Fort Worth, Texas
9824th VART Sq	Fort Worth, Texas
Flt A 9824th VART Sq	Fort Worth, Texas
Flt B 9824th VART Sq	Fort Worth, Texas
Flt C 9824th VART Sq	Fort Worth Texas
9825th VART Sq	Fort Worth, Texas
Flt A 9825th VART Sq	Fort Worth, Texas
Flt B 9825th VART Sq	Fort Worth, Texas
Flt C 9825th VART Sq	Fort Worth, Texas
9826th VART Sq	Wichita Falls, Texas
Flt A 9826th VART Sq	Wichita Falls, Texas
Flt B 9826th VART Sq	Wichita Falls, Texas
Flt C 9826th VART Sq	Wichita Falls, Texas
9172nd VART Gp	Lubbock, Texas
9827th VART Sq	Lubbock, Texas
Flt A 9827th VART Sq	Lubbock, Texas
Flt B 9827th VART Sq	Lubbock, Texas
Flt C 9827th VART Sq	Lubbock, Texas
9828th VART Sq	Lubbock, Texas
Flt A 9828th VART Sq	Lubbock, Texas
Flt B 9828th VART Sq	Lubbock, Texas
Flt C 9829th VART Sq	Lubbock, Texas
9173rd VART Gp	El Paso, Texas
9829th VART Sq	El Paso, Texas
Flt A 9829th VART Sq	El Paso, Texas
Flt B 9829thVART Sq	El Paso, Texas
Flt C 9829th VART Sq	El Paso, Texas
9830th VART Sq	El Paso, Texas
Flt A 9830th VART Sq	El Paso, Texas
Flt B 9830th VART Sq	El Paso, Texas
Flt C 9830th VART Sq	El Paso, Texas
9169th VART Gp	Abilene, Texas
9815th VART Sq	Abilene, Texas
Flt A 9815th VART Sq	Abilene, Texas
Flt B 9815th VART Sq	Abilene, Texas
Flt C 9815th VART Sq	San Angelo, Texas
Flt D 9815th VART Sq	Brownwood, Texas
Flt E 9815th VART Sq	Brownwood, Texas
9816th VART Sq	Midland, Texas
Flt A 9816th VART Sq	Midland, Texas
Flt B 9816th VART Sq	Midland, Texas
Flt C 9816th VART Sq	Midland, Texas

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Twelfth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
9042nd VART Wg	Tulsa, Oklahoma
9174th VART Gp	Albuquerque, NM
9831st VART Sq	Albuquerque, NM
Flt A 9831st VART Sq	Albuquerque, NM
Flt B 9831st VART Sq	Clovis, NM
Flt C 9831st VART Sq	Gallup, NM
9832nd VART Sq	Los Alamos, NM
Flt A 9832nd VART Sq	Los Alamos, NM
Flt B 9832nd VART Sq	Santa Fe, NM
Flt C 9832nd VART Sq	Taos, NM
9833rd VART Sq	Amarillo, Texas
Flt A 9833rd VART Sq	Amarillo, Texas
Flt B 9833rd VART Sq	Borger, Texas
Flt C 9833rd VART Sq	Pampa, Texas
9834th VART Sq	Roswell, NM
Flt A 9834th VART Sq	Roswell, NM
Flt B 9834th VART Sq	Roswell, NM
Flt C 9834th VART Sq	Roswell, NM
Flt D 9834th VART Sq	Hobbs, NM
Flt E 9834th VART Sq	Carlsbad, NM
9175th VART Gp	Oklahoma City, Oklahoma
9835th VART Sq	Oklahoma City, Oklahoma
Flt A 9835th VART Sq	Oklahoma City, Oklahoma
Flt B 9835th VART Sq	Oklahoma City, Oklahoma
Flt C 9835th VART Sq	Oklahoma City, Oklahoma
Flt D 9835th VART Sq	Norman, Oklahoma
Flt E 9835th VART Sq	Ardmore, Oklahoma
Flt F 9835th VART Sq	Ada, Oklahoma
9836th VART Sq	Stillwater, Oklahoma
Flt A 9836th VART Sq	Stillwater, Oklahoma
Flt B 9836th VART Sq	Ponca City, Oklahoma
Flt C 9836th VART Sq	Guthrie, Oklahoma
9837th VART Sq	Lawton, Oklahoma
Flt A 9837th VART Sq	Lawton, Oklahoma
Flt B 9837th VART Sq	Chickasha, Oklahoma
Flt C 9837th VART Sq	Altus, Oklahoma
Flt D 9837th VART Sq	Duncan, Oklahoma
9176th VART Gp	Tulsa, Oklahoma
9820th VART Sq	Dallas, Texas
Flt A 9820th VART Sq	Dallas, Texas
Flt B 9820th VART Sq	Dallas, Texas
Flt C 9820th VART Sq	Dallas, Texas
Flt D 9820th VART Sq	Greenville, Texas
9838th VART Sq	Tulsa, Oklahoma
Flt A 9838th VART Sq	Tulsa, Oklahoma

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Twelfth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONTD)

Unit	Location
Flt B 9838th VART Sq	Tulsa, Oklahoma
Flt C 9838th VART Sq	Bartlesville, Oklahoma
Flt D 9839th VART Sq	Miami, Oklahoma
9839th VART Sq	Muskogee, Oklahoma
Flt A 9839th VART Sq	Muskogee, Oklahoma
Flt B 9839th VART Sq	Holdenville, Oklahoma
Flt C 9839th VART Sq	Okmulgee, Oklahoma
Flt D 9839th VART Sq	McAlester, Oklahoma
Flt C 9814th VART Sq	Austin Texas
Flt C 9817th VART Sq	San Antonio, Texas

CONTINENTAL AIR COMMAND AIR FORCE RESERVE OFFICERS TRAINING CENTER

TWELFTH AIR FORCE

Institution	Address
University of Arkansas	Fayetteville, Ark.
Louisiana State University	Baton Rouge, La.
Tulane University	New Orleans, La.
*Southwestern Louisiana Inst.	Lafayette, La.
New Mexico College of A&MA	Las Cruces, N.M.
Oklahoma A&M	Stillwater, Oklahoma
University of Oklahoma	Norman, Oklahoma
A&M College of Texas	College Station, Texas
*Baylor University	Waco, Texas
*Southern Methodist University	Dallas, Texas
Texas Tech College	Lubbock, Texas
University of Texas	Austin, Texas

*Indicates institutions having Air ROTC ONLY

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

FOURTEENTH AIR FORCE

AIR FORCE RESERVE TRAINING CENTER, UNITS

2584th Air Force Reserve Training Center, Memphis Mun Apt, Memphis Tenn.

- 516th Troop Carrier Wing (M) Hq & Hq Sq
  - 516th Troop Carrier Gp (M) Hq
    - 345th Troop Carrier Sq (M)
    - 346th Troop Carrier Sq (M)
    - 347th Troop Carrier Sq (M)
    - 348th Troop Carrier Sq (M)
  - 516th Maint & Supp Gp Hq
    - 516th Maint Sq TCM
    - 516th Supp Sq TCM
  - 516th Air Base Gp Hq & Hq Sq
    - 516th Fin Disb Unit TCM
    - 516th Comm Sq TCM
  - 516th Medical Gp

2587th Air Force Reserve Training Center, Birmingham Mun Apt, Alabama

- 514th Troop Carrier Wing (M) Hq & Hq Sq
  - 514th Troop Carrier Gp (M) Hq
    - 335th Troop Carrier Sq (M)
    - 336th Troop Carrier Sq (M)
    - 337th Troop Carrier Sq (M)
    - 338th Troop Carrier Sq (M)
  - 514th Maint & Supp Gp Hq
    - 514th Maint Sq TCM
    - 514th Supp Sq TCM
  - 514th Air Base Gp Hq & Hq Sq
    - 514th Fin Disb Unit TCM
    - 514th Comm Sq TCM
  - 514th Medical Gp

2585th Air Force Reserve Training Center, Miami Int Apt, Miami Fla.

- 435th Troop Carrier Wg (M) Hq & Hq Sq
  - 435th Troop Carrier Gp (M) Hq
    - 76th Troop Carrier Sq (M)
    - 77th Troop Carrier Sq (M)
    - 78th Troop Carrier Sq (M)
    - 349th Troop Carrier Sq (M)
  - 435th Maint & Supp Gp Hq
    - 435th Maint Sq TCM
    - 435th Supp Sq TCM
  - 435th Air Base Gp Hq & Hq Sq
    - 435th Fin Disb Unit TCM
    - 435th Comm Sq TCM
  - 435th Medical Gp

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourteenth Air Force (Contd)

AIR FORCE RESERVE TRAINING CENTER UNITS (CONTD)

2589th Air Force Reserve Training Center, Marietta AFB, Marietta, Georgia

- 94th Bomb Wg (L) Hq & Hq Sq
  - 94th Bomb Gp (L) Hq
    - 331st Bomb Sq (L)
    - 332nd Bomb Sq (L)
    - 333rd Bomb Sq (L)
    - 410th Bomb Sq (L)
  - 94th Maint & Supp Gp Hq
    - 94th Maint Sq
    - 94th Supp Sq
  - 94th Air Base Gp Hq & Hq Sq
    - 94th Comm Sq
      - 94th Fin Disb Unit
  - 94th Medical Gp

COROLLARY UNITS T/O&E

Corollary Unit	Parent Unit
Smyrna AFB, Smyrna, Tenn.	
337th Troop Carrier Sq (M)	20th Troop Carrier Sq (M)
376th Troop Carrier Sq (M)	334th Troop Carrier Sq (M)
309th Troop Carrier Gp (M)	314th Troop Carrier Gp
309th Maint & Supp Gp Hq	314th Maint & Supp Gp Hq
Brookley AFB, Mobile, Alabama	
480th Vehicle Rpr Sq Depot	
480th Aircraft Rpr Sq Depot	
MacDill AFB, Tampa, Fla.	
380th Bomb Gp (M) Hq	
528th Bomb Sq (M)	
380th Maint & Supp Gp Hq	
531st Bomb Sq (M)	

COROLLARY UNITS T/D

Keesler AFB, Biloxi, Mississippi	
8605th Air Base Gp Hq & Hq Sq	3380th Air Base Gp Hq & Hq Sq
8305th Maint & Supp Gp Hq & Hq Sq	3380th Maint & Supp Gp Hq & Hq Sq
8305th Tech Tng Gp Hq & Hq Sq	3380th Tech Tng Gp Hq & Hq Sq
MacDill AFB, Tampa Florida	
8540th AACS Sq	1928th AACS Sq

CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourteenth Air Force (Contd)

COROLLARY UNITS T/D

Corollary Unit	Parent Unit
	Maxwell AFB, Montgomery, Ala.
8539th AACS Sq	1922nd AACS Sq
	Robins AFB, Macon, Ga.
8541st AACS Sq	1926th AACS Sq
8504th Air Res Gp Hq	2104th Air Res Gp Hq
8510th Air Transp Sq	1727th Air Transp Sq
	Brookely AFB, Mobile, Ala
8513th Air Transp Sq	1258th Air Transp Sq
8514th Air Transp Sq	1260th Air Transp Sq
	Keesler AFB, Biloxi, Miss.

VOLUNTEER AIR RESERVE TRAINING UNITS

Unit	Location
9882nd VART Sq	Miami, Florida
Flt A (Intell) 9882nd VART Sq	Miami, Florida
Flt B (Pet Sp) 9882nd VART Sq	Miami, Florida
Flt C (MATS) 9882nd VART Sq	Miami, Florida
9883rd VART Sq	W. Palm Beach, Florida
9884th VART Sq	Orlando, Florida
9885th VART Sq	Tampa, Florida
Flt B (Pet Sp) 9835th VART Sq	Tampa, Florida
Flt C (MATS) 9885th VART Sq	Tampa, Florida
9886th VART Sq	Gainesville, Fla
9887th VART Sq	Jacksonville, Florida
9889th VART Sq	Tallahassee, Fla
Flt E 9889th VART Sq	Panama City, Fla.
Flt F 9888th VART Sq	Valpariso, Fla.
9900th VART Sq	Marietta, Ga.
Flt A (Intell) 9900th VART Sq	Marietta, Ga.
Flt B (Pet Sp) 9900th VART Sq	Marietta, Ga.
Flt C (MATS) 9900th VART Sq	Marietta, Ga.
9901st VART Sq	Columbus, Ga.
Flt E 9901st VART Sq	Albany, Ga.
9902nd VART Sq	Macon Ga.
9903rd VART Sq	Savannah, Ga.
9920th VART Sq	Birmingham, Ala.
Flt A (Intell) 9920th VART Sq	Birmingham, Ala.
Flt B (Pet Sp) 9920th VART Sq	Birmingham, Ala.
Flt C (MATS) 9920th VART Sq	Birmingham, Ala.

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CONTINENTAL AIR COMMAND UNITED STATES AIR FORCE RESERVE UNITS

Fourteenth Air Force (Contd)

VOLUNTEER AIR RESERVE TRAINING UNITS (CONT'D)

Unit	Location
9921st VART Sq	Montgomery, Ala.
Flt B (Pet Sp) 9921st VART Sq	Montgomery, Ala.
Flt C (M.TS) 9921st VART Sq	Montgomery, Ala.
Flt D 9921st VART Sq	Tuskegee, Ala.
Flt E 9921st VART Sq	Selma, Ala.
9922nd VART Sq	Mobile, Ala
9940th VART Sq	Charlotte, N.C.
Flt D 9940th VART Sq	Hendersonville, N. C.
9941st VART Sq	Winston-Salem, N.C.
9942nd VART Sq	Durham, N. C.
Flt E 9942nd VART Sq	Fayetteville, N. C.
9943rd VART Sq	Asheville, N.C.
9944th VART Sq	Chapel Hill, N. C.
9960th VART Sq	Memphis Tenn.
Flt A (Intell) 9960th VART Sq	Memphis Tenn.
Flt C (M.TS) 9960th VART Sq	Memphis, Tenn.
9961st VART Sq	Nashville, Tenn.
9962nd VART Sq	Knoxville, Tenn.
9963rd VART Sq	Chattanooga, Tenn.
9980th VART Sq	Greenville, S. C.
9981st VART Sq	Charleston, S. C.
9982nd VART Sq	Columbia, S. C.
Flt E 9982nd VART Sq	Sumter, S. C.
9983rd VART Sq	Spartanburg, S. C.
9990th VART Sq	Jackson, Miss.
Flt B (Pet Sp) 9990th VART Sq	Jackson, Miss.
Flt C (M.TS) 9990th VART Sq	Jackson, Miss.
Flt D 9990th VART Sq	University, Miss.
Flt E 9990th VART Sq	Columbia, Miss.
9991st VART Sq	Biloxi, Miss.

CONTINENTAL AIR COMMAND AIR FORCE RESERVE OFFICERS TRAINING CENTER

FOURTEENTH AIR FORCE

Institution	Address
Alabama Polytechnic Institute	Auburn, Ala
Tuskegee Institute	Tuskegee Institute, Ala
University of Alabama	University, Ala
University of Florida	Gainesville, Florida
The University of Miami	Coral Gables, Florida
Georgia Institute of Technology	Atlanta, Ga.
University of Georgia	Athens, Ga.
Mississippi State College	Starkville, Mississippi
University of Mississippi	Oxford, Mississippi
*East Carolina Teachers College	Greenville, N. C.
North Carolina State College of A&E	Raleigh, N. C.
*University of North Carolina	Chapel Hill, N. C.
Clemson Agricultural College	Clemson, S. C.
The Citadel	Charleston, S. C.
University of Tennessee	Knoxville, Tennessee

*Indicates institutions having Air ROTC ONLY

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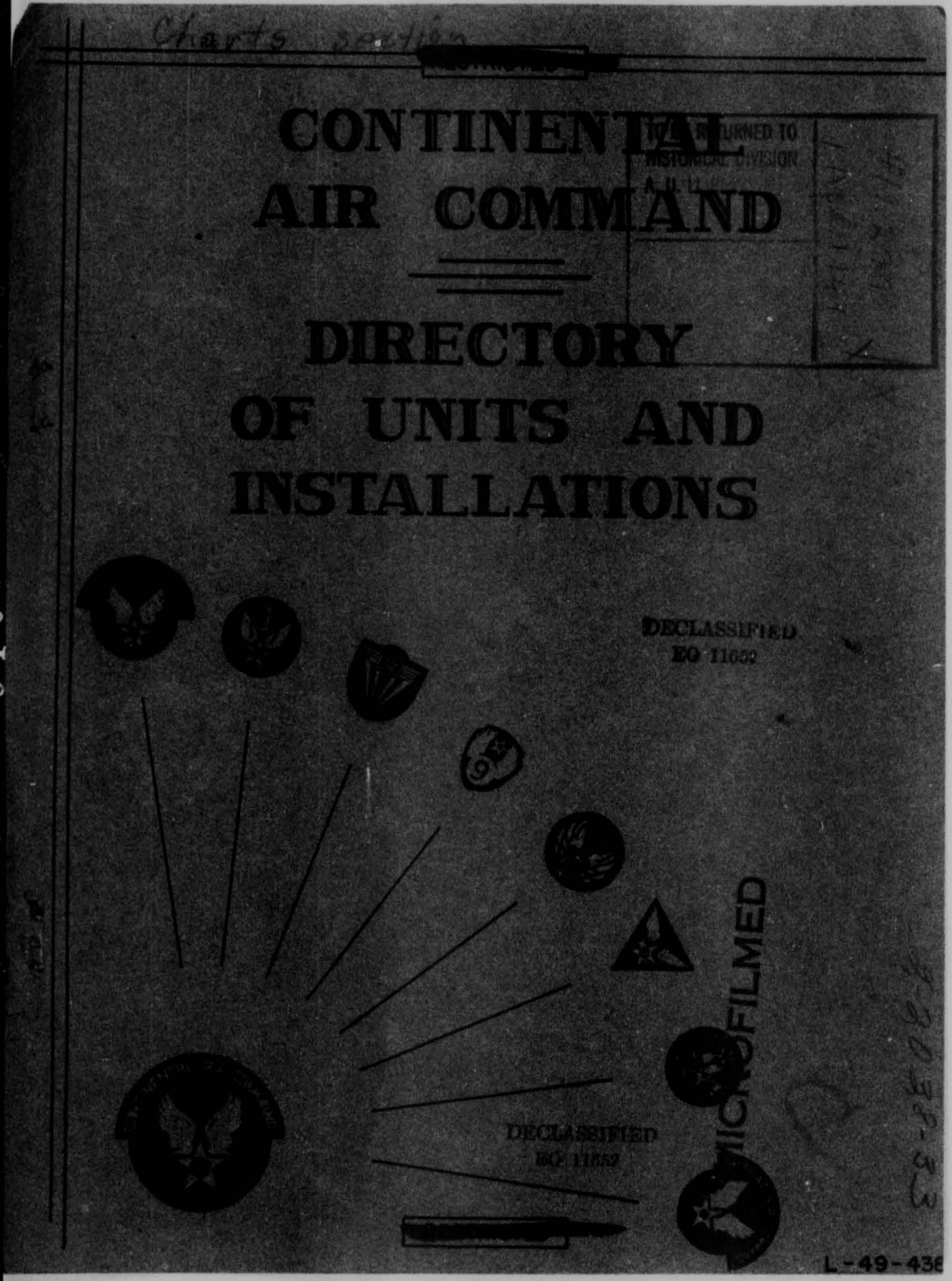

Charts section

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CONTINENTAL AIR COMMAND

DIRECTORY OF UNITS AND INSTALLATIONS

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HEADQUARTERS

CONTINENTAL AIR COMMAND

MITCHEL AIR FORCE BASE, NEW YORK

DIRECTORY

of

UNITS AND INSTALLATIONS

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Report all errors or omissions to:

Commanding General
Continental Air Command
Mitchel Air Force Base, N.Y.

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ABBREVIATIONS

AACS - Airways & Air Communications Service
AC - Aircraft Control
AC&W - Aircraft Control & Warning
ADC - Air Defense Command
Adm - Administrative
AF - Air Force
AFB - Air Force Base
AFTRC - Air Training Command
AFRTC - Air Force Reserve Training Center
AMC - Air Materiel Command
Apl - Airplane
Apt - Airport
Atchd - Attached
AU - Air University
Avn - Aviation
AWS - Air Weather Service
Base Sv - Base Services
BN - Battalion
Bomb - Bombardment
Calib - Calibration
Carr - Carrier
Co - Company
Comd - Command
Comm - Communitcation

ABBREVIATIONS (contd)

ConAC - Continental Air Command

Const - Construction

Det - Detachment

Div - Division

Engr - Engineering or Engineer

Fld - Field

Flt - Flight

Ftr - Fighter

Gp - Group

Hq - Headquarters

JP - Jet-Propelled

L - Light

LB - Light Bombardment

Loc - Location

Maint - Maintenance

Mat - Materiel

MATS - Military Air Transport Service

Med - Medical

Mun - Municipal

Oprs - Operations

Oprg - Operating

AFORD - Air Force Overseas Replacement Depot

Ph - Photo

POE - Port of Embarkation

Rcn - Reconnaissance

ABBREVIATIONS (Contd)

Res	Reserve
SAC	Strategic Air Command
SAM	Special Air Missions
Sch	School
SE	Single Engine
Sep	Separation
SEPD	Seattle Port Detachment
SFPD	San Francisco Port Detachment
Sig-	Signal
Sq	Squadron
Sta	Station
Sv	Service(s)
TAC	Tactical Air Command
Tech	Technical
Trp	Troop
VH	Very Heavy
VHB	Very Heavy Bombardment
VLR	Very Long Range
Wea	Weather
Wg	Wing
Wpns	Weapons
WRAMA	Warner Robins Air Materiel Area

CONTINENTAL AIR COMMAND DIRECTORY OF UNITS AND INSTALLATIONS

Part I

COMMANDS AND AIR FORCES

Continental Air Command, Hq & Hq Sq
Mitchel Air Force Base, New York

Air Defense Command, Hq & Hq Sq
Mitchel Air Force Base, New York

Tactical Air Command, Hq & Hq Sq
Langley Air Force Base, Virginia

First Air Force, Hq & Hq Sq
Fort Slocum, New York
(Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont)

Fourth Air Force, Hq & Hq Sq
Hamilton Air Force Base, Hamilton, California
(Arizona, California, Idaho, Montana, Nevada, Oregon, Utah and Washington)

Ninth Air Force, Hq & Hq Sq
Langley Air Force Base, Virginia
(District of Columbia, Delaware, Kentucky, Maryland, Ohio, Pennsylvania, Virginia and West Virginia)

Tenth Air Force, Hq & Hq Sq
Fort Benjamin Harrison, Indiana
(Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Sourth Dakota, Wisconsin and Wyoming)

Twelfth Air Force, Hq & Hq Sq
Brooks Air Force Base, Texas
(Arkansas, Louisiana, New Mexico, Oklahoma and Texas)

Fourteenth Air Force, Hq & Hq Sq
Orlando Air Force Base, Orlando, Florida
(Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina and Tennessee)

Part II

REGULAR USAF UNITS

UNITS AND INSTALLATIONS OF CONTINENTAL AIR COMMAND AND UNITS OF OTHER COMMANDS ON CONTINENTAL AIR COMMAND INSTALLATIONS

(Note: Command jurisdiction of installations noted in parentheses)

UNITS AND INSTALLATIONS

CAMP KILMER, Stelton, N.J. (Army)
2225th AFORD

DOW AFB, Bangor, Me.
- 14th Ftr Wg Hq & Hq Sq
  - 14th Ftr Gp, Hq
    - 37th Ftr Sq, Jet
    - 48th Ftr Sq, Jet
    - 49th Ftr Sq, Jet
  - 14th Maint & Supply Gp, Hq
    - 14th Maint Sq, Ftr, Jet
    - 14th Supply Sq, Ftr, Jet
    - 14th Motor Vehicle Sq, Ftr, Jet
  - 14th Air Base Gp, Hq & Hq Sq
    - 14th Comm Sq, Ftr, Jet
    - 14th Air Police Sq, Ftr, Jet
    - 14th Food Service Sq, Ftr, Jet
    - 14th Installations Sq,Ftr, Jet
    - 14th Base Service Sq, Ftr, Jet
    - 14th Finance Disbursing Unit, Ftr, Jet
  - 14th Medical Gp
- 2228th AFRTC

FORT SLOCUM, N.Y.
- First Air Force, Hq & Hq Sq
  - 34th Comm Sq, Command
  - **22d Sig Radar Maint Unit (Type A) (DA)
  - **284th Sig Radar Maint Unit (Type C)(DA)
- 679th AF Band
- 2226th Air Base Gp, Hq & Hq Sq
  - 2226th Base Service Sq
  - 2226th Assembly & Processing Sq

GRENIER AFB, Manchester, N.H. (SAC)
647th AC&W Sq (503d AC&W Gp)

GRIFFISS AFB, Rome, N.Y. (AMC)
2229th AFRTC

HANSCOM APT, Bedford, Mass.
2234th AFRTC

UNITS OF OTHER COMMANDS ON ConAC STATIONS

DOW AFB, Bangor, Me.
12-6 Wea Det, 12 Wea Sq (AWS)(MATS)
1915th AACS Sq (AACS)(MATS

HANSCOM APT, Bedford, Mass.
12-2 Wea Det, 12 Wea Sq. (AWS)(MATS

** No Personnel Assigned

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FIRST AIR FORCE (contd)

UNITS AND INSTALLATIONS

MITCHEL AFB, N.Y.
Continental Air Command, Hq & Hq Sq
28th Comm Sq, Air Force
Air Defense Command, Hq & Hq Sq
} 26th Air Defense Division, Hq & Hq Sq
52d Ftr Wg, Hq & Hq Sq
52d Ftr Gp, Hq
2d Ftr Sq, All Wea
5th Ftr Sq, All Wea
52d Maint & Supply Gp. Hq
52d Maint Sq, Ftr, All Wea
52d Supply Sq, Ftr, All Wea
52d Motor Vehicle Sq, Ftr, All Wea
52d Air Base Gp, Hq & Hq Sq
52d Comm Sq, Ftr, All Wea
52d Air Police Sq, Ftr, All Wea
52d Food Service Sq, Ftr, All Wea
52d Installations Sq, Ftr, All Wea
52d Base Service Sq, Ftr, All Wea
52d Finance Disbursing Unit, Ftr, All Wea
52d Medical Gp
12th Radar Calib Det
581st AF Band
672d AC&W Sq (503d AC&W Gp)
2230th AFRTC
2243d WAF Sq
*2244th Avn Sq

NEWARK MUN APT, Newark, N.J.
2231st AFRTC

OTIS AFB, Falmouth, Mass.
33d Ftr Wg, Hq & Hq Sq
33d Ftr Gp, Hq
58th Ftr Sq, Jet
59th Ftr Sq, Jet
60th Ftr Sq, Jet
33d Maint & Supply Gp, Hq
33d Maint Sq, Ftr, Jet
33d Supply Sq, Ftr, Jet
33d Motor Vehicle Sq, Ftr, Jet
33d Air Base Gp, Hq & Hq Sq
33d Comm Sq, Ftr, Jet
33d Air Police Sq, Ftr, Jet
33d Food Service Sq, Ftr, Jet
33d Installations Sq, Ftr, Jet
33d Base Service Sq, Ftr, Jet
33d Finance Disbursing Unit, Ftr, Jet
33d Medical Gp

Asgd to ConAC
} Asgd to ADC
* Negro Personnel

UNITS OF OTHER COMMANDS ON ConAC STATIONS

MITCHEL AFB, N.Y.
2102d Wea Gp, Hq & Hq Sq (AWS)(MATS)
12th Wea Sq, (AWS)(MATS)
1112th SAM Sq (Hq Comd, USAF)
1802d AACS Gp, Hq & Hq Sq (AACS)(MATS)
1916th AACS
12-10 Wea Det, 12 Wea Sq (AWS)(MATS)

NEWARK MUN APT, Newark, N.J.
12-11 Wea Det, 12 Wea Sq (AWS)(MATS)

OTIS AFB, Falmouth, Mass.
12-24 Wea Det, 12th Wea Sq (AWS)(MATS
1917-2 AACS Det, 1917th AACS Sq
(AACS)(MATS)

FIRST AIR FORCE (contd)

UNITS AND INSTALLATIONS

PINE CAMP, GREAT BEND, N.Y. (DA)
648th AC&W Sq (503d AC&W Gp)

ROSLYN, N.Y. (Sub-base, Mitchel AFB)
503d AC& W Gp, Hq
 Det 1 & 2, 645th AC Sq
 646th AC&W Sq
 Det 1 & 2, 647th AC&W Sq
 Det 2 & 3, 648th AC&W Sq

STEWART FIELD, Newburgh, N.Y.
2232d AFRTC
4400th Air Base Gp, Hq & Hq Sq
 4401st Maint & Supply Sq
 4402d Air Installation Sq
 4403d Station Medical Sq

WESTOVER AFB, Westover Fld, Mass. (MATS)
2227th AFRTC

UNITS OF OTHER COMMANDS
ON ConAC STATIONS

STEWART FIELD, Newburgh, N.Y.
12-15 Wea Det, 12 Wea Sq,
(AWS)(MATS)

FOURTH AIR FORCE

UNITS AND INSTALLATIONS

DALY CITY, Calif.
Radio Security Det B,
136th Radio Security Sq
(USAF Security Service)

DAVIS-MONTHAN AFB, Tucson, Ariz. (SAC)
2348th AFRTC

EVERETT, Wash.
(Mailing Address: Gen Del, Everett, Wash.)
634th AC Sq (505th AC&W Gp)

FORT LEWIS, Wash (Army)
4th Depot Unit, Army

HAMILTON AFB, Hamilton, Calif.
Fourth Air Force, Hq & Hq Sq
 35th Comm Sq, Command
 78th Ftr Wg, Hq & Hq Sq
  78th Ftr Gp, Hq
   82d Ftr Sq, Jet
   83d Ftr Sq, Jet
   84th Ftr Sq, Jet
  78th Maint & Supply Gp, Hq
   78th Maint Sq, Ftr, Jet
   78th Supply Sq, Ftr, Jet
   78th Motor Vehicle Sq, Ftr, Jet
  78th Air Base Gp, Hq & Hq Sq
   78th Comm Sq, Ftr, Jet
   78th Air Police Sq, Ftr, Jet
   78th Food Service Sq, Ftr, Jet
   78th Installations Sq, Ftr, Jet
   78th Base Service Sq, Ftr, Jet
   78th Finance Disbursing Unit, Ftr, Jet
 78th Medical Gp
573d AF Band
2346th AFRTC
2349th AFORD
2351st WAF Sq
*2352d Avn Sq

HILL AFB, Hill Fld, Utah (AMC)
2344th AFRTC

LONG BEACH MUN APT, Long Beach, Calif.
2347th AFRTC

* Negro Personnel

UNITS OF OTHER COMMANDS ON ConAC STATIONS

HAMILTON AFB, Hamilton, Calif.
1117th SAM Sq (Hq Comd, USAF)
1801st AACS Gp Hq (AACS)(MATS)
1902d AACS Sq (AACS)(MATS)
10-5 Wea Det, 5th Wea Sq (AWS)
Hamilton Flt Service Ctr (MATS)
2150th Rescue Unit (ARS)(MATS)
Flt A, 2150th Rescue Unit (ARS)
 (MATS)

LONG BEACH MUN APT, Long Beach, Calif.
9-20 Wea Det, 9th Wea Sq (AWS)
 (MATS)

FOURTH AIR FORCE (contd)

UNITS AND INSTALLATIONS

MARCH AFB, Calif.

- 1st Ftr Wg, Hq & Hq Sq
  - 1st Ftr Gp, Hq
    - 27th Ftr Sq, Jet
    - 71st Ftr Sq, Jet
    - 94th Ftr Sq, Jet
  - 1st Maint & Supply Gp, Hq
    - 1st Maint Sq, Ftr, Jet
    - 1st Supply Sq, Ftr, Jet
    - 1st Motor Vehicle Sq, Ftr, Jet
  - 1st Air Base Gp, Hq & Hq Sq
    - 1st Comm Sq, Ftr, Jet
    - 1st Air Police Sq, Ftr, Jet
    - 1st Food Service Sq, Ftr, Jet
    - 1st Installations Sq, Ftr, Jet
    - 1st Base Service Sq, Ftr, Jet
    - 1st Finance Disbursing Unit, Ftr, Jet
  - 1st Medical Gp
- *31st Motor Transport Sq, Avn
- 817th Engr Avn Bn (DA)
- 622d Engr Maint Co (Avn)

MCCHORD AFB, Wash.

- 62d Tr Carr Wg, Medium, Hq & Hq Sq
  - 62d Tr Carr Gp, Medium, Hq
    - 4th Tr Carr Sq, Medium
    - 7th Tr Carr Sq, Medium
    - 8th Tr Carr Sq, Medium
  - 62d Maint & Supply Gp, Hq
    - 62d Maint Sq, Tr Carr, Medium
    - 62d Supply Sq, Tr Carr, Medium
    - 62d Motor Vehicle Sq, Tr Carr, Medium
  - 62d Air Base Gp, Hq & Hq Sq
    - 62d Comm Sq, Tr Carr, Medium
    - 62d Air Police Sq, Tr Carr, Medium
    - 62d Food Service Sq, Tr Carr, Medium
    - 62d Installations Sq, Tr Carr, Medium
    - 62d Base Service Sq, Tr Carr, Medium
    - 62d Finance Disbursing Unit, Tr Carr, Medium
  - 62d Medical Gp
- 318th Ftr Sq, All Wea (325th Ftr Gp)
- 11th Radar Calib Det
- 505th AC&W Gp, Hq
  - 635th AC&W Sq
- 531st AC&W Gp, Hq
  - 626th AC&W Sq
  - 632d AC&W Sq
- 2345th AFRTC

UNITS OF OTHER COMMANDS ON ConAC STATIONS

MARCH AFB, Calif.

- 9th Wea Sq, (AWS)(MATS)
- 1907th AACS Sq (AACS)(MATS)
- Flt B, 2150 Rescue Unit (ARS) (MATS)
- 1702-3 Det, 1702 Air Trans Gp (COND) (MATS)
- March Flt Service Ctr (MATS)
- Det S, 3903 Bomb Scoring Sq (SAC)
- Det F, 3903 Bomb Scoring Sq (SAC)
- 908 Wea Det, 9th Wes Sq(AWS) (MATS)

MCCHORD AFB, Wash.

- 1905th AACS Sq (AACS)(MATS)
- Flt C, 2150 Rescue Unit (ARS)(MATS)
- 1501-1 Det, 1501 Air Transp Gp, (PACS)(MATS)
- 10-10 Wea Det, 10th Wea Sq (AWS)(MATS)
- McChord Flt Service Ctr (MATS)

* Negro Personnel

FOURTH AIR FORCE (contd)

UNITS AND INSTALLATIONS

MOSES LAKE AFB, Moses Lake, Wash.
325th Ftr Wg, Hq & Hq Sq
325th Ftr Gp, Hq
317th Ftr Sq, All Wea
325th Maint & Supply Gp, Hq
325th Maint Sq, Ftr, All Wea
325th Supply Sq, Ftr, All Wea
325th Motor Vehicle Sq, Ftr, All Wea
325th Air Base Gp, Hq & Hq Sq
325th Comm Sq, Ftr, All Wea
325th Air Police Sq, Ftr, All Wea
325th Food Service Sq, Ftr, All Wea
325th Installations Sq, Ftr, All Wea
325th Base Service Sq, Ftr, All Wea
325th Finance Disbursing Unit, Ftr, All Wea
325th Medical Gp
637th AC&W Sq (505th AC&W Gp)

SILVER LAKE, Wash.
(Mailing Address: Gen Del, Everett, Wash.)
§ 25th Air Defense Division, Hq & Hq Sq

SAN FRANCISCO POE, Ft Mason, Calif. (Army)
Det, 2349th AFORD

SEATTLE POE, Seattle, Wash. (Army)
Det, 2349th AFORD

UNITS OF OTHER COMMANDS ON ConAC STATIONS

MOSES LAKE AFB, Moses Lake, Wash.
10-7 Wea Det, 10th Wea Sq (AWS) (MATS)
1905-5 AACS Det (AACS)(MATS)

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§ Asgd to ADC

NINTH AIR FORCE

UNITS AND INSTALLATIONS

ANDREWS AFB, Washington 20, D.C. (MATS)
4th Ftr Wg, Hq & Hq Sq
- 4th Ftr Gp, Hq
  - 334th Ftr Sq, Jet
  - 335th Ftr Sq, Jet
  - 336th Ftr Sq, Jet
- 4th Maint & Supply Gp, Hq
  - 4th Maint Sq, Ftr, Jet
  - 4th Supply Sq, Ftr, Jet
  - 4th Motor Vehicle Sq, Ftr, Jet
- 4th Air Base Gp, Hq & Hq Sq
  - 4th Comm Sq, Ftr, Jet
  - 4th Air Police Sq, Ftr, Jet
  - 4th Food Service Sq, Ftr, Jet
  - 4th Installations Sq, Ftr, Jet
  - 4th Base Service Sq, Ftr, Jet
  - 4th Finance Disbursing Unit, Ftr, Jet
- 4th Medical Gp

2238th AFRTC

BYRD FLD, Richmond, Va.
2235th AFRTC

CLEVELAND MUN APT, Cleveland, Ohio (AMC)
2240th AFRTC

DOVER AFB, Dover, Del, (Inactive)
4404th Standby Base Sq

GODMAN AFB, Fort Knox, Ky.
2236th AFRTC
3d Depot Unit, A (Type A)

GREATER PITTSBURGH APT, Coraopolis, Pa.
2239th AFRTC

UNITS OF OTHER COMMANDS ON ConAC STATIONS

BYRD FLD, Richmond, Va.
12-4 Wea Det, 12 Wea Sq, (AWS) (MATS)

GODMAN AFB, Fort Knox, Ky.
16-3 Wea Det, 16 Wea Sq, (AWS) (MATS)
1918-4 AACS Det, 1918 AACS Sq (AACS)(MATS)

GREATER PITTSBURGH APT, Pa.
12-21 Wea Det, 12 Wea Sq, (AWS) (MATS)
1912-1 AACS Det, 1912 AACS Sq (AACS)(MATS)

NINTH AIR FORCE (contd)

UNITS AND INSTALLATIONS

LANGLEY AFB, Va.
#Tactical Air Command, Hq & Hq Sq
Ninth Air Force, Hq & Hq Sq
363d Tac Recon Wg, Hq & Hq Sq
363d Tac Recon Gp, Hq
160th Tac Recon Sq, Photo-Jet
161st Tac Recon Sq, Photo-Jet
162d Tac Recon Sq, Night Photo
363d Maint & Supply Gp, Hq
363d Maint Sq, Tac Recon
363d Supply Sq, Tac Recon
363d Motor Vehicle Sq, Tac Recon
363d Air Base Gp, Hq & Hq Sq
363d Comm Sq, Tac Recon
363d Air Police Sq, Tac Recon
363d Installations Sq, Tac Recon
363d Food Service Sq, Tac Recon
363d Base Service Sq, Tac Recon
363d Finance Disbursing Unit, Tac Recon
363d Medical Gp
4412th WAF Sq
564th AF Band
4th Photo Tech Sq
29th Comm Sq, AF
*837th Engr Avn Battalion (DA)
4415th Liaison Flt

LOCKBOURNE AFB, Columbus, Ohio
*332d Ftr Wg, Hq & Hq Sq
*332d Ftr Gp, Hq
*99th Ftr Sq, SE
*100th Ftr Sq, SE
*301st Ftr Sq, SE
*332d Maint & Supply Gp, Hq
*332d Maint Sq, Ftr, SE
*332d Supply Sq, Ftr, SE
*332d Motor Vehicle Sq, Ftr, SE
*332d Air Base Gp, Hq & Hq Sq
*332d Comm Sq, Ftr, SE
*332d Air Police Sq, Ftr, SE
*332d Installations Sq, Ftr, SE
*332d Food Service Sq, Ftr, SE
*332d Base Service Sq, Ftr, SE
*332d Finance Disbursing Unit, Ftr, SE
*332d Medical Gp

Asgd direct to ConAC
* Negro Personnel

UNITS OF OTHER COMMANDS
ON ConAC STATIONS

LANGLEY AFB, Va.
1913 AACS Sq (AACS)(MATS)
1702-2 Det, 1702 Air Trans
Gp (COND)(MATS)
12-9 Wea Det, 12th Wea Sq
(AWS)(MATS)
1001st IG Unit (Hq Comd, USAF)

LOCKBOURNE AFB, Columbus, Ohio
1914-2 AACS Det, 1914th AACS
Sq (AACS)(MATS)
12-19 Wea Det, 12th Wea Sq
(AACS) (MATS)

NINTH AIR FORCE (contd)

UNITS AND INSTALLATIONS

LOCKBOURNE AFB, Columbus, Ohio
*766th AF Band
*4413th WAF Sq
*449th Sig Heavy Const Bn, Avn (DA)
*770th AF Band
*2221st Special Service Unit
*2222d Special Service Unit

READING MUN APT, Reading, Pa.
2237th AFRTC

UNITS OF OTHER COMMANDS
ON ConAC STATIONS

READING MUN APT, Reading, Pa.
12-14 Wea Det, 12th Wea Sq
(AWS)(MATS)

* Negro Personnel

TENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC STATION
ATTERBURY AFB, Columbus, Ind, (Sub-base, Stout Fld, Ind.) (No units)	
BAER FLD, Fort Wayne, Ind. 2437th AFRTC	
CHANUTE AFB, Chanute Fld, Ill. (AFRTC) 2464th AFRTC	
CHICAGO-ORCHARD APT, Park Ridge, Ill. 2471st AFRTC	CHICAGO-ORCHARD AFB, Park Ridge, Ill. 16-4 Wea Det, 16th Wea Sq, (AWS)(MATS 1114th SAM Sq (Hq Comd, USAF) Det 2750 AFB Hq & Hq Sq (Air Museum) (AMC)
FAIRFAX FLD, Kansas City, Kans. 2472d AFRTC	FAIRFAX FLD, Kansas City, Kans. 24-29 Wea Det, 24th Wea Sq (AWS)(MATS Acft Assy Plant #2 (AMC)
FORT BENJAMIN HARRISON, Ind. Tenth Air Force, Hq & Hq Sq 36th Comm Sq, Command 691st AF Band 2475th W/F Sq 2463d Air Base Gp, Hq & Hq Sq 2463d Maint & Supply Sq 2463d Base Service Sq 2463d Medical Sq #2220th Extension Gp, Hq & Hq Sq	
LOWRY AFB, Denver, Colo. (AFRTC) 2468th AFRTC	
MARSHALL AFB, Ft Riley, Kans. 4406th Air Base Sq	MARSHALL AFB, Ft Riley, Kans. 1911-2 AACS Det, 1911th AACS Sq (AACS)(MATS)
OFFUTT AFB, Fort Crooks, Nebr. (SAC) 2473d AFRTC	
OSCODA AFB, Oscoda, Mich. (Sub-base, Selfridge AFB) 2476th Base Service Sq	

Asgd direct to ConAC

TENTH AIR FORCE (contd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC STATIONS
SCOTT AFB, Belleville, Ill. (AFTRC) 2459th AFRTC	
SHERMAN AFB, Ft Leavenworth, Kans. 4405th Air Base Sq	SHERMAN AFB, Ft Levenworth, Kans. 1911-3 AACS Det, 1911th AACS Sq (AACS)(MATS) 19-5 Wea Det, 19th Wea Sq, (AWS)(MATS)
SELFRIDGE AFB, Selfridge Fld, Mich. 56th Ftr Wg, Hq & Hq Sq 56th Ftr Gp, Hq 61st Ftr Sq, Jet 62d Ftr Sq, Jet 63d Ftr Sq, Jet 56th Maint & Supply Gp, Hq 56th Maint Sq, Ftr, Jet 56th Supply Sq, Ftr, Jet 56th Motor Vehicle Sq, Ftr, Jet 56th Air Base Gp, Hq & Hq Sq 56th Comm Sq, Ftr, Jet 56th Air Police Sq, Ftr, Jet 56th Food Service Sq, Ftr, Jet 56th Installations Sq, Ftr, Jet 56th Base Service Sq, Ftr, Jet 56th Finance Disbursing Unit, Ftr, Jet 56th Medical Gp 645th AC&W Sq (503d AC&W Gp) Less Det 1 & 2 2242d AFRTC	SELFRIDGE AFB, Selfridge Fld, Mich. (SAU) 1914-3 AACS Det, 1914th AACS Sq (AACS)(MATS) Opr Loc 12/20L, 12th Wea Sq, (AWS)(MATS) 464th Sig Hvy Constr Co (Avn) (DA) 468th Sig Hvy Constr Co (Avn) (DA) Flt C, 2151st Rescue Unit, (ARS)(MATS)
SIOUX CITY MUN APT, Sioux City, Iowa 2470th AFRTC	
STOUT FLD, Indianapolis, Ind. 2466th AFRTC	STOUT FLD, Indianapolis, Ind. 1918-2 AACS Det, 1918th AACS Sq (AACS)(MATS)
WOLD-CHAMBERLAIN FLD, Minneapolis, Minn. 2465th AFRTC	WOLD-CHAMBERLAIN FLD, Minn. 16-6 Wea Det, 16th Wea Sq, (AWS)(MATS) 1918-1 AACS Det, 1918th AACS Sq (AACS)(MATS)

TWELFTH AIR FORCE

UNITS AND INSTALLATIONS

BARKSDALE AFB, Barksdale, La (AFTRC)

- 47th Bomb Wg, Lt, Hq & Hq Sq
  - 47th Bomb Gp, Lt, Hq
    - 84th Bomb Sq, Lt, Jet
    - 85th Bomb Sq, Lt, Jet
    - 86th Bomb Sq, Lt, Jet
  - 47th Maint & Supply Gp, Hq
    - 47th Maint Sq, Bomb, Lt, Jet
    - 47th Supply Sq, Bomb, Lt, Jet
    - 47th Motor Vehicle Sq, Bomb, Lt, Jet
  - 47th Air Base Gp, Hq & Hq Sq
    - 47th Comm Sq, Bomb, Lt, Jet
    - 47th Food Service Sq, Bomb Lt, Jet
    - 47th Air Police Sq, Bomb Lt, Jet
    - 47th Installations Sq, Bomb Lt, Jet
    - 47th Base Service Sq, Bomb, Lt, Jet
    - 47th Finance Disbursing Unit, Bomb, Lt, Jet
  - 47th Medical Gp
- 2590th AFRTC
- 1st Shoran Beacon Unit

BIGGS AFB, Biggs Fld, Tex, (SAC)

- 1st Tow Target Sq

BROOKS AFB, Texas

- Twelfth Air Force, Hq & Hq Sq
- 579th AF Band
- 2593d AFRTC
- 2595th Air Base Gp, Hq & Hq Sq
  - 2595th Base Service Sq
  - 2595th Maint & Supply Sq
  - 2595th Opns Sq
  - 2595th Medical Sq
- *2599th Avn Sq
- #Det B, 136th Radio Security Sq

CAMP LEROY JOHNSON, New Orleans, La. (Army)

- 2594th AFORD

CAMP HOOD, Texas (Army)

- 1st Depot Unit, Army

ELLINGTON AFB, Houston, Tex. (AFRTC)

- 2591st AFRTC

UNITS OF OTHER COMMANDS ON ConAC STATIONS

BROOKS AFB, Texas

- 1116th SAM Sq, (Hq Comd, USAF)
- 24-26 Wea Det, 24th Wea Sq (AWS)(MATS)
- 1923-2 AACS Det, 1923d AACS Sq (AACS)(MATS)
- 8th Radio Sq. Mobile (USAF)
- 136th Radio Security Sq (USAF Security Service)

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* Negro Personnel
# Attached for Adm & Log Support

TWELFTH AIR FORCE (contd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC STATIONS
HENSLEY FLD, Dallas, Texas 2596th AFRTC	HENSLEY FLD, Dallas, Texas 1921-3 AACS Det, 1921st AACS Sq (AACS)(MATS) 24-32 Wea Det, 24th Wea Sq, (AWS)(MATS)
KIRTLAND AFB, Kirtland Fld, N.M. (AMC) 636th AC&W Sq	
TINKER AFB, Oklahoma City, Okla (AMC) 2592d AFRTC	
POST FLD, Fort Sill, Okla. 8th Depot Unit, Army	POST FLD, Fort Sill, Okla. 24-30 Wea Det, 24th Wea Sq, (AWS)(MATS)

FOURTEENTH AIR FORCE

UNITS AND INSTALLATIONS

BIRMINGHAM MUN APT, Birmingham, Ala.
2587th AFRTC

GREENVILLE AFB, Greenville, S.C.
316th Tr Carr Wg, Medium, Hq & Hq Sq
316th Tr Carr Gp, Medium, Hq
36th Tr Carr Sq, Medium
37th Tr Carr Sq, Medium
75th Tr Carr Sq, Medium
316th Maint & Supply Gp, Hq
316th Maint Sq, Tr Carr, Medium
316th Supply Sq, Tr Carr, Medium
316th Motor Vehicle Sq, Tr Carr, Medium
316th Air Base Gp, Hq & Hq Sq
316th Comm Sq, Tr Carr, Medium
316th Air Police Sq, Tr Carr, Medium
316th Food Service Sq, Tr Carr, Medium
316th Installations Sq, Tr Carr, Medium
316th Base Service Sq, Tr Carr, Medium
316th Finance Disbursing Unit, Tr Carr, Medium
316th Medical Gp
502d Tac Control Gp, Hq
605th Tac Control Sq
934th Sig Bn (Separate) (TAC)
12th Photo Tech Unit
256th Med Dispensary Unit, Avn (DA)
1st Vet Det, Avn (DA)
722d AF Band
5th Radar Calib Det
4410th Bomb Disposal Unit
4411th WAF Sq

GUNTER AFB, Montgomery, Ala. (AU)
2586th AFRTC

HAWKINS FLD, Jackson, Miss.
2588th AFRTC

LAWSON AFB, Ft Benning, Ga.
4405th Air Base Sq

UNIT OF OTHER COMMANDS ON ConAC STATIONS

BIRMINGHAM MUN APT, Birmingham,Al
26-10 Wea Det, 26th Wea Sq (AWS)(MATS)

GREENVILLE AFB, Greenville, S.C.
1924th AACS Sq (AACS)(MATS)
25-2 Wea Det, 25th Wea Sq (AWS) (MATS)

HAWKINS FLD, Jackson, Miss.
26-4 Wea Det, 26th Wea Sq (AWS)(MATS)

LAWSON AFB, Ft Benning, Ga.
1926-3 AACS Det (AACS)(MATS)
25-3 Wea Det, 25th Wea Sq (AWS)(MATS)

FOURTEENTH AIR FORCE (contd)

UNITS AND INSTALLATIONS	UNIT OF OTHER COMMANDS ON ConAC STATIONS
MacDILL AFB, MacDill Fld, Fla. (SAC) 2582d AFRTC	
MARIETTA AFB, Marietta, Ga. 2589th AFRTC	MARIETTA AFB, Marietta, Ga. 1115th SAM Sq (Hq Comd, USAF) 1924-1 AACS Det, 1924 AACS Sq (AACS)(MATS) 25-5 Wea Det, 25th Wea Sq, (AWS)(MATS)
MEMPHIS MUN APT, Memphis, Tenn. 2584th AFRTC	MEMPHIS MUN APT, Memphis, Tenn 26-7 Wea Det, 26th Wea Sq, (AWS)(MATS) 1922-3 AACS Det, 1922d AACS Sq (AACS)(MATS) 1702-1 Det, 1702 Air Trans Gp (COND)(MATS)
MIAMI INTERNATIONAL APT, Miami, Fla. 2585th AFRTC	MIAMI INTERNATIONAL APT, Miami,Fl 1925th AACS Sq (AACS)(MATS) 25-12 Wea Det, 25th Wea Sq (AWS)(MATS)
MOODY AFB, Valdosta, Ga. 4409th Standby Base Sq	MOODY AFB, Valdosta, Ga. 1926-1 AACS Det, 1926th AACS Sq (AACS)(MATS)
ORLANDO AFB, Orlando, Fla. Fourteenth Air Force, Hq & Hq Sq 2583d Air Base Gp, Hq & Hq Sq 2583d Base Service Sq 2583d Opns Sq 2583d Maint & Supply Sq 2583d Medical Sq 2583d Assembly Sq *2598th Avn Sq 539th AC&W Gp, Hq 649th AC Sq 650th AC&W Sq 651st AC&W Sq 652d AC&W Sq 7th Radar Calib Det 769th AF Band 37th Comm Sq, Comd	ORLANDO AFB, Orlando, Fla. 1928-1 AACS Det, 1928th AACS Sq (AACS)(MATS) 25-6 Wea Det, 25th Wea Sq, (AWS)(MATS)

FOURTEENTH AIR FORCE (contd)

UNITS AND INSTALLATIONS

POPE AFB, Fort Bragg, N.C.
5th Depot Unit, Army
2600th Air Base Sq

SHAW AFB, Sumter, S.C.
20th Ftr Wg, Hq & Hq Sq
 20th Ftr Gp, Hq
  55th Ftr Sq, Jet
  77th Ftr Sq, Jet
  79th Ftr Sq, Jet
 20th Maint & Supply Gp, Hq
  20th Maint Sq, Ftr, Jet
  20th Supply Sq, Ftr, Jet
  20th Motor Vehicle Sq, Ftr, Jet
 20th Air Base Gp, Hq & Hq Sq
  20th Comm Sq, Ftr, Jet
  20th Air Police Sq, Ftr, Jet
  20th Food Service Sq, Ftr, Jet
  20th Installations Sq, Ftr, Jet
  20th Base Service Sq, Ftr, Jet
  20th Finance Disbursing Unit, Ftr, Jet
 20th Medical Gp
606th AC&W Sq (502d Tac Control Gp)
*30th Motor Transport Sq, Avn
2d Armament Sq, Chemical

SMYRNA AFB, Smyrna, Tenn.
314th Tr Carr Wg, Medium, Hq & Hq Sq
 314th Tr Carr Gp, Medium, Hq
  20th Tr Carr Sq, Medium
  334th Tr Carr Sq, Medium
 314th Maint & Supply Gp, Hq
  314th Maint Sq, Tr Carr, Medium
  314th Supply Sq, Tr Carr, Medium
  314th Motor Vehicle Sq, Tr Carr, Medium
 314th Air Base Gp, Hq & Hq Sq
  314th Comm Sq, Tr Carr, Medium
  314th Air Police Sq, Tr Carr, Medium
  314th Food Service Sq, Tr Carr, Medium
  314th Installations Sq, Tr Carr, Medium
  314th Base Service Sq, Tr Carr, Medium
  314th Finance Disbursing Unit, Tr Carr, Medium
  314th Medical Gp

UNITS OF OTHER COMMANDS
ON ConAC STATIONS

POPE AFB, Fort Bragg, N.C.
1113 SAM Sq (Hq Comd, USAF)
1913-1 AACS Det, 1913th AACS Sq (AACS)(MATS)
25-7 Wea Det, 25th Wea Sq (AWS)(MATS)
Hq Sq Flt Sect Det, Air Rescue Service (ARS)(MATS)
Flt C, 5th Rescue Sq (ARS)(MATS)

SHAW AFB, Sumter, S.C.
1924-2 AACS Det, 1924th AACS Sq (AACS)(MATS)
25-9 Wea Det, 25th Wea Sq (AWS)(MATS)

SMYRNA AFB, Smyrna, Tenn.
1922-4 AACS Det, 1922d AACS Sq (AACS)(MATS)
26-9 Wea Det, 26th Wea Sq (AWS)(MATS)

* Negro Personnel

FOURTEENTH AIR FORCE (contd)

UNITS AND INSTALLATIONS

TURNER AFB, Albany, Ga.

- 31st Ftr Wg, Hq & Hq Sq
  - 31st Ftr Gp Hq
    - 307th Ftr Sq, Jet
    - 308th Ftr Sq, Jet
    - 309th Ftr Sq, Jet
  - 31st Maint & Supply Gp, Hq
    - 31st Maint Sq, Ftr, Jet
    - 31st Supply Sq, Ftr, Jet
    - 31st Motor Vehicle Sq, Ftr, Jet
  - 31st Air Base Gp, Hq & Hq Sq
    - 31st Comm Sq, Ftr, Jet
    - 31st Air Police Sq, Ftr, Jet
    - 31st Food Service Sq, Ftr, Jet
    - 31st Installations Sq, Ftr, Jet
    - 31st Base Service Sq, Ftr, Jet
    - 31st Finance Disbursing Unit, Ftr, Jet
  - 31st Medical Gp
- 607th AC&W Sq (502d Tac Control Gp)

UNITS OF OTHER COMMANDS ON ConAC STATIONS

TURNER AFB, Albany, Ga.

- 1926-2 AACS Det, 1926th AACS Sq (AACS)(MATS)
- 25-10 Wea Det, 25th Wea Sq (AWS)(MATS)

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NUMERICAL LIST CONTINENTAL AIR COMMAND UNITS

UNIT	STATION	AIR FORCE
1st Ftr Wg, Hq & Hq Sq	March AFB, Calif.	Fourth
1st Ftr Gp, Hq	March AFB, Calif.	Fourth
1st Maint & Supply Gp, Hq	March AFB, Calif.	Fourth
1st Maint Sq, Ftr, Jet	March AFB, Calif.	Fourth
1st Supply Sq, Ftr, Jet	March AFB, Calif.	Fourth
1st Motor Vehicle Sq, Ftr, Jet	March AFB, Calif.	Fourth
1st Air Base Gp, Hq & Hq Sq	March AFB, Calif.	Fourth
1st Comm Sq, Ftr, Jet	March AFB, Calif.	Fourth
1st Air Police Sq, Ftr, Jet	March AFB, Calif.	Fourth
1st Food Service Sq, Ftr, Jet	March AFB, Calif.	Fourth
1st Installations Sq, Ftr, Jet	March AFB, Calif.	Fourth
1st Base Service Sq, Ftr, Jet	March AFB, Calif.	Fourth
1st Finance Disb. Unit, Ftr, Jet	March AFB, Calif.	Fourth
1st Medical Gp.	March AFB, Calif.	Fourth
1st Depot Unit, Army	Camp Hood, Texas (Army)	Twelfth
1st Shoran Beacon Unit	Barksdale AFB, La.	Twelfth
1st Tow Target Sq	Biggs AFB, Texas (SAC)	Twelfth
1st Vet Det, Avn (DA)	Greenville AFB, S. C.	Fourteenth
2d Armament Sq, Chemical	Shaw AFB, S. C.	Fourteenth
2d Ftr Sq, All Wea	Mitchel AFB, N. Y.	First
3d Depot Unit, A (Type A)	Godman AFB, Ky.	Ninth
4th Ftr Wg, Hq & Hq Sq	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Ftr Gp, Hq	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Maint & Supply Gp, Hq	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Maint Sq, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Supply Sq, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Motor Vehicle Sq, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Air Base Gp, Hq & Hq Sq	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Comm Sq, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Air Police Sq, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Food Service Sq, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Installations Sq, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Base Service Sq, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Finance Disb. Unit, Ftr, Jet	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Medical Gp	Andrews AFB, Wash., D.C. (MATS)	Ninth
4th Depot Unit, Army	Ft. Lewis, Wash. (Army)	Fourth
4th Photo Tech Sq	Langley AFB, Va.	Ninth
4th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
5th Depot Unit, Army	Pope AFB, N. C.	Fourteenth
5th Ftr Sq, All Wea	Mitchel AFB, N. Y.	First
5th Radar Calib Det	Greenville AFB, S. C.	Fourteenth
7th Radar Calib Det	Orlando AFB, Fla.	Fourteenth
7th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
8th Depot Unit, Army	Post Field, Ft. Sill, Okla.	Twelfth
8th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
11th Radar Calib Det	McChord AFB, Wash.	Fourth
12th Photo Tech Unit	Greenville AFB, S. C.	Fourteenth
12th Radar Calib Det	Mitchel AFB, N. Y.	First

UNIT	STATION	AIR FORCE
14th Ftr Wg, Hq & Hq Sq	Dow AFB, Maine	First
14th Ftr Gp, Hq	Dow AFB, Maine	First
14th Maint & Supply Gp, Hq	Dow AFB, Maine	First
14th Maint Sq, Ftr, Jet	Dow AFB, Maine	First
14th Supply Sq, Ftr, Jet	Dow AFB, Maine	First
14th Motor Vehicle Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Base Gp, Hq & Hq Sq	Dow AFB, Maine	First
14th Comm Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Police Sq, Ftr, Jet	Dow AFB, Maine	First
14th Food Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Installations Sq, Ftr, Jet	Dow AFB, Maine	First
14th Base Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Finance Disb. Unit, Ftr, Jet	Dow AFB, Maine	First
14th Medical Gp	Dow AFB, Maine	First
20th Ftr Wg, Hq & Hq Sq	Shaw AFB, S. C.	Fourteenth
20th Ftr Gp, Hq	Shaw AFB, S. C.	Fourteenth
20th Maint & Supply Gp, Hq	Shaw AFB, S. C.	Fourteenth
20th Maint Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Supply Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Motor Vehicle Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Air Base Gp, Hq & Hq Sq	Shaw AFB, S. C.	Fourteenth
20th Comm Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Air Police Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Food Service Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Installations Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Base Service Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Finance Disb. Unit, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Medical Gp	Shaw AFB, S. C.	Fourteenth
20th Tr Carr Sq, Med	Smyrna AFB, Tenn.	Fourteenth
22d Sig Radar Maint Unit (Type A)(DA) (No personnel assigned)	Ft. Slocum, N. Y.	First
25th Air Defense Division, Hq & Hq Sq (Mailing Address: Gen. Delivery, Everett, Washington)	Silver Lake, Wash.	ADC
26th Air Defense Division, Hq & Hq Sq	Mitchel AFB, N. Y.	ADC
27th Ftr Sq, Jet	March AFB, Calif.	Fourth
28th Comm Sq, Air Force	Mitchel AFB, N. Y.	ConAC
29th Comm Sq, AF	Langley AFB, Va.	Ninth
30th Motor Transport Sq, Avn.	Shaw AFB, S. C.	Fourteenth
31st Ftr Wg, Hq & Hq Sq	Turner AFB, Ga.	Fourteenth
31st Ftr Gp, Hq	Turner AFB, Ga.	Fourteenth
31st Maint & Supply Gp, Hq	Turner AFB, Ga.	Fourteenth
31st Maint Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Supply Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Motor Vehicle Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Air Base Gp, Hq & Hq Sq	Turner AFB, Ga.	Fourteenth
31st Comm Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Air Police Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Food Service Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Installations Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Base Service Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth

UNIT	STATION	AIR FORCE
31st Finance Disb. Unit, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Medical Gp	Turner AFB, Ga.	Fourteenth
*31st Motor Transport Sq, Avn	March Afb, Calif.	Fourth
33d Ftr Wg, Hq & Hq Sq	Otis AFB, Mass.	First
33d Ftr Gp, Hq	Otis AFB, Mass.	First
33d Maint & Supply Gp, Hq	Otis AFB, Mass.	First
33d Maint Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Supply Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Motor Vehicle Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Air Base Gp, Hq & Hq Sq	Otis AFB, Mass.	First
33d Comm Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Air Police Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Food Service Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Installations Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Base Service Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Finance Disb. Unit, Ftr, Jet	Otis AFB, Mass.	First
33d Medical Gp	Otis AFB, Mass.	First
34th Comm Sq, Command	Ft. Slocum, N.Y.	First
35th Comm Sq, Command	Hamilton AFB, Calif.	Fourth
36th Comm Sq, Command	Ft. Benjamin Harrison, Ind.	Tenth
36th Tr Carr Sq, Med	Greenville AFB, S.C.	Fourteenth
37th Comm Sq, Command	Orlando AFB, Fla.	Fourttenth
37th Ftr Sq, Jet	Dow AFB, Maine	First
37th Tr Carr Sq, Med	Greenville AFB, S.C.	Fourteenth
47th Bomb Wg, Lt, Hq & Hq Sq	Barksdale AFB, La.	Twelfth
47th Bomb Gp, Lt, Hq	Barksdale AFB, La.	Twelfth
47th Maint & Supply Gp, Hq	Barksdale AFB, La.	Twelfth
47th Maint Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Supply Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Motor Vehicle Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Air Base Gp, Hq & Hq Sq	Barksdale AFB, La.	Twelfth
47th Comm Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Food Service Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Air Police Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Installations Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Base Service Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Finance Disb. Unit, Bomb,Lt,Jet	Barksdale AFB, La.	Twelfth
47th Medical Gp	Barksdale AFB, La.	Twelfth
48th Ftr Sq, Jet	Dow AFB, Maine	First
49th Ftr Sq, Jet	Dow AFB, Maine	First
52d Ftr Wg, Hq & Hq Sq	Mitchel AFB, N.Y.	First
52d Ftr Gp, Hq	Mitchel AFB, N.Y.	First
52d Maint & Supply Gp, Hq	Mitchel AFB, N.Y.	First
52d Maint Sq, Ftr, All Wea	Mitchel AFB, N.Y.	First
52d Supply Sq, Ftr, All Wea	Mitchel AFB, N.Y.	First
52d Motor Vehicle Sq, Ftr, All Wea	Mitchel AFB, N.Y.	First
52d Air Base Gp, Hq & Hq Sq	Mitchel AFB, N.Y.	First
52d Comm Sq, Ftr, All Wea	Mitchel AFB, N.Y.	First
52d Air Police Sq, Ftr, All Wea	Mitchel AFB, N.Y.	First
52d Food Service Sq, Ftr, All Wea	Mitchel AFB, N.Y.	First
52d Installations Sq, Ftr, All Wea	Mitchel AFB, N.Y.	First

*Negro Personnel

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UNIT	STATION	AIR FORCE
52d Base Service Sq, Ftr, All Wea	Mitchel AFB, N. Y.	First
52d Finance Disb. Unit, Ftr, All Wea	Mitchel AFB, N. Y.	First
52d Medical Gp	Mitchel AFB, N. Y.	First
55th Ftr Sq, Jet	Shaw AFB, S. C.	Fourteenth
56th Ftr Wg, Hq & Hq Sq	Selfridge AFB, Mich.	Tenth
56th Ftr Gp, Hq	Selfridge AFB, Mich.	Tenth
56th Maint & Supply Gp, Hq	Selfridge AFB, Mich.	Tenth
56th Maint Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Supply Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Motor Vehicle Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Air Base Gp, Hq & Hq Sq	Selfridge AFB, Mich.	Tenth
56th Comm Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Air Police Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Food Service Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Installations Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Base Service Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Finance Disb. Unit, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Medical Gp	Selfridge AFB, Mich.	Tenth
58th Ftr Sq, Jet	Otis AFB, Mass.	First
59th Ftr Sq, Jet	Otis AFB, Mass.	First
60th Ftr Sq, Jet	Otis AFB, Mass.	First
61st Ftr Sq, Jet	Selfridge AFB, Mich.	Tenth
62d Ftr Sq, Jet	Selfridge AFB, Mich.	Tenth
62d Tr Carr Wg, Med, Hq & Hq Sq	McChord AFB, Wash.	Fourth
62d Tr Carr Gp, Med, Hq	McChord AFB, Wash.	Fourth
62d Maint & Supply Gp, Hq	McChord AFB, Wash.	Fourth
62d Maint Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Supply Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Motor Vehicle Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Air Base Gp, Hq & Hq Sq	McChord AFB, Wash.	Fourth
62d Comm Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Air Police Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Food Service Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Installations Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Base Service Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Finance Disb. Unit, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Medical Gp	McChord AFB, Wash.	Fourth
63d Ftr Sq, Jet	Selfridge AFB, Mich.	Tenth
71st Ftr Sq, Jet	March AFB, Calif.	Fourth
75th Tr Carr Sq, Med	Greenville AFB, S. C.	Fourteenth
77th Ftr Sq, Jet	Shaw AFB, S. C.	Fourteenth
78th Ftr Wg, Hq & Hq Sq	Hamilton AFB, Calif.	Fourth
78th Ftr Gp, Hq	Hamilton AFB, Calif.	Fourth
78th Maint & Supply Gp, Hq	Hamilton AFB, Calif.	Fourth
78th Maint Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Supply Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Motor Vehicle Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Air Base Gp, Hq & Hq Sq	Hamilton AFB, Calif.	Fourth
78th Comm Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Air Police Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Food Service Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Installations Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth

UNIT	STATION	AIR FORCE
78th Base Service Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Finance Disb. Unit, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Medical Gp	Hamilton AFB, Calif.	Fourth
79th Ftr Sq, Jet	Shaw AFB, S.C.	Fourteenth
82d Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
83d Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
84th Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
84th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
85th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
86th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
94th Ftr Sq, Jet	March AFB, Calif.	Fourth
*99th Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
*100th Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
136th Radio Security Sq, Radio Security Det B (USAF Unit attached to Fourth AF)	Daly City, Calif.	Fourth
160th Tac Recon Sq, Photo-Jet	Langley AFB, Va.	Ninth
161st Tac Recon Sq, Photo-Jet	Langley AFB, Va.	Ninth
162d Tac Recon Sq, Night-Photo	Langley AFB, Va.	Ninth
256th Med Dispensary Unit, Avn(DA)	Greenville AFB, S.C.	Fourteenth
284th Sig Radar Maint Unit(Type G) (DA)(No personnel assigned)	Ft. Slocum, N.Y.	First
*301st Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
307th Ftr Sq, Jet	Turner AFB, Ga	Fourteenth
308th Ftr Sq, Jet	Turner AFB, Ga	Fourteenth
309th Ftr Sq, Jet	Turner AFB, Ga	Fourteenth
314th Tr Carr Wg, Med, Hq & Hq Sq	Smyrna AFB, Tenn.	Fourteenth
314th Tr Carr Gp, Med, Hq	Smyrna AFB, Tenn.	Fourteenth
314th Maint & Supply Gp, Hq	Smyrna AFB, Tenn.	Fourteenth
314th Maint Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Supply Sq, Tr Carr, Med.	Smyrna AFB, Tenn.	Fourteenth
314th Motor Vehicle Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Air Base Gp, Hq & Hq Sq	Smyrna AFB, Tenn.	Fourteenth
314th Comm Sq, Tr Carr, Med.	Smyrna AFB, Tenn.	Fourteenth
314th Air Police Sq, Tr Carr, Med	Smryna AFB, Tenn.	Fourteenth
314th Food Service Sq, Tr Carr. Med	Smyrna AFB, Tenn.	Fourteenth
314th Installations Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Base Service Sq, Tr Carr.Med	Smyrna AFB, Tenn.	Fourteenth
314th Finance Disb. Unit,Tr Carr.Med	Smyrna AFB, Tenn.	Fourteenth
314th Medical Gp	Smyrna AFB, Tenn.	Fourteenth
316th Tr Carr Wg,Med,Hq & Hq Sq	Greenville AFB, S.C.	Fourteenth
316th Tr Carr Gp, Med, Hq	Greenville AFB, S.C.	Fourteenth
316th Maint & Supply Gp, Hq	Greenville AFB, S.C.	Fourteenth
316th Maint Sq, Tr Carr, Med	Greenville AFB, S.C.	Fourteenth
316th Supply Sq, Tr Carr, Med	Greenville AFB, S.C.	Fourteenth
316th Motor Vehicle Sq, Tr Carr,Med	Greenville AFB, S.C.	Fourteenth
316th Air Base Gp, Hq & Hq Sq	Greenville AFB, S.C.	Fourteenth
316th Comm Sq, Tr Carr, Med	Greenville AFB, S.C.	Fourteenth
316th Air Police Sq,Tr Carr,Med.	Greenville AFB, S.C.	Fourteenth
316th Food Service Sq,Tr Carr,Med	Greenville AFB, S.C.	Fourteenth
316th Installations Sq, Tr Carr,Med	Greenville AFB, S.C.	Fourteenth

*Negro Personnel

UNIT	STATION	AIR FORCE
316th Base Service Sq, Tr Carr, Med	Greenville AFB, S.C.	Fourteenth
316th Finance Disb. Unit, Tr Carr Med	Greenville AFB, S.C.	Fourteenth
316th Medical Gp	Greenville AFB, S.C.	Fourteenth
317th Ftr Sq, All Wea	Moses Lake AFB, Wash.	Fourth
318th Ftr Sq, All Wea(325th Ftr Gp)	McChord AFB, Wash.	Fourth
325th Ftr Wg, Hq & Hq Sq	Moses Lake AFB, Wash.	Fourth
325th Ftr Gp, Hq	Moses Lake AFB, Wash.	Fourth
325th Maint & Supply Gp, Hq	Moses Lake AFB, Wash.	Fourth
325th Maint Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Supply Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Motor Vehicle Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Air Base Gp, Hq & Hq Sq	Moses Lake AFB, Wash.	Fourth
325th Comm Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Food Service Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Installations Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Base Sv Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Finance Disb.Unit,Ftr,All Wea	Moses Lake AFB, Wash.	Fourth
325th Medical Gp	Moses Lake AFB, Wash.	Fourth
*332d Ftr Wg, Hq & Hq Sq	Lockbourne AFB, Ohio	Ninth
*332d Ftr Gp, Hq	Lockbourne AFB, Ohio	Ninth
*332d Maint & Supply Gp, Hq	Lockbourne AFB, Ohio	Ninth
*332d Maint Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Supply Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Motor Vehicle Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Air Base Gp, Hq & Hq Sq	Lockbourne AFB, Ohio	Ninth
*332d Comm Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Air Police Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Food Service Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Installations Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Base Service Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Finance Disb. Unit, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Medical Gp	Lockbourne AFB, Ohio	Ninth
334th Ftr Sq, Jet	Andrews AFB, Wash.,D.C.(MATS)	Ninth
334th Tr Carr Sq, Med	Smyrna AFB, Tenn.	Fourteenth
335th Ftr Sq, Jet	Andrews AFB, Wash.,D.C.(MATS)	Ninth
336th Ftr Sq, Jet	Andrews AFB, Wash.,D.C.(MATS)	Ninth
363d Tac Recon Wg, Hq & Hq Sq	Langley AFB, Va.	Ninth
363d Tac Recon Gp, Hq	Langley AFB, Va.	Ninth
363d Maint & Supply Gp, Hq	Langley AFB, Va.	Ninth
363d Maint Sq, Tac Recon	Langley AFB, Va.	Ninth
363d Supply Sq, Tac Recon	Langley AFB, Va.	Ninth
363d Motor Vehicle Sq, Tac Recon	Langley AFB, Va.	Ninth
363d Air Base Gp, Hq & Hq Sq	Langley AFB, Va.	Ninth
363d Comm Sq. Tac Recon	Langley AFB, Va.	Ninth
363d Air Police Sq, Tac Recon	Langley AFB, Va.	Ninth
363d Food Service Sq, Tac Recon	Langley AFB, Va.	Ninth
363d Installations Sq, Tac Recon	Langley AFB, Va.	Ninth
363d Base Service Sq, Tac Recon	Langley AFB, Va.	Ninth
363d Finance Disb. Unit, Tac Recon	Langley AFB, Va.	Ninth
363d Medical Gp	Langley AFB, Va.	Ninth

*Negro Personnel

UNIT	STATION	AIR FORCE
*449th Sig Heavy Const Bn, Avn (DA)	Lockbourne AFB, Ohio	Ninth
502d Tac Control Gp, Hq	Greenville AFB, S. C.	Fourteenth
503d AC & W Gp, Hq	Roslyn, N. Y.	First
505th AC & W Gp, Hq	McChord AFB, Wash.	Fourth
531st AC & W Gp, Hq	McChord AFB, Wash.	Fourth
539th AC & W Gp, Hq	Orlando AFB, Fla.	Fourteenth
564th AF Band	Langley AFB, Va.	Ninth
573d AF Band	Hamilton AFB, Calif.	Fourth
579th AF Band	Brooks AFB, Texas	Twelfth
581st AF Band	Mitchel AFB, N. Y.	First
605th Tac Control Sq	Greenville AFB, S. C.	Fourteenth
606th AC & W Sq (502d Tac Control Gp)	Shaw AFB, S. C.	Fourteenth
607th AC & W Sq (502d Tac Control Gp)	Turner AFB, Ga.	Fourteenth
622d Engr Maint Co (Avn)	March AFB, Calif.	Fourth
626th AC & W Sq	McChord AFB, Wash.	Fourth
632d AC & W Sq	McChord AFB, Wash.	Fourth
634th AC Sq	Everett, Wash.	Fourth
(Mailing Address: General Delivery,	Everett, Wash.)	
635th AC & W Sq	McChord AFB, Wash.	Fourth
636th AC & W Sq	Kirtland AFB, N. M. (AMC)	Twelfth
637th AC & W Sq (505th AC & W Gp)	Moses Lake AFB, Wash.	Fourth
645th AC Sq	Selfridge AFB, Mich.	Tenth
646th AC & W Sq	Roslyn, N. Y.	First
647th AC & W Sq	Grenier AFB, N. H.	First
648th AC & W Sq	Pine Camp, N. Y.	First
649th AC Sq	Orlando AFB, Fla.	Fourteenth
650th AC & W Sq	Orlando AFB, Fla.	Fourteenth
651st AC & W Sq	Orlando AFB, Fla.	Fourteenth
652d AC & W Sq	Orlando AFB, Fla.	Fourteenth
679th AF Band	Ft. Slocum, N. Y.	First
691st AF Band	Ft. Benjamin Harrison, Ind.	Tenth
722d AF Band	Greenville AFB, S. C.	Fourteenth
*768th AF Band	Lockbourne AFB, Ohio	Ninth
769th AF Band	Orlando AFB, Fla.	Fourteenth
*770th AF Band	Lockbourne AFB, Ohio	Ninth
817th Engr Avn Bn (DA)	March AFB, Calif.	Fourth
*837th Engr Avn Bn (DA)	Langley AFB, Va.	Ninth
924th Engr Avn Gp, Hq&Hq & Sv Co (DA)	March AFB, Calif.	Fourth
934th Sig Bn (Separate)(Tac)	Greenville AFB, S. C.	Fourteenth
2220th Extension Gp, Hq & Hq Sq	Ft. Benjamin Harrison, Ind.	Tenth
*2221st Special Service Unit	Lockbourne AFB, Ohio	Ninth
*2222d Special Service WAF Unit	Lockbourne AFB, Ohio	Ninth
2225th AFORD	Camp Kilmer, N. J.	First
2226th Air Base Gp, Hq & Hq Sq	Ft. Slocum, N. Y.	First
2226th Base Service Sq	Ft. Slocum, N. Y.	First
2226th Assembly & Processing Sq	Ft. Slocum, N. Y.	First
2227th AFRTC	Westover AFB, Mass. (MATS)	First
2228th AFRTC	Dow AFB, Maine	First
2229th AFRTC	Griffiss AFB, N. Y. (AMC)	First
2230th AFRTC	Mitchel AFB, N. Y.	First
2231st AFRTC	Newark Mun Apt., N. J.	First
2232d AFRTC	Steward Field, N. Y.	First

*Negro personnel

UNIT	STATION	AIR FORCE
2234th AFRTC	Hanscom Apt, Bedford, Mass	First
2235th AFRTC	Byrd Fld, Richmond, Va.	Ninth
2236th AFRTC	Godman AFB, Ky.	Ninth
2237th AFRTC	Reading Mun Apt, Pa.	Ninth
2238th AFRTC	Andrews AFB, Wash., D. C.(MATS)	Ninth
2239th AFRTC	Greater Pittsburgh Apt, Pa.	Ninth
2240th AFRTC	Cleveland Mun Apt, Ohio (AMC)	Ninth
2242d AFRTC	Selfridge AFB, Mich.	Tenth
2243d WAF Sq	Mitchel AFB, N. Y.	First
*2244th Avn Sq	Mitchel AFB, N. Y.	First
2344th AFRTC	Hill AFB, Utah, (AMC)	Fourth
2345th AFRTC	McChord AFB, Wash.	Fourth
2346th AFRTC	Hamilton AFB, Calif.	Fourth
2347th AFRTC	Long Beach Mun Apt, Calif.	Fourth
2348th AFRTC	Davis-Monthan AFB, Ariz. (SAC)	Fourth
2349th AFORD	Hamilton AFB, Calif.	Fourth
2349th AFORD, Det	San Francisco POE, Calif.(Army)	Fourth
2349th AFORD, Det	Seattle POE, Seattle, Wash.(Army)	Fourth
2351st WAF Sq	Hamilton AFB, Calif.	Fourth
*2352d Avn Sq	Hamilton AFB, Calif.	Fourth
2463d Air Base Gp, Hq & Hq Sq	Ft. Benjamin Harrison, Ind.	Tenth
2463d Maint & Supply Sq	Ft. Benjamin Harrison, Ind.	Tenth
2463 Base Service Sq	Ft. Benjamin Harrison, Ind.	Tenth
2463d Medical Sq	Ft. Benjamin Harrison, Ind.	Tenth
2464th AFRTC	Chanute AFB, Ill. (AFTRC)	Tenth
2465th AFRTC	Wold-Chamberlain Fld, Minn.	Tenth
2466th AFRTC	Stout Field, Ind.	Tenth
2467th AFRTC	Baer Field, Ft. Wayne, Ind.	Tenth
2468th AFRTC	Lowry AFB, Colo. (AFTRC)	Tenth
2469th AFRTC	Scott AFB, Ill. (AFRTC)	Tenth
2470th AFRTC	Sioux City Mun Apt, Iowa	Tenth
2471st AFRTC	Chicago-Orchard Apt, Ill.	Tenth
2472d AFRTC	Fairfax Fld, Kan.	Tenth
2473d AFRTC	Offutt AFB, Neb. (SAC)	Tenth
2475th WAF Sq	Ft. Benjamin Harrison, Ind.	Tenth
2476th Base Service Sq	Oscoda AFB, Mich.	Tenth
2582d AFRTC	MacDill AFB, Fla. (SAC)	Fourteenth
2583d Air Base Gp, Hq & Hq Sq	Orlando AFB, Fla.	Fourteenth
2583d Base Service Sq	Orlando AFB, Fla.	Fourteenth
2583d Opns Sq	Orlando AFB, Fla.	Fourteenth
2583d Maint & Sup Sq	Orlando AFB, Fla.	Fourteenth
2583d Assembly Sq	Orlando AFB, Fla.	Fourteenth
2583d Med Sq	Orlando AFB, Fla.	Fourteenth
2584th AFRTC	Memphis Mun Apt, Tenn.	Fourteenth
2585th AFRTC	Miami International Apt, Fla.	Fourteenth
2586th AFRTC	Gunter AFB, Montgomery, Ala.(AU)	Fourteenth
2587th AFRTC	Birmingham Mun Apt, Ala.	Fourteenth
2588th AFRTC	Hawkins Fld, Jackson, Miss.	Fourteenth
2589th AFRTC	Marietta AFB, Ga.	Fourteenth
2590th AFRTC	Barksdale AFB, La.	Twelfth
2591st AFRTC	Ellington AFB, Texas	Twelfth

*Negro personnel

UNIT	STATION	AIR FORCE
2592d AFRTC	Tinker AFB, Okla, (AMC)	Twelfth
2593d AFRTC	Brooks AFB, Texas	Twelfth
2594th AFORD	Camp LeRoy Johnson, La.(Army)	Twelfth
2595th Air Base Gp, Hq & Hq Sq	Brooks AFB, Texas	Twelfth
2595th Base Service Sq	Brooks AFB, Texas	Twelfth
2595th Maint & Supply Sq	Brooks AFB, Texas	Twelfth
2595th Opns Sq	Brooks AFB, Texas	Twelfth
2595th Medical Sq	Brooks AFB, Texas	Twelfth
2596th AFRTC	Hensley Field, Texas	Twelfth
*2598th Avn Sq	Orlando AFB, Fla.	Fourteenth
*2599th Avn Sq	Brooks AFB, Texas	Twelfth
2600th Air Base Sq	Pope AFB, N. C.	Fourteenth
4400th Air Base Gp, Hq & Hq Sq	Stewart Fld, N.Y.	First
4401st Maint & Supply Sq	Stewart Fld, N.Y.	First
4402d Air Installation Sq	Stewart Fld, N.Y.	First
4403d Station Medical Sq	Stewart Fld, N.Y.	First
4404th Standby Base Sq	Dover AFB, Del. (Inactive)	Ninth
4405th Air Base Sq	Sherman AFB, Kans.	Tenth
4406th Air Base Sq	Marshall AFB, Kans.	Tenth
4408th Air Base Sq	Lawson AFB, Ft. Benning, Ga.	Fourteenth
4409th Standby Base Sq	Moody AFB, Ga.	Fourteenth
4410th Bomb Disposal Unit	Greenville AFB, S. C.	Fourteenth
4411th WAF Sq	Greenville AFB, S. C.	Fourteenth
4412th WAF Sq	Langley AFB, Va.	Ninth
*4413th WAF	Lockbourne AFB, Ohio	Ninth
4414th Air Base Sq	Bergstrom AFB, Texas	Twelfth
4415th Liaison Flt	Langley AFB, Va.	Ninth

*Negro Personnel

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Craig	8 April '49	19 April 1949 no			
Lt King by Col J M Scott	21 April '49	28 Apr 49			
[illegible] MC61	SEE 2A	SEE 2A			

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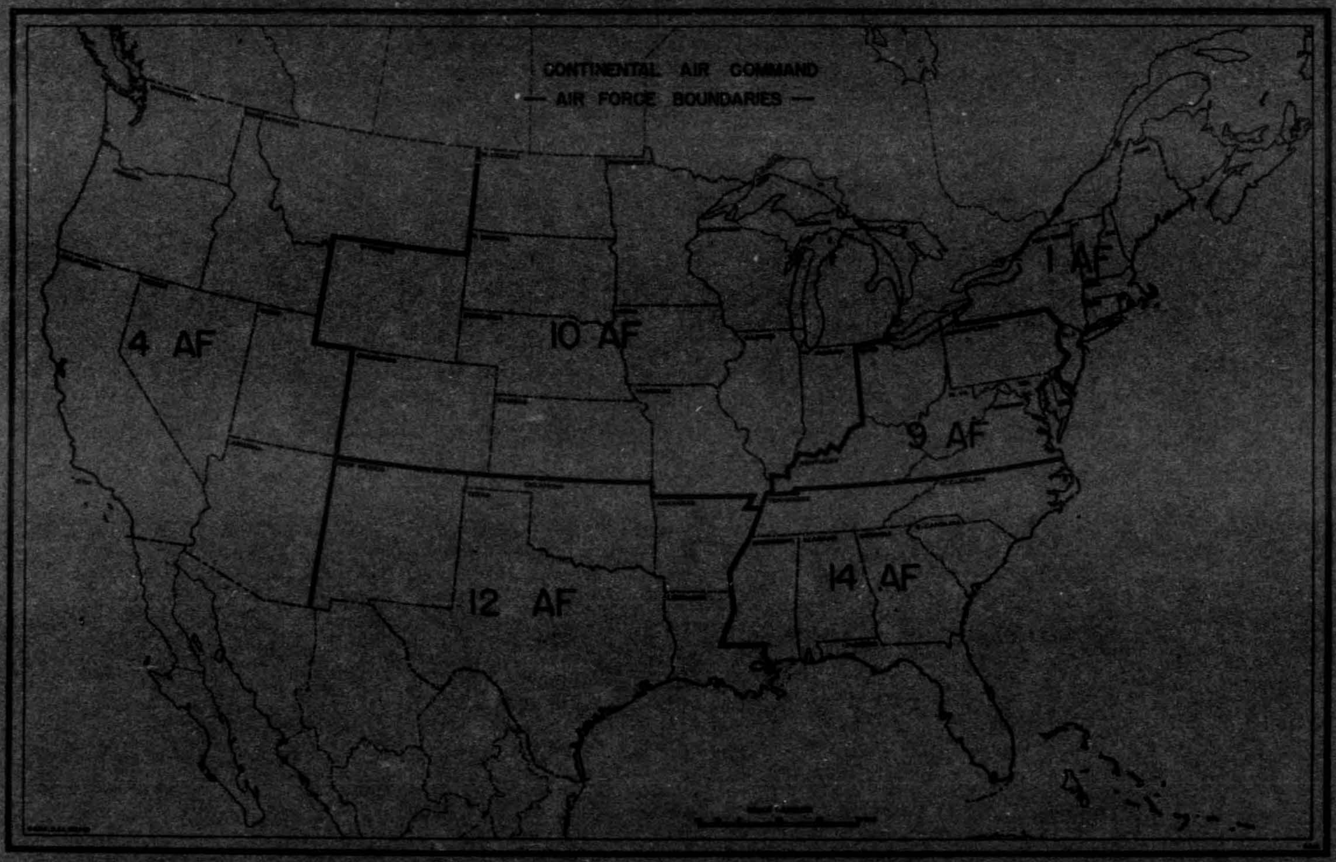

CONTINENTAL AIR COMMAND

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CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

DIRECTORY
of
UNITS AND INSTALLATIONS

SUPPLEMENT

Page numbers and effective dates listed below are for the purpose of providing a means to verify and insure that copies of ConAC Directory of Units and Installations are current:

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FIRST AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

MITCHEL AFB, N. Y.

- #Continental Air Command, Hq & Hq Sq
  - 28th Comm Sq, Air Force
- #Air Defense Command, Hq & Hq Sq
- 52d Ftr Wg, Hq & Hq Sq
  - 52d Ftr Gp, Hq
    - 2d Ftr Sq, All Wea
    - 5th Ftr Sq, All Wea
  - 52d Maint & Supply Gp, Hq
    - 52d Maint Sq, Ftr, All Wea
    - 52d Supply Sq, Ftr, All Wea
    - 52d Motor Vehicle Sq, Ftr, All Wea
  - 52d Air Base Gp, Hq & Hq Sq
    - 52d Comm Sq, Ftr, All Wea
    - 52d Air Police Sq, Ftr, All Wea
    - 52d Food Service Sq, Ftr, All Wea
    - 52d Installations Sq, Ftr, All Wea
    - 52d Base Service Sq, Ftr, All Wea
    - 52d Finance Disbursing Unit, Ftr, All Wea
  - 52d Medical Gp
- 12th Radar Calib Det
- 581st AF Band
- 2230th AFRTC
- 2243d WAF Sq
- *2244th Avn Sq

NEWARK MUN APT, Newark, N. J.

- 2231st AFRTC

OTIS AFB, Falmouth, Mass.

- 33d Ftr Wg, Hq & Hq Sq
  - 33d Ftr Gp, Hq
    - 58th Ftr Sq, Jet
    - 59th Ftr Sq, Jet
    - 60th Ftr Sq, Jet
  - 33d Maint & Supply Gp, Hq
    - 33d Maint Sq, Ftr, Jet
    - 33d Supply Sq, Ftr, Jet
    - 33d Motor Vehicle Sq, Ftr, Jet
  - 33d Air Base Gp, Hq & Hq Sq
    - 33d Comm Sq, Ftr, Jet
    - 33d Air Police Sq, Ftr, Jet
    - 33d Food Service Sq, Ftr, Jet
    - 33d Installations Sq, Ftr, Jet
    - 33d Base Service Sq, Ftr, Jet
    - 33d Finance Disbursing Unit, Ftr, Jet
  - 33d Medical Gp

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

MITCHEL AFB, N. Y.

- 2102d Wea Gp, Hq & Hq Sq (AWS)(MATS)
- 12th Wea Sq,(AWS)(MATS)
- 1112th SAM Sq (Hq Comd, USAF)
- 1802d AACS Gp, Hq & Hq Sq (AACS)(MATS)
- 1916th AACS Sq (AACS)(MATS)
- 12-10 Wea Det, 12 Wea Sq, (AWS)(MATS)
- 2059-4 Wea Det, 2059th Wea Sq (AWS)(MATS)

NEWARK MUN APT, Newark, N. J.

- 12-11 Wea Det, 12 Wea Sq (AWS)(MATS)

OTIS AFB, Falmouth, Mass.

- 12-24 Wea Det, 12th Wea Sq (AWS)(MATS)
- 1917-2 AACS Det, 1917th AACS Sq (AACS) (MATS)

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Asgd to ConAC
* Negro Personnel

Revised 1 May 1949

FIRST AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

PINE CAMP, Great Bend, N. Y. (Army)
648th AC&W Sq (503d AC&W Gp)

ROSLYN, N. Y. (Sub-base, Mitchel AFB)
I28th Air Defense Division, Hq & Hq Sq
  503d AC&W Gp, Hq
    Det 1 & 2, 645th AC Sq
    646th AC&W Sq
    Det 1 & 2, 647th AC&W Sq
    Det 2 & 3, 648th AC&W Sq
  672d AC&W Sq (503d AC&W Gp)
    Det 1, 2 & 3, 672d AC&W Sq

STEWART FIELD, Newburgh, N. Y.
2232d AFRTC
4400th Air Base Gp, Hq & Hq Sq
  4401st Maint & Supply Sq
  4402d Air Installation Sq
  4403d Station Medical Sq

WESTOVER AFB, Westover Fld, Mass. (MATS)
2227th AFRTC

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

STEWART FIELD, Newburgh, N. Y.
12-15 Wea Det, 12 Wea Sq, (AWS) (MATS)
1916-3 AACS Det, 1916th AACS Sq (AACS)
(MATS)

I Asgd Air Defense Command

FOURTH AIR FORCE

UNITS AND INSTALLATIONS

DAVIS-MONTHAN AFB, Tucson, Ariz. (SAC)
2348th AFRTC

EVERETT, Wash.
(Mailing Address: Gen Del, Everett, Wash.)
634th AC Sq (505th AC&W Gp)

FORT LEWIS, Wash. (Army)
4th Depot Unit, Army

HAMILTON AFB, Hamilton, Calif.
Fourth Air Force, Hq & Hq Sq
- 35th Comm Sq, Command
- 78th Ftr Wg, Hq & Hq Sq
  - 78th Ftr Gp, Hq
    - 82d Ftr Sq, Jet
    - 83d Ftr Sq, Jet
    - 84th Ftr Sq, Jet
  - 78th Maint & Supply Gp, Hq
    - 78th Maint Sq, Ftr, Jet
    - 78th Supply Sq, Ftr, Jet
    - 78th Motor Vehicle Sq, Ftr, Jet
  - 78th Air Base Gp, Hq & Hq Sq
    - 78th Comm Sq, Ftr, Jet
    - 78th Air Police Sq, Ftr, Jet
    - 78th Food Service Sq, Ftr, Jet
    - 78th Installations Sq, Ftr, Jet
    - 78th Base Service Sq, Ftr, Jet
    - 78th Finance Disbursing Unit, Ftr, Jet
  - 78th Medical Gp

573d AF Band
2346th AFRTC
2349th AFORD
2351st WAF Sq
*2352d Avn Sq

HILL AFB, Hill Fld, Utah (AMC)
2344th AFRTC

LONG BEACH MUN APT, Long Beach, Calif.
2347th AFRTC

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

HAMILTON AFB, Hamilton, Calif.
1117th SAM Sq (Hq Comd, USAF)
1801st AACS Gp Hq (AACS)(MATS)
1902 AACS Sq (AACS)(MATS)
10-5 Wea Det, 5th Wea Sq (AWS)
Hamilton Flt Service Ctr (MATS)
2150th Rescue Unit (ARS)(MATS)
Flt A, 2150th Rescue Unit (ARS)(MATS)

LONG BEACH MUN APT, Long Beach, Calif.
9-20 Wea Det, 9th Wea Sq (AWS)(MATS)

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* Negro Personnel

FOURTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

MARCH AFB, Calif. (SAC)
817th Engr Avn Bn (DA)

McCHORD AFB, Wash.

- 62d Tr Carr Wg, Medium, Hq & Hq Sq
  - 62d Tr Carr Gp, Medium, Hq
    - 4th Tr Carr Sq, Medium
    - 7th Tr Carr Sq, Medium
    - 8th Tr Carr Sq, Medium
  - 62d Maint & Supply Gp, Hq
    - 62d Maint Sq, Tr Carr, Medium
    - 62d Supply Sq, Tr Carr, Medium
    - 62d Motor Vehicle Sq, Tr Carr, Medium
  - 62d Air Base Gp, Hq & Hq Sq
    - 62d Comm Sq, Tr Carr, Medium
    - 62d Air Police Sq, Tr Carr, Medium
    - 62d Food Service Sq, Tr Carr, Medium
    - 62d Installations Sq, Tr Carr, Medium
    - 62d Base Service Sq, Tr Carr, Medium
    - 62d Finance Disbursing Unit, Tr Carr, Medium
  - 62d Medical Gp
- 318th Ftr Sq, All Wea (325th Ftr Gp)
- 11th Radar Calib Det
- 505th AC&W Gp, Hq
  - 635th AC&W Sq
- 531st AC&W Gp, Hq
  - 632d AC&W Sq
- 2345th AFRTC

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

McCHORD AFB, Wash.
1905th AACS Sq (AACS)(MATS)
Flt C, 2150 Rescue Unit (ARS)(MATS)
1501-1 Det, 1501 Air Trans Gp (PACS) (MATS)
10-10 Wea Det, 10th Wea Sq (AWS)(MATS)
McChord Flt Service Ctr (MATS)

FOURTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

MOSES LAKE AFB, Moses Lake, Wash.

- 325th Ftr Wg, Hq & Hq Sq
  - 325th Ftr Gp, Hq
    - 317th Ftr Sq, All Wea
  - 325th Maint & Supply Gp, Hq
    - 325th Maint Sq, Ftr, All Wea
    - 325th Supply Sq, Ftr, All Wea
    - 325th Motor Vehicle Sq, Ftr, All Wea
  - 325th Air Base Gp, Hq & Hq Sq
    - 325th Comm Sq, Ftr, All Wea
    - 325th Air Police Sq, Ftr, All Wea
    - 325th Food Service Sq, Ftr, All Wea
    - 325th Installations Sq, Ftr, All Wea
    - 325th Base Service Sq, Ftr, All Wea
    - 325th Finance Disb. Unit, Ftr, All Wea
  - 325th Medical Gp
- 637th AC&W Sq (505th AC&W Gp)

SILVER LAKE, Wash.
(Mailing Address: Gen Del, Everett, Wash.)
‡25th Air Defense Division, Hq & Hq Sq

SAN FRANCISCO POE, Ft. Mason, Calif. (Army)
Det, 2349th AFORD

SEATTLE POE, Seattle, Wash. (Army)
Det, 2349th AFORD

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

MOSES LAKE AFB, Moses Lake, Wash.
10-7 Wea Det, 10th Wea Sq (AWS) (MATS)
1905-5 AACS Det (AACS)(MATS)

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‡ Asgd to ADC

NINTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
ANDREWS AFB, Washington 20, D. C. (USAF Comd) 2238th AFRTC	
BYRD FLD, Richmond, Va. 2235th AFRTC	BYRD FLD, Richmond, Va. 12-4 Wea Det, 12 Wea Sq (AWS)(MATS)
CLEVELAND MUN APT, Cleveland, Ohio (AMC) 2240th AFRTC	
DOVER AFB, Dover, Del. (Inactive) 4404th Standby Base Sq	
GODMAN AFB, Fort Knox, Ky. 2236th AFRTC 3d Depot Unit A (Type A)	GODMAN AFB, Fort Knox, Ky. 16-3 Wea Det, 16 Wea Sq (AWS)(MATS) 1918-4 AACS Det, 1918 AACS Sq (AACS) (MATS)
GREATER PITTSBURGH APT, Coraopolis, Pa. 2239th AFRTC	GREATER PITTSBURGH APT, Coraopolis, Pa. 12-21 Wea Det, 12 Wea Sq (AWS)(MATS) 1912-1 AACS Det, 1912 AACS Sq (AACS) (MATS)

NINTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

LANGLEY AFB, Va.

- #Tactical Air Command, Hq & Hq Sq
- Ninth Air Force, Hq & Hq Sq
  - 4th Ftr Wg, Hq & Hq Sq
    - 4th Ftr Gp, Hq
      - 334th Ftr Sq, Jet
      - 335th Ftr Sq, Jet
      - 336th Ftr Sq, Jet
    - 4th Maint & Supply Gp, Hq
      - 4th Maint Sq, Ftr, Jet
      - 4th Supply Sq, Ftr, Jet
      - 4th Motor Vehicle Sq, Ftr, Jet
    - 4th Air Base Gp, Hq & Hq Sq
      - 4th Comm Sq, Ftr, Jet
      - 4th Air Police Sq, Ftr, Jet
      - 4th Food Service Sq, Ftr, Jet
      - 4th Installations Sq, Fgr, Jet
      - 4th Base Service Sq, Ftr, Jet
      - 4th Finance Disbursing Unit, Ftr, Jet
    - 4th Medical Gp
- 363d Tac Recon Gp, Hq
  - 161st Tac Recon Sq, Photo-Jet
  - 162d Tac Recon Sq, Night Photo
- 4412th WAF Sq
- 564th AF Band
- 4th Photo Tech Sq
- 29th Comm Sq, Command
- *837th Engr Avn Battalion (DA)
- 4415th Liaison Flt

LOCKBOURNE AFB, Columbus, Ohio

- *332d Ftr Wg, Hq & Hq Sq
  - *332d Ftr Gp, Hq
    - *99th Ftr Sq, SE
    - *100th Ftr Sq, SE
    - *301st Ftr Sq, SE
  - *332d Maint & Supply Gp, Hq
    - *332d Maint Sq, Ftr, SE
    - *332d Supply Sq, Ftr, SE
    - *332d Motor Vehicle Sq, Ftr, SE
  - *332d Air Base Gp, Hq & Hq Sq
    - *332d Comm Sq, Ftr, SE
    - *332d Air Police Sq, Ftr, SE
    - *332d Installations Sq, Ftr, SE
    - *332d Food Service Sq, Ftr, SE
    - *332d Base Service Sq, Ftr, SE
    - *332d Finance Disbursing Unit, Ftr, SE
  - *332d Medical Gp

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

LANGLEY AFB, Va.

- 1913 AACS Sq (AACS)(MATS)
- 1702-2 Det, 1702 Air Trans Gp (COND) (MATS)
- 12-9 Wea Det, 12th Wea Sq (AWS)(MATS)
- 1001st IG Unit (Hq Comd, USAF)

LOCKBOURNE AFB, Columbus Ohio

- 1914-2 AACS Det, 1914th AACS Sq (AACS)(MATS)
- 12-19 Wea Det, 12th Wea Sq (AACS) (MATS)

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* Negro Personnel

NINTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

LOCKBOURNE AFB, Columbus, Ohio
*766th AF Band
*4413th WAF Sq
*449th Sig Avn Hvy Constn Bn (DA)
*770th AF Band
*2221st Special Service Unit
*2222d Special Service Unit

READING MUN APT, Reading, Pa.
2237th AFRTC

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

READING MUN APT, Reading, Pa.
12-14 Wea Det, 12th Wea Sq (AWS)
(MATS)

* Negro Personnel

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TENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
ATTERBURY AFB, Columbus Ind.(Sub-base, Stout Fld, Ind.) (No units)	
BAER FLD, Fort Wayne, Ind. 2467th AFRTC	
CHANUTE AFB, Chanute Fld, Ill. (AFTRC) 2464th AFRTC	
CHICAGO-ORCHARD APT, Park Ridge, Ill. 2471st AFRTC	CHICAGO-ORCHARD APT, Ill. 16-4 Wea Det, 16th Wea Sq, (AWS)(MATS) 1114th SAM Sq (Hq Comd, USAF) Det 2750 AFB Hq & Hq Sq (Air Museum)(AMC)
FAIRFAX FLD, Kansas City, Kans. 2472d AFRTC	FAIRFAX FLD, Kansas City, Kans. ACFT Assy Plant #2 (AMC) 19-1 Wea Det, 19 Wea Sq (AWS) (MATS)
FORT BENJAMIN HARRISON, Ind. Tenth Air Force, Hq & Hq Sq 36th Comm Sq, Command 691st AF Band 2475th WAF Sq 2463d Air Base Gp, Hq & Hq Sq 2463d Maint & Supply Sq 2463d Base Service Sq 2463d Medical Sq #2220th Extension Gp, Hq & Hq Sq	
LOWRY AFB, Denver, Colo, (AFTRC) 2468th AFRTC	
MARSHALL AFB, Ft Riley, Kans. 4406th Air Base Sq	MARSHALL AFB, Ft Riley, Kans. 1911-2 AACS Det, 1911th AACS (MATS) 19-10 Wea Det, 19 Wea Sq (AWS)(MATS)
OFFUTT AFB, Fort Crook, Nebr. (SAC) 2473d AFRTC	
OSCODA AFB, Oscoda, Mich. (Sub-base, Selfridge AFB) 2476th Base Service Sq	

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TENTH AIR FORCE (Cont'd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
SCOTT AFB, Belleville, Ill, (AFTRC) 2469th AFRTC	
SHERMAN AFB, Ft Leavenworth, Kans. 4405th Air Base Sq	**SHERMAN AFB, Ft Leavenworth, Kans.** 1911-3 AACS Det, 1911th AACS Sq (AACS)(MATS) 19-5 Wea Det, 19th Wea Sq, (AWS)(MATS)
SELFRIDGE AFB, Selfridge Fld, Mich. 56th Ftr Wg, Hq & Hq Sq 56th Ftr Gp, Hq 61st Ftr Sq, Jet 62d Ftr Sq, Jet 63d Ftr Sq, Jet 56th Maint & Supply Gp, Hq 56th Maint Sq, Ftr, Jet 56th Supply Sq, Ftr, Jet 56th Motor Vehicle Sq, Ftr, Jet 56th Air Base Gp, Hq & Hq Sq 56th Comm Sq, Ftr, Jet 56th Air Police Sq, Ftr, Jet 56th Food Service Sq, Ftr, Jet 56th Installations Sq, Ftr, Jet 56th Base Service Sq, Ftr, Jet 56th Finance Disbursing Unit, Ftr, Jet 56th Medical Gp 645th AC&W Sq (503d AC&W Gp) Less Det 1 & 2 2242d AFRTC	**SELFRIDGE AFB, Selfridge Fld, Mich.** 1914-3 AACS Det, 1914th AACS Sq, (AACS)(MATS) Flt C, 2151st Rescue Unit, (ARS)(MATS) 16-8 Wea Det, 16 Wea Sq (AWS)(MATS)
SIOUX CITY MUN APT, Sioux City, Iowa 2470th AFRTC	
STOUT FLD, Indianapolis, Ind. 2466th AFRTC	**STOUT FLD, Indianapolis, Ind.** 1918-2 AACS Det, 1918th AACS Sq (AACS)(MATS) 16-9 Wea Det, 16 Wea Sq, (AWS)(MATS)
WOLD-CHAMBERLAIN FLD, Minneapolis, Minn. 2465th AFRTC	**WOLD-CHAMBERLAIN, Minn.** 16-6 Wea Det, 16th Wea Sq, (AWS)(MATS) 1918-1 AACS Det, 1918th AACS Sq (AACS)(MATS)

TWELFTH AIR FORCE

UNITS AND INSTALLATIONS

BARKSDALE AFB, Barksdale Fld, La (AFTRC)
- 47th Bomb Wg, Lt, Hq & Hq Sq
  - 47th Bomb Gp, Lt, Hq
    - 84th Bomb Sq, Lt, Jet
    - 85th Bomb Sq, Lt, Jet
    - 86th Bomb Sq, Lt, Jet
  - 47th Maint & Supply Gp, Hq
    - 47th Maint Sq, Bomb, Lt, Jet
    - 47th Supply Sq, Bomb, Lt,Jet
    - 47th Motor Vehicle Sq, Bomb, Lt, Jet
  - 47th Air Base Gp, Hq & Hq Sq
    - 47th Comm Sq, Bomb, Lt, Jet
    - 47th Food Service Sq, Bomb, Lt, Jet
    - 47th Air Police Sq, Bomb, Lt, Jet
    - 47th Installations Sq, Bomb, Lt, Jet
    - 47th Base Service Sq, Bomb, Lt, Jet
    - 47th Finance Disbursing Unit, Bomb, Lt, Jet
  - 47th Medical Gp
- 2590th AFRTC
- 1st Shoran Beacon Unit

BIGGS AFB, Biggs Fld, Tex. (SAC)
- 1st Tow Target Sq

BROOKS AFB, Texas
- Twelfth Air Force, Hq &Hq Sq
- 579th AF Band
- 2593d AFRTC
- 2595th Air Base Gp, Hq & Hq Sq
  - 2595th Base Service Sq
  - 2595th Maint & Supply Sq
  - 2595th Opns Sq
  - 2595th Medical Sq
- *2599th Avn Sq
- #Det B, 136th Radio Security Sq (USAF)
- 2597th AF Police Sq (Off Base)

CAMP LEROY JOHNSON, New Orleans, La. (Army)
- 2594th AFORD

CAMP HOOD, Texas (Army)
- 1st Depot Unit, Army

ELLINGTON AFB, Houston, Tex. (AFRTC)
- 2591st AFRTC

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

BROOKS AFB, Texas
- 1116th SAM Sq, (Hq Comd, USAF)
- 24-26 Wea Det, 24th Wea Sq (AWS) (MATS)
- 1923-2 AACS Det, 1923 AACS Sq (AACS) (MATS)
- 8th Radio Sq, Mobile (USAF)
- 136th Radio Security Sq (USAF) (Security Service)
- 24th Wea Sq (AWS)(MATS)

* Negro Personnel
# Attached for Adm & Log Support

TWELFTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
HENSLEY FLD, Dallas, Texas (Navy) 2596th AFRTC	
KIRTLAND AFB, Kirtland Fld, N. M. (AMC) 636th AC&W Sq	
TINKER AFB, Oklahoma City, Okla (AMC) 2592d AFRTC	
POST FLD, Fort Sill, Okla. (Army) 8th Depot Unit, Army	
SHEPPARD AFB, Wichita Falls, Tex. (AFTRC) Co "A" 817th Eng Avn Bn Co "B" 817th Eng Avn Bn	

FOURTEENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
BIRMINGHAM MUN APT, Birmingham, Ala. 2587th AFRTC	**BIRMINGHAM MUN APT, Birmingham, Ala.** 26-10 Wea Det, 26th Wea Sq (AWS) (MATS) Det G, 3903d Radar Bomb Scoring Det (SAC)
GREENVILLE AFB, Greenville, S. C. 316th Tr Carr Wg, Medium, Hq & Hq Sq 316th Tr Carr Gp, Medium, Hq 36th Tr Carr Sq, Medium 37th Tr Carr Sq, Medium 75th Tr Carr Sq, Medium 316th Maint & Supply Gp, Hq 316th Maint Sq, Tr Carr, Medium 316th Supply Sq, Tr Carr, Medium 316th Motor Vehicle Sq, Tr Carr, Medium 316th Air Base Gp, Hq & Hq Sq 316th Comm Sq, Tr Carr, Medium 316th Air Police Sq, Tr Carr, Medium 316th Food Service Sq, Tr Carr, Medium 316th Installations Sq, Tr Carr, Medium 316th Base Service Sq, Tr Carr, Medium 316th Finance Disb. Unit, Tr Carr, Medium 316th Medical Gp 502d Tac Control Gp, Hq 605th Tac Control Sq 934th Sig Bn (Separate) (TAC) 12th Photo Tech Unit 256th Med Dispensary Unit, Avn (DA) 1st Vet Det, Avn (DA) 722d AF Band 5th Radar Calib Det 4410th Bomb Disposal Unit 4411th WAF Sq	**GREENVILLE AFB, Greenville, S. C.** 1924th AACS Sq (AACS)(MATS) 25-2 Wea Det, 25th Wea Sq (AWS) (MATS)
GUNTER AFB, Montgomery, Ala. (AU) 2586th AFRTC	
HAWKINS FLD, Jackson, Miss. 2588th AFRTC	**HAWKINS FLD, Jackson, Miss.** 26-4 Wea Det, 26th Wea Sq (AWS)(MATS)
LAWSON AFB, Ft. Benning, Ga. 4408th Air Base Sq	**LAWSON AFB, Ft. Benning, Ga.** 1926-3 AACS Det (AACS)(MATS) 25-3 Wea Det, 25th Wea Sq (AWS) (MATS)

FOURTEENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
MacDILL AFB, MacDill Fld, Fla. (SAC) 2582d AFRTC	
MARIETTA AFB, Marietta, Ga. 2589th AFRTC	MARIETTA AFB, Marietta, Ga. 1115th SAM Sq (Hq Comd, USAF) 1924-1 AACS Det, 1924 AACS Sq (AACS)(MATS) 25-5 Wea Det, 25th Wea Sq (AWS) (MATS)
MEMPHIS MUN APT, Memphis, Tenn. 2584th AFRTC	MEMPHIS MUN APT, Memphis, Tenn. 26-7 Wea Det, 26th Wea Sq (AWS) (MATS) 1922-3 AACS Det, 1922d AACS Sq (AACS)(MATS) 1702-1 Det, 1702 Air Trans Gp (COND)(MATS)
MIAMI INTERNATIONAL APT, Miami, Fla. 2585th AFRTC	MIAMI INTERNATIONAL APT, Miami, Fla. 1925th AACS Sq (AACS)(MATS) 25-12 Wea Det, 25th Wea Sq (AWS) (MATS)
MOODY AFB, Valdosta, Ga. 4409th Standby Base Sq	MOODY AFB, Valdosta, Ga. 1926-1 AACS Det. 1926th AACS Sq (AACS)(MATS)
ORLANDO AFB, Orlando, Fla. Fourteenth Air Force, Hq & Hq Sq 2583d Air Base Gp, Hq & Hq Sq 2583d Base Service Sq 2583d Opns Sq 2583d Maint & Supply Sq 2583d Medical Sq 2583d Assembly Sq *2598th Avn Sq 539th AC&W Gp, Hq 649th AC Sq 650th AC&W Sq 651st AC&W Sq 652d AC&W Sq 7th Radar Calib Det 769th AF Band 37th Comm Sq, Comd	ORLANDO AFB, Orlando, Fla. 1928-1 AACS Det, 1928th AACS (AACS)(MATS) 25-6 Wea Det, 25th Wea Sq, (AWS) (MATS)

FOURTEENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

POPE AFB, Fort Bragg, N. C.
5th Depot Unit, Army
2600th Air Base Sq
8th Air Division (Tactical), Hq & Hq Sq)
9th Air Division (Tactical), Hq & Hq Sq)

SHAW AFB, Sumter, S. C.
20th Ftr Wg, Hq & Hq Sq
20th Ftr Gp, Hq
55th Ftr Sq, Jet
77th Ftr Sq, Jet
79th Ftr Sq, Jet
20th Maint & Supply Gp, Hq
20th Maint Sq, Ftr, Jet
20th Supply Sq, Ftr, Jet
20th Motor Vehicle Sq, Ftr, Jet
20th Air Base Gp, Hq & Hq Sq
20th Comm Sq, Ftr, Jet
20th Air Police Sq, Ftr, Jet
20th Food Service Sq, Ftr, Jet
20th Installations Sq, Ftr, Jet
20th Base Service Sq, Ftr, Jet
20th Finance Disbursing Unit, Ftr, Jet
20th Medical Gp
606th AC&W Sq (502d Tac Control Gp)
*30th Motor Transport Sq, Avn
2d Armament Sq, Chemical

SMYRNA AFB, Smyrna, Tenn.
314th Tr Carr Wg, Medium, Hq & Hq Sq
314th Tr Carr Gp, Medium, Hq
20th Tr Carr Sq, Medium
334th Tr Carr Sq, Medium
314th Maint & Supply Gp, Hq
314th Maint Sq, Tr Carr, Medium
314th Supply Sq, Tr Carr, Medium
314th Motor Vehicle Sq, Tr Carr, Medium
314th Air Base Gp, Hq & Hq Sq
314th Comm Sq, Tr Carr, Medium
314th Air Police Sq, Ftr, Jet
314th Food Service Sq, Tr Carr, Medium
314th Installations Sq, Tr Carr, Medium
314th Base Service Sq, Tr Carr, Medium
314th Finance Disbursing Unit, Tr Carr, Medium
314th Medical Gp

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

POPE AFB, Fort Bragg, N. C.
1113d SAM Sq (Hq Comd, USAF)
1913-1 AACS Det, 1913th AACS Sq (AACS)(MATS)
25-7 Wea Det, 25th Wea Sq (AWS) (MATS)
Hq Sq Flt Sect Det, Air Rescue Service (ARS)(MATS)
Flt C, 5th Rescue Sq (ARS)(MATS)

SHAW AFB, Sumter, S. C.
1924-2 AACS Det, 1924th AACS Sq (AACS)(MATS)
25-9 Wea Det, 25th Wea Sq (AWS) (MATS)

SMYRNA AFB, Smyrna, Tenn.
1922-4 AACS Det, 1922d AACS Sq (AACS) (MATS)
26-9 Wea Det, 26th Wea Sq (AWS)(MATS)

* Negro Personnel

FOURTEENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

TURNER AFB, Albany, Ga.

- 31st Ftr Wg, Hq & Hq Sq
  - 31st Ftr Gp, Hq
    - 307th Ftr Sq, Jet
    - 308th Ftr Sq, Jet
    - 309th Ftr Sq, Jet
  - 31st Maint & Supply Gp, Hq
    - 31st Maint Sq, Ftr, Jet
    - 31st Supply Sq, Ftr, Jet
    - 31st Motor Vehicle Sq, Ftr, Jet
  - 31st Air Base Gp, Hq & Hq Sq
    - 31st Comm Sq, Ftr, Jet
    - 31st Air Police Sq, Ftr, Jet
    - 31st Food Service Sq, Ftr, Jet
    - 31st Installations Sq, Ftr, Jet
    - 31st Base Service Sq, Ftr, Jet
    - 31st Finance Disb. Unit, Ftr, Jet
  - 31st Medical Gp
- 607th AC&W Sq (502d Tac Control Gp)

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

TURNER AFB, Albany, Ga.

- 1926-2 AACS Det, 1926th AACS Sq (AACS)(MATS)
- 25-10 Wea Det, 25th Wea Sq (AWS)(MATS)

NUMERICAL LIST CONTINENTAL AIR COMMAND UNITS

UNIT	STATION	AIR FORCE
1st Depot Unit, Army	Camp Hood, Texas (Army)	Twelfth
1st Shoran Beacon Unit	Barksdale AFB, La.	Twelfth
1st Tow Target Sq	Biggs AFB, Texas (SAC)	Twelfth
1st Vet Det, Avn (DA)	Greenville AFB, S. C.	Fourteenth
2d Armament Sq, Chemical	Shaw AFB, S. C.	Fourteenth
2d Ftr Sq, All Wea	Mitchel AFB, N. Y.	First
3d Depot Unit, A (Type A)	Godman AFB, Ky.	Ninth
4th Ftr Wg, Hq & Hq Sq	Langley AFB, Va.	Ninth
4th Ftr Gp, Hq	Langley AFB, Va.	Ninth
4th Maint & Supply Gp, Hq	Langley AFB, Va.	Ninth
4th Maint Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Supply Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Motor Vehicle Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Air Base Gp, Hq & Hq Sq	Langley AFB, Va.	Ninth
4th Comm Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Air Police Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Food Service Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Installations Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Base Service Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Finance Disb. Unit, Ftr, Jet	Langley AFB, Va.	Ninth
4th Medical Gp	Langley AFB, Va.	Ninth
4th Depot Unit, Army	Ft. Lewis, Wash. (Army)	Fourth
4th Photo Tech Sq	Langley AFB, Va.	Ninth
4th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
5th Depot Unit, Army	Pope AFB, N. C.	Fourteenth
5th Ftr Sq, All Wea	Mitchel AFB, N. Y.	First
5th Radar Calib Det	Greenville AFB, S. C.	Fourteenth
7th Radar Calib Det	Orlando AFB, Fla.	Fourteenth
7th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
8th Depot Unit, Army	Post Field, Ft. Sill, Okla.	Twelfth
8th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
11th Radar Calib Det	McChord AFB, Wash.	Fourth
12th Photo Tech Unit	Greenville AFB, S. C.	Fourteenth
12th Radar Calib Det	Mitchel AFB, N. Y.	First

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UNIT	STATION	AIR FORCE
14th Ftr Wg, Hq & Hq Sq	Dow AFB, Maine	First
14th Ftr Gp, Hq	Dow AFB, Maine	First
14th Maint & Supply Gp, Hq	Dow AFB, Maine	First
14th Maint Sq, Ftr, Jet	Dow AFB, Maine	First
14th Supply Sq, Ftr, Jet	Dow AFB, Maine	First
14th Motor Vehicle Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Base Gp, Hq & Hq Sq	Dow AFB, Maine	First
14th Comm Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Police Sq, Ftr, Jet	Dow AFB, Maine	First
14th Food Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Installations Sq, Ftr, Jet	Dow AFB, Maine	First
14th Base Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Finance Disb. Unit, Ftr, Jet	Dow AFB, Maine	First
14th Medical Gp	Dow AFB, Maine	First
20th Ftr Wg, Hq & Hq Sq	Shaw AFB, S. C.	Fourteenth
20th Ftr Gp, Hq	Shaw AFB, S. C.	Fourteenth
20th Maint & Supply Gp, Hq	Shaw AFB, S. C.	Fourteenth
20th Maint Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Supply Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Motor Vehicle Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Air Base, Gp, Hq & Hq Sq	Shaw AFB, S. C.	Fourteenth
20th Comm Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Air Police Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Food Service Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Installations Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Base Service Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Finance Disb. Unit, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Medical Gp	Shaw AFB, S. C.	Fourteenth
20th Tr Carr Sq, Med	Smyrna AFB, Tenn.	Fourteenth
25th Air Defense Div, Hq & Hq Sq	Silver Lake, Wash.	ADC
(Mailing Address: Gen. Delivery, Everett, Washington)		
26th Air Defense Div, Hq & Hq Sq	Roslyn, N. Y.	ADC
28th Comm Sq, Air Force	Mitchel AFB, N. Y.	ConAC
29th Comm Sq, AF	Langley AFB, Va.	Ninth
30th Motor Transport Sq, Avn.	Shaw AFB, S. C.	Fourteenth
31st Ftr Wg, Hq & Hq Sq	Turner AFB, Ga.	Fourteenth
31st Ftr Gp, Hq	Turner AFB, Ga.	Fourteenth
31st Maint & Supply Gp, Hq	Turner AFB, Ga.	Fourteenth
31st Maint Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Supply Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Motor Vehicle Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Air Base Gp, Hq & Hq Sq	Turner AFB, Ga.	Fourteenth
31st Comm Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Air Police Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Food Service Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Installations Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Base Service Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth

UNIT	STATION	AIR FORCE
31st Finance Disb. Unit, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Medical Gp	Turner AFB, Ga.	Fourteenth
33d Ftr Wg, Hq & Hq Sq	Otis AFB, Mass.	First
33d Ftr Gp, Hq	Otis AFB, Mass.	First
33d Maint & Supply Gp, Hq	Otis AFB, Mass.	First
33d Maint Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Supply Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Motor Vehicle Sq, Ftr, Jet.	Otis AFB, Mass.	First
33d Air Base Gp, Hq & Hq Sq	Otis AFB, Mass.	First
33d Comm Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Air Police Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Food Service Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Installations Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Base Service Sq, Ftr, Jet	Otis AFB, Mass.	First
33d Finance Disb. Unit, Ftr, Jet	Otis AFB, Mass.	First
33d Medical Gp	Otis AFB, Mass.	First
34th Comm Sq, Command	Ft. Slocum, N. Y.	First
35th Comm Sq, Command	Hamilton AFB, Calif.	Fourth
36th Comm Sq, Command	Ft. Benjamin Harrison, Ind.	Tenth
36th Tr Carr Sq, Med	Greenville AFB, S. C.	Fourteenth
37th Comm Sq, Command	Orlando AFB, Fla.	Fourteenth
37th Ftr Sq, Jet	Dow AFB, Maine	First
37th Tr Carr Sq, Med	Greenville AFB, S. C.	Fourteenth
47th Bomb Wg, Lt, Hq & Hq Sq	Barksdale AFB, La.	Twelfth
47th Bomb Gp, Lt, Hq	Barksdale AFB, La.	Twelfth
47th Maint & Supply Gp, Hq	Barksdale AFB, La.	Twelfth
47th Maint Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Supply Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Motor Vehicle Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Air Base Gp, Hq & Hq Sq	Barksdale AFB, La.	Twelfth
47th Comm Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Food Service Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Air Police Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Installations Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Base Service Sq, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Finance Disb.Unit, Bomb, Lt, Jet	Barksdale AFB, La.	Twelfth
47th Medical Gp	Barksdale AFB, La.	Twelfth
48th Ftr Sq, Jet	Dow AFB, Maine	First
49th Ftr Sq, Jet	Dow AFB, Maine	First
52d Ftr Wg, Hq & Hq Sq	Mitchel AFB, N. Y.	First
52d Ftr Gp, Hq	Mitchel AFB, N Y.	First
52d Maint & Supply Gp, Hq	Mitchel AFB, N. Y.	First
52d Maint Sq, Ftr, All Wea	Mitchel AFB, N Y.	First
52d Supply Sq, Ftr, All Wea	Mitchel AFB, N Y	First
52d Motor Vehicle Sq, Ftr, All Wea	Mitchel AFB, N Y.	First
52d Air Base Gp, Hq & Hq Sq	Mitchel AFB, N. Y.	First
52d Comm Sq, Ftr, All Wea	Mitchel AFB, N. Y.	First
52d Food Service Sq, Ftr, All Wea	Mitchel AFB, N. Y.	First
52d Installations Sq, Ftr, All Wea	Mitchel AFB, N. Y.	First

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UNIT	STATION	AIR FORCE
52d Base Service Sq, Ftr, All Wea	Mitchel AFB, N. Y.	First
52d Finance Disb. Unit, Ftr, All Wea	Mitchel AFB, N. Y.	First
52d Medical Gp	Mitchel AFB, N. Y.	First
55th Ftr Sq, Jet	Shaw AFB, S. C.	Fourteenth
56th Ftr Wg, Hq & Hq Sq	Selfridge AFB, Mich.	Tenth
56th Ftr Gp, Hq	Selfridge AFB, Mich.	Tenth
56th Maint & Supply Gp, Hq	Selfridge AFB, Mich.	Tenth
56th Maint Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Supply Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Motor Vehicle Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Air Base Gp, Hq & Hq Sq	Selfridge AFB, Mich.	Tenth
56th Comm Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Air Police Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Food Service Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Installations Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Base Service Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Finance Disb. Unit, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Medical Gp	Selfridge AFB, Mich.	Tenth
58th Ftr Sq, Jet	Otis AFB, Mass.	First
59th Ftr Sq, Jet	Otis AFB, Mass.	First
60th Ftr Sq, Jet	Otis AFB, Mass.	First
61st Ftr Sq, Jet	Selfridge AFB, Mich.	Tenth
62d Ftr Sq, Jet	Selfridge AFB, Mich.	Tenth
62d Tr Carr Wg, Med, Hq & Hq Sq	McChord AFB, Wash.	Fourth
62d Tr Carr Gp, Med, Hq	McChord AFB, Wash.	Fourth
62d Maint & Supply Gp, Hq	McChord AFB, Wash.	Fourth
62d Maint Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Supply Sq, Tr Carr Med	McChord AFB, Wash.	Fourth
62d Motor Vehicle Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Air Base Gp, Hq & Hq Sq	McChord AFB, Wash.	Fourth
62d Comm Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Air Police Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Food Service Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Installations Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Base Service Sq, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Finance Disb. Unit, Tr Carr, Med	McChord AFB, Wash.	Fourth
62d Medical Gp	McChord AFB, Wash.	Fourth
63d Ftr Sq, Jet	Selfridge AFB, Mich.	Tenth
75th Tr Carr Sq, Med	Greenville AFB, S. C.	Fourteenth
77th Ftr Sq, Jet	Shaw AFB, S. C.	Fourteenth
78th Ftr Wg, Hq & Hq Sq	Hamilton AFB, Calif.	Fourth
78th Ftr Gp, Hq	Hamilton AFB, Calif.	Fourth
78th Maint & Supply Gp, Hq	Hamilton AFB, Calif.	Fourth
78th Maint Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Supply Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Motor Vehicle Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Air Base Gp, Hq & Hq Sq	Hamilton AFB, Calif.	Fourth
78th Air Police Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Comm Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Food Service Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Installations Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth

UNIT	STATION	AIR FORCE
78th Base Service Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Finance Disb. Unit, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Medical Gp	Hamilton AFB, Calif.	Fourth
79th Ftr Sq, Jet	Shaw AFB, S. C.	Fourteenth
82d Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
83d Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
84th Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
84th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
85th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
86th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
*99th Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
*100th Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
136th Radio Security Sq, Radio Security Det B (USAF UNIT attached to Fourth AF)	Brooks AFB, Texas	Twelfth
161st Tac Recon Sq, Photo-Jet	Langley AFB, Va.	Ninth
162d Tac Recon Sq, Night-Photo	Langley AFB, Va.	Ninth
256th Med Dispensary Unit, Avn (DA)	Greenville AFB, S. C.	Fourteenth
*301st Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
307th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
308th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
309th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
314th Tr Carr Wg, Med, Hq & Hq Sq	Smyrna AFB, Tenn.	Fourteenth
314th Tr Carr Gp, Med, Hq	Smyrna AFB, Tenn.	Fourteenth
314th Maint & Supply Gp, Hq	Smyrna AFB, Tenn.	Fourteenth
314th Maint Sq, Tr Carr, Med.	Smyrna AFB, Tenn.	Fourteenth
314th Supply Sq, Tr Carr, Med.	Smyrna AFB, Tenn.	Fourteenth
314th Motor Vehicle Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Air Base Gp, Hq & Hq Sq	Smyrna AFB, Tenn.	Fourteenth
314th Comm Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Air Police Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Food Service Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Installations Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Base Service Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Finance Disb. Unit, Tr Carr,Med	Smyrna AFB, Tenn.	Fourteenth
314th Medical Gp	Smyrna AFB, Tenn.	Fourteenth
316th Tr Carr Wg, Med, Hq & Hq Sq	Greenville AFB, S. C.	Fourteenth
316th Tr Carr Gp, Med, Hq	Greenville AFB, S. C.	Fourteenth
316th Maint & Supply Gp, Hq	Greenville AFB, S. C.	Fourteenth
316th Maint Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Supply Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Motor Vehicle Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Air Base Gp, Hq & Hq Sq	Greenville AFB, S. C.	Fourteenth
316th Comm Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Air Police Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Food Service Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Installations Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth

* Negro Personnel

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UNIT	STATION	AIR FORCE
316th Base Service Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Finance Disb. Unit, Tr Carr,Med	Greenville AFB, S. C.	Fourteenth
316th Medical Gp	Greenville AFB, S. C.	Fourteenth
317th Ftr Sq, All Wea	Moses Lake AFB, Wash.	Fourth
318th Ftr Sq, All Wea (325th Ftr Sq)	McChord AFB, Wash.	Fourth
325th Ftr Wg, Hq & Hq Sq	Moses Lake AFB, Wash.	Fourth
325th Ftr Gp, Hq	Moses Lake AFB, Wash.	Fourth
325th Maint & Supply Gp, Hq	Moses Lake AFB, Wash.	Fourth
325th Maint Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Supply Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Motor Vehicle Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Air Base Gp, Hq & Hq Sq	Moses Lake AFB, Wash.	Fourth
325th Air Police Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Comm Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Food Service Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Installations Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Base Sv Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Finance Disb. Unit, Ftr,All Wea	Moses Lake AFB, Wash.	Fourth
325th Medical Gp	Moses Lake AFB, Wash.	Fourth
*332d Ftr Wg, Hq & Hq Sq	Lockbourne AFB, Ohio	Ninth
*332d Ftr Gp, Hq	Lockbourne AFB, Ohio	Ninth
*332d Maint & Supply Gp, Hq	Lockbourne AFB, Ohio	Ninth
*332d Maint Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Supply Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Motor Vehicle Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Air Base Gp, Hq & Hq Sq	Lockbourne AFB, Ohio	Ninth
*332d Comm Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Air Police Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Food Service Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Installations Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Base Service Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Finance Disb. Unit, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Medical Gp	Lockbourne AFB, Ohio	Ninth
334th Ftr Sq, Jet	Andrews AFB, Wash.D.C.(MATS)	Ninth
334th Tr Carr Sq, Med	Smyrna AFB, Tenn.	Fourteenth
335th Ftr Sq, Jet	Andrews AFB, Wash.D.C.(MATS)	Ninth
336th Ftr Sq, Jet	Andrews AFB, Wash.D.C.(MATS)	Ninth
363d Tac Recon Gp, Hq	Langley AFB. Va.	Ninth

* Negro Personnel

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UNIT	STATION	AIR FORCE
2592d AFRTC	Tinker AFB, Okla. (AMC)	Twelfth
2593d AFRTC	Brooks AFB, Texas	Twelfth
2594th AFORD	Camp LeRoy Johnson, La. (Army)	Twelfth
2595th Air Base Gp, Hq & Hq Sq	Brooks AFB, Texas	Twelfth
2595th Base Service Sq	Brooks AFB, Texas	Twelfth
2595th Maint & Supply Sq	Brooks AFB, Texas	Twelfth
2595th Cpns Sq	Brooks AFB, Texas	Twelfth
2595th Medical Sq	Brooks AFB, Texas	Twelfth
2596th AFRTC	Hensley Fld, Texas	Twelfth
2597th Air Police Sq (Off Base)	Brooks AFB, Texas	Twelfth
*2598th Avn Sq	Orlando AFB, Fla.	Fourteenth
*2599th Avn Sq	Brooks AFB, Texas	Twelfth
2600th Air Base Sq	Pope AFB, N. C.	Fourteenth
4400th Air Base Gp, Hq & Hq Sq	Stewart Fld, N. Y.	First
4401st Maint & Supply Sq	Stewart Fld, N. Y.	First
4402d Air Installations Sq	Stewart Fld, N. Y.	First
4403d Station Medical Sq	Stewart Fld, N. Y.	First
4404th Standby Base Sq	Dover AFB, Del. (Inactive)	Ninth
4405th Air Base Sq	Sherman AFB, Kans.	Tenth
4406th Air Base Sq	Marshall AFB, Kans.	Tenth
4408th Air Base Sq	Lawson AFB, Kans.	Fourteenth
4409th Standby Base Sq	Moody AFB, Ga.	Fourteenth
4410th Bomb Disposal Unit	Greenville AFB, S. C.	Fourteenth
4412th WAF Sq	Langley AFB, Va.	Ninth
*4413th WAF Sq	Lockbourne AFB, Ohio	Ninth
4415th Liaison Flt	Langley AFB, Va.	Ninth

* Negro Personnel

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CONTINENTAL AIR COMMAND
Mitchel Air Force Base, New York

DIRECTORY

of

UNITS AND INSTALLATIONS

SUPPLEMENT

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3, 4, 5 and 6	1 June 1949
7	1 June 1949
8, 9, 10, 11, 12, 13 and 14	1 June 1949
15 and 16	1 April 1949
17	1 June 1949
18	1 June 1949
19, 20, 21, 22, 23 and 24	1 May 1949
25 and 26	1 April 1949
27	1 May 1949

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CONTINENTAL AIR COMMAND

MITCHEL AIR FORCE BASE, NEW YORK

DIRECTORY

of

UNITS AND INSTALLATIONS

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ABBREVIATIONS

AACS	Airways & Air Communications Service
AC	Aircraft Control
AC&W	Aircraft Control & Warning
ADC	Air Defense Commend
Adm	Administrative
AF	Air Force
AFB	Air Force Base
AFTRC	Air Training Command
AFRTC	Air Force Reserve Training Center
AMC	Air Materiel Commend
Apl	Airplane
Apt	Airport
Atchd	Attached
AU	Air University
Avn	Aviation
AWS	Air Weather Service
Base Sv	Base Services
BN	Battalion
Bomb	Bombardment
Calib	Calibration
Carr	Carrier
Co	Company
Comd	Commend
Comm	Communication

ABBREVIATIONS (cont'd)

ConAC	-	Continental Air Command
Const	-	Construction
Det	-	Detachment
Div	-	Division
Engr	-	Engineering or Engineer
Fld	-	Field
Flt	-	Flight
Ftr	-	Fighter
Gp	-	Group
Hq	-	Headquarters
JP	-	Jet-Propelled
L	-	Light
LB	-	Light Bombardment
Loc	-	Location
Maint	-	Maintenance
Mat	-	Materiel
MATS	-	Military Air Transport Service
Med	-	Medical
Mun	-	Municipal
Oprs	-	Operations
Oprg	-	Operating
AFORD	-	Air Force Overseas Replacement Depot
Ph	-	Photo
POE	-	Port of Embarkation
Rcn	-	Reconnaissance

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ABBREVIATIONS (cont'd)

Res - Reserve
SAC - Strategic Air Command
SAM - Special Air Missions
Sch - School
SE - Single Engine
Sep - Separation
SEPD - Seattle Port Detachment
SFPD - San Francisco Port Detachment
Sig - Signal
Sq - Squadron
Sta - Station
Sv - Service(s)
TAC - Tactical Air Command
Tech - Technical
Trp - Troop
VH - Very Heavy
VHB - Very Heavy Bombardment
VLR - Very Long Range
Wea - Weather
Wg - Wing
Wpns - Weapons
WRAMA - Warner Robins Air Materiel Area

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CONTINENTAL AIR COMMAND
DIRECTORY
OF
UNITS AND INSTALLATIONS

Part I

COMMANDS AND AIR FORCES

Continental Air Command, Hq & Hq Sq
Mitchel Air Force Base, New York

Air Defense Command, Hq & Hq Sq
Mitchel Air Force Base, New York

Tactical Air Command, Hq & Hq Sq
Langley Air Force Base, Virginia

First Air Force, Hq & Hq Sq
Fort Slocum, New York
(Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont)

Fourth Air Force, Hq & Hq Sq
Hamilton Air Force Base, Hamilton, California
(Arizona, California, Idaho, Montana, Nevada, Oregon, Utah and Washington)

Ninth Air Force, Hq & Hq Sq
Langley Air Force Base, Virginia
(District of Columbia, Delaware, Kentucky, Maryland, Ohio, Pennsylvania, Virginia and West Virginia)

Tenth Air Force, Hq & Hq Sq
Fort Benjamin Harrison, Indiana
(Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin and Wyoming)

Twelfth Air Force, Hq & Hq Sq
Brooks Air Force Base, Texas
(Arkansas, Louisiana, New Mexico, Oklahoma and Texas)

Fourteenth Air Force, Hq & Hq Sq
Orlando Air Force Base, Orlando, Florida
(Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee)

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Part II

UNITS AND INSTALLATIONS OF CONTINENTAL AIR COMMAND AND UNITS OF OTHER COMMANDS ON CONTINENTAL AIR COMMAND INSTALLATIONS

(Note: Command jurisidction of installations noted in parentheses)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
CAMP KILMER, Stelton, N. J. (Army)	
2225th AFORD	
DOW AFB, Bangor, Me.	DOW AFB, Bangor, Me.
14th Ftr Wg, Hq & Hq Sq	12-6 Wea Det, 12 Wea Sq (AWS)(MATS)
14th Ftr Gp, Hq	1915th AACS Sq (AACS)(MATS)
37th Ftr Sq, Jet	
48th Ftr Sq, Jet	
49th Ftr Sq, Jet	
14th Maint & Supply Gp, Hq	
14th Maint Sq, Ftr, Jet	
14th Supply Sq, Ftr, Jet	
14th Motor Vehicle Sq, Ftr, Jet	
14th Air Base Gp, Hq & Hq Sq	
14th Comm Sq, Ftr, Jet	
14th Air Police Sq, Ftr, Jet	
14th Food Service Sq, Ftr, Jet	
14th Installations Sq, Ftr, Jet	
14th Base Service Sq, Ftr, Jet	
14th Finance Disb. Unit, Ftr, Jet	
14th Medical Gp	
Det 1, 647th AC&W Sq (503d AC&W Gp)	
2228th AFRTC	
FORT SLOCUM, N. Y.	
First Air Force, Hq & Hq Sq	
34th Comm Sq, Command	
679th AF Band	
2226th Air Base Gp, Hq & Hq Sq	
2226th Base Service Sq	
2226th Assembly & Processing Sq	
GRENIER AFB, Manchester, N. H. (SAC)	
647th AC&W Sq (503d AC&W Gp)	
GRIFFISS AFB, Rome, N. Y. (AMC)	
2229th AFRTC	
HANSCOM APT, Bedford, Mass.	HANSCOM APT, Bedford, Mass.
2234th AFRTC	12-2 Wea Det, 12 Wea Sq (AWS)(MATS)

FIRST AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

MITCHEL AFB, N. Y.
#Continental Air Command, Hq & Hq Sq
 28th Comm Sq, Air Force
 #Air Defense Command, Hq & Hq Sq
  52d Ftr Wg, Hq & Hq Sq
   52d Ftr Gp, Hq
    2d Ftr Sq, All Wea
    5th Ftr Sq, All Wea
   52d Maint & Supply Gp, Hq
    52d Maint Sq, Ftr, All Wea
    52d Supply Sq, Ftr, All Wea
    52d Motor Vehicle Sq, Ftr, All Wea
   52d Air Base Gp, Hq & Hq Sq
    52d Comm Sq, Ftr, All Wea
    52d Air Police Sq, Ftr, All Wea
    52d Food Service Sq, Ftr, All Wea
    52d Installations Sq, Ftr, All Wea
    52d Base Service Sq, Ftr, All Wea
    52d Finance Disb. Unit, Ftr, All Wea
   52d Medical Gp
  12th Radar Calib Det
  581st AF Band
  2230th AFRTC
  [illegible] AF Sq
*2244th Avn Sq

NEWARK MUN APT, Newark, N. J.
2231st AFRTC

OTIS AFB, Falmouth, Mass.
33d Ftr Wg, Hq & Hq Sq
 33d Ftr Gp, Hq
  58th Ftr Sq, Jet
  59th Ftr Sq, Jet
  60th Ftr Sq, Jet
 33d Maint & Supply Gp, Hq
  33d Maint Sq, Ftr, Jet
  33d Supply Sq, Ftr, Jet
  33d Motor Vehicle Sq, Ftr, Jet
 33d Air Base Gp, Hq & Hq Sq
  33d Comm Sq, Ftr, Jet
  33d Air Police Sq, Ftr, Jet
  33d Food Service Sq, Ftr, Jet
  33d Installations Sq, Ftr, Jet
  33d Base Service Sq, Ftr, Jet
  33d Finance Disb. Unit, Ftr, Jet
 33d Medical Gp
Det 2, 647th AC&W Sq (503d AC&W Gp)

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

MITCHEL AFB, N. Y.
2102d Wea Gp, Hq & Hq Sq (AWS)(MATS)
12th Wea Sq (AWS)(MATS)
1112th SAM Sq (Hq Comd, USAF)
1802d AACS Gp, Hq & Hq Sq
1916th AACS Sq (AACS)(MATS)
12-10 Wea Det, 12 Wea Sq (AWS)(MATS)
2059-4 Wea Det, 2059th Wea Sq (AWS)
  (MATS)

NEWARK MUN APT, Newark, N. J.
12-11 Wea Det, 12 Wea Sq (AWS)(MATS)

OTIS AFB, Falmouth, Mass.
12-24 Wea Det, 12th Wea Sq (AWS)(MATS)
1917-2 AACS Det, 1917th AACS Sq (AACS)
  (MATS)

Asgd to ConAC
* Negro Personnel

FIRST AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

PINE CAMP, Great Bend, N. Y. (Army)
648th AC&W Sq (503d AC&W Gp)
(less Dets 1, 2 & 3)

ROSLYN, N. Y. (Sub-Base, Mitchel AFB)
‡26th Air Defense Division, Hq & Hq Sq
503d AC&W Gp, Hq
Det 2 & 3, 645th AC Sq
646th AC&W Sq
Det 2, 672d AC&W Sq (503d AC&W Gp)

OPERATING LOCATION #2
SCHENECTADY GENERAL DEPOT
SCHENECTADY, N. Y. (OA)
Det 2, 648th AC&W Sq (503d AC&W Gp)

SENECA ORDNANCE DEPOT, Romulus, N. Y.
Det 3, 648th AC&W Sq (503d AC&W Gp)

STEWART FIELD, Newburgh, N. Y.
2232d AFRTC
4400th Air Base Gp, Hq & Hq Sq
4401st Maint & Supply Sq
4402d Air Installations Sq
4403d Station Medical Sq

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

STEWART FIELD, Newburgh, N. Y.
12-15 Wea Det, 12 Wea Sq (AWS)(MATS)
1916-3 AACS Det, 1916th AACS Sq
(AACS)(MATS)

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‡ Asgd Air Defense Command

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FOURTH AIR FORCE

UNITS AND INSTALLATIONS

DAVIS-MONTHAN AFB, Tucson, Ariz. (SAC)
- 2348th AFRTC

EVERETT, Wash.
(Mailing Address: P. O. Box 909, Everett, Wash.)
- 634th AC Sq (505th AC&W Gp)

HAMILTON AFB, Hamilton, Calif.
- Fourth Air Force, Hq & Hq Sq
  - 35th Comm Sq, Command
  - 78th Ftr Wg, Hq & Hq Sq
    - 78th Ftr Gp, Hq
      - 82d Ftr Sq, Jet
      - 83d Ftr Sq, Jet
      - 84th Ftr Sq, Jet
    - 78th Maint & Supply Gp, Hq
      - 78th Maint Sq, Ftr, Jet
      - 78th Supply Sq, Ftr, Jet
      - 78th Motor Vehicle Sq, Ftr, Jet
    - 78th Air Base Gp, Hq & Hq Sq
      - 78th Comm Sq, Ftr, Jet
      - 78th Air Police Sq, Ftr, Jet
      - 78th Food Service Sq, Ftr, Jet
      - 78th Installations Sq, Ftr, Jet
      - 78th Base Service Sq, Ftr, Jet
      - 78th Finance Disb. Unit, Ftr, Jet
    - 78th Medical Gp
- 573d AF Band
- 2346th AFRTC
- 2349th AFORD
- 2351st WAF Sq
- *2352d Avn Sq

HILL AFB, Hill Fld, Utah, (AMC)
- 2344th AFRTC

LONG BEACH MUN APT, Long Beach, Calif.
- 2347th AFRTC

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

HAMILTON AFB, Hamilton, Calif.
- 1117th SAM Sq (Hq Comd, USAF)
- 1801st AACS Gp Hq (AACS)(MATS)
- 1902d AACS Sq (AACS)(MATS)
- 10-5 Wea Det, 5th Wea Sq (AWS)
- Det 7, Hamilton Flt Service Ctr (MATS)
- 2150th Rescue Unit (ARS)(MATS)
- Flt A, 2150th Rescue Unit (ARS)(MATS)

LONG BEACH MUN APT, Long Beach, Calif.
- 9-20 Wea Det, 9th Wea Sq (AWS)(MATS)

* Negro Personnel

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FOURTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

MARCH AFB, Calif. (SAC)
- 817th Engr Avn Bn (DA)
  (less Co. "A", "B" & "C")

McCHORD AFB, Wash.
- 62d Tr Carr Wg, Medium, Hq & Hq Sq
  - 62d Tr Carr Gp, Medium, Hq
    - 4th Tr Carr Sq, Medium
    - 7th Tr Carr Sq, Medium
    - 8th Tr Carr Sq, Medium
  - 62d Maint & Supply Gp, Hq
    - 62d Maint Sq, Tr Carr, Medium
    - 62d Supply Sq, Tr Carr, Medium
    - 62d Motor Vehicle Sq, Tr Carr, Medium
  - 62d Air Base Gp, Hq & Hq Sq
    - 62d Comm Sq, Tr Carr, Medium
    - 62d Air Police Sq, Tr Carr, Medium
    - 62d Food Service Sq, Tr Carr, Medium
    - 62d Installations Sq, Tr Carr, Medium
    - 62d Base Service Sq, Tr Carr, Medium
    - 62d Finance Disb. Unit, Tr Carr, Medium
  - 62d Medical Gp
- 318th Ftr Sq, All Wea (325th Ftr Gp)
- 11th Radar Calib Det
- 505th AC&W Gp, Hq
  - 635th AC&W Sq
- 531st AC&W Gp, Hq
  - 632d AC&W Sq
- 2345th AFRTC

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

McCHORD AFB, Wash.
- 1905th AACS Sq (AACS)(MATS)
- Flt C, 2150th Rescue Unit (ARS)(MATS)
- 1501-1 Det, 1501st Air Trans Gp
  (PACS)(MATS)
- 10-10 Wea Det, 10th Wea Sq (AWS)(MATS)
- Det 9, McChord Flt Service Ctr (MATS)

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FOURTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

MOSES LAKE AFB, Moses Lake, Wash.

- 325th Ftr Wg, Hq & Hq Sq
  - 325th Ftr Gp, Hq
    - 317th Ftr Sq, All Wea
  - 325th Maint & Supply Gp, Hq
    - 325th Maint Sq, Ftr, All Wea
    - 325th Supply Sq, Ftr, All Wea
    - 325th Motor Vehicle Sq, Ftr, All Wea
  - 325th Air Base Gp, Hq & Hq Sq
    - 325th Comm Sq, Ftr, All Wea
    - 325th Air Police Sq, Ftr, All Wea
    - 325th Food Service Sq, Ftr, All Wea
    - 325th Installations Sq, Ftr, All Wea
    - 325th Base Service Sq, Ftr, All Wea
    - 325th Finance Disb. Unit, Ftr, All Wea
  - 325th Medical Gp
- 637th AC&W Sq (505th AC&W Gp)
- Co. "C", 817th Engr Avn Bn (DA)

SILVER LAKE, Wash.
(Mailing Address: P. O. Box 909, Everett, Wash.)
[1]25th Air Defense Division, Hq & Hq Sq

SAN FRANCISCO POE, Ft. Mason, Calif. (Army)
Det, 2349th AFCRD

SEATTLE POE, Seattle, Wash. (Army)
Det, 2349th AFCRD

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

MOSES LAKE AFB, Moses Lake, Wash.
10-7 Wea Det, 10th Wea Sq (AWS)(MATS)
1905-5 AACS Det (AACS)(MATS)

[1] Asgd to ADC

Revised 1 June 1949

NINTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
ANDREWS AFB, Washington 20, D. C. (USAF Comd) 2238th AFRTC	
ARLINGTON, Va. QUARTERS "K", NAVAL BKS, NO. 7 COLUMBIA TURNPIKE 672d AC&W Sq (503d AC&W Gp) (less Dets 1, 2 & 3)	
BYRD FLD, Richmond, Va. 2235th AFRTC	
CLEVELAND MUN APT, Cleveland, Ohio (AMC) 2240th AFRTC	
DOVER AFB, Dover, Del. (Inactive) 4404th Standby Base Sq	
FORT JOHN CUSTIS, Va. Det 1, 672d AC&W Sq (503d AC&W Gp)	
GODMAN AFB, Fort Knox, Ky. 2236th AFRTC	GODMAN AFB, Fort Knox, Ky. 16-3 Wea Det, 16th Wea Sq (AWS) (MATS) 1918-4 AACS Det, 1918th AACS Sq (AACS)(MATS)
GREATER PITTSBURGH APT, Coraopolis, Pa. 2239th AFRTC	GREATER PITTSBURGH APT, Coraopolis, Pa. 12-21 Wea Det, 12th Wea Sq (AWS)(MATS) 1912-1 AACS Det, 1912th AACS Sq (AACS) (MATS)
INDIANTOWN GAP MILITARY RESERVATION, Pa. Det 3, 672d AC&W Sq (503d AC&W Gp)	

NINTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

LANGLEY AFB, Va.
#Tactical Air Command, Hq & Hq Sq
Ninth Air Force, Hq & Hq Sq
4th Ftr Wg, Hq & Hq Sq
4th Ftr Gp, Hq
334th Ftr Sq, Jet
335th Ftr Sq, Jet
336th Ftr Sq, Jet
4th Maint & Supply Gp, Hq
4th Maint Sq, Ftr, Jet
4th Supply Sq, Ftr, Jet
4th Motor Vehicle Sq, Ftr, Jet
4th Air Base Gp, Hq & Hq Sq
4th Comm Sq, Ftr, Jet
4th Air Police Sq, Ftr, Jet
4th Food Service Sq, Ftr, Jet
4th Installations Sq, Ftr, Jet
4th Base Service Sq, Ftr, Jet
4th Finance Disb. Unit, Ftr, Jet
4th Medical Gp
363d Tac Recon Gp, Hq
161st Tac Recon Sq, Photo-Jet
162d Tac Recon Sq, Night-Photo
4412th WAF Sq
564th AF Band
4th Photo Tech Sq
29th Comm Sq, Command
*837th Engr Avn Battalion (DA)
4415th Liaison Flt

LOCKBOURNE AFB, Columbus, Ohio
*332d Ftr Wg, Hq & Hq Sq
*332d Ftr Gp, Hq
*99th Ftr Sq, SE
*100th Ftr Sq, SE
*301st Ftr Sq, SE
*332d Maint & Supply Gp, Hq
*332d Maint Sq, Ftr, SE
*332d Supply Sq, Ftr, SE
*332d Motor Vehicle Sq, Ftr, SE
*332d Air Base Gp, Hq & Hq Sq
*332d Comm Sq, Ftr, SE
*332d Air Police Sq, Ftr, SE
*332d Installations Sq, Ftr, SE
*332d Food Service Sq, Ftr, SE
*332d Base Service Sq, Ftr, SE
*332d Finance Disb. Unit, Ftr, SE
*332d Medical Gp

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

LANGLEY AFB, Va.
1913 AACS Sq (AACS)(MATS)
1702-1 Det, 1702d Air Trans Gp (COND) (MATS)
12-9 Wea Det, 12th Wea Sq (AWS)(MATS)
1001st IG Unit, (Hq Comd, USAF)

LOCKBOURNE AFB, Columbus, Ohio
1914-2 AACS Det, 1914th AACS Sq (AACS)(MATS)
12-19 Wea Det, 12th Wea Sq (AACS) (MATS)

Asgd direct to ConAC
* Negro Personnel

NINTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

LOCKBOURNE AFB, Columbus, Ohio
*766th AF Band
*4413th WAF Sq
*449th Sig Avn Hvy Constn Bn (DA)
*770th AF Band
*2221st Special Service Unit
*2222d Special Service WAF Unit

PHILADELPHIA INTERNATIONAL APT, Philadelphia, Pa.
2241st AFRTC

RAVENNA ARSENAL, Apco, Ohio
Det 1, 645th AC&W Sq (503d AC&W Gp)

READING MUN APT, Reading, Pa.
2237th AFRTC

* Negro Personnel

TENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
ATTERBURY AFB, Columbus, Ind. (Sub-Base, Stout Fld, Ind.) No units	
BAER FLD, Fort Wayne, Ind. 2467th AFRTC	
CHANUTE AFB, Chanute Fld, Ill. (AFTRC) 2464th AFRTC	
CHICAGO-ORCHARD APT, Park Ridge, Ill. 2471st AFRTC	CHICAGO-ORCHARD APT, Park Ridge, Ill. 16-4 Wea Det, 16th Wea Sq (AWS)(MATS) 1114th SAM Sq (Hq Comd, USAF) Det 2750th AFB Hq & Hq Sq (Air Museum) (AMC)
FAIRFAX FLD, Kansas City, Kans. 2472d AFRTC	FAIRFAX FLD, Kansas City, Kans. Acft Assy Plant #2 (AMC) 19-1 Wea Det, 19th Wea Sq (AWS)(MATS)
FORT BENJAMIN HARRISON, Ind. Tenth Air Force, Hq & Hq Sq 36th Comm Sq, Command 691st AF Band 2475th WAF Sq 2463d Air Base Gp, Hq & Hq Sq 2463d Maint & Supply Sq 2463d Base Service Sq 2463d Air Police Sq 2463d Air Instllations Sq 2463d Food Service Sq 2463d Medical Sq #2220th Extension Gp, Hq & Hq Sq	
LOWRY AFB, Denver, Colo. (AFTRC) 2468th AFRTC	
MARSHALL AFB, Ft. Riley, Kans. 4406th Air Base Sq	MARSHALL AFB, Ft. Riley, Kans. 1911-2 AACS Det, 1911th AACS (MATS) 19-10 Wea Det, 19th Wea Sq (AWS) (MATS)
OFFUTT AFB, Omaha, Nebr. (SAC) [illegible] AFRTC	
OSCODA AFB, Oscoda, Mich. (Sub-base, Selfridge AFB) 2476th Base Service Sq	

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TENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

SCOTT AFB, Belleville, Ill. (AFTRC)
2469th AFRTC

SHERMAN AFB, Ft. Leavenworth, Kans.
4405th Air Base Sq

SELFRIDGE AFB, Selfridge Fld, Mich.

- 56th Ftr Wg, Hq & Hq Sq
  - 56th Ftr Gp, Hq
    - 61st Ftr Sq, Jet
    - 62d Ftr Sq, Jet
    - 63d Ftr Sq, Jet
  - 56th Maint & Supply Gp, Hq
    - 56th Maint Sq, Ftr, Jet
    - 56th Supply Sq, Ftr, Jet
    - 56th Motor Vehicle Sq, Ftr, Jet
  - 56th Air Base Gp, Hq & Hq Sq
    - 56th Comm Sq, Ftr,Jet
    - 56th Air Police Sq, Ftr, Jet
    - 56th Food Service Sq, Ftr, Jet
    - 56th Installations Sq, Ftr, Jet
    - 56th Base Service Sq, Ftr, Jet
    - 56th Finance Disb. Unit, Ftr, Jet
  - 56th Medical Gp
- 645th AC Sq (503d AC&W Gp) less Dets 1 & 2
- 2242d AFRTC

SIOUX CITY MUN APT, Sioux City, Iowa
2470th AFRTC

STOUT FLD, Indianapolis, Ind.
2466th AFRTC

WOLD-CHAMBERLAIN FLD, Minneapolis, Minn.
2465th AFRTC

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

SHERMAN AFB, Ft. Leavenworth, Kans.
1911-3 AACS Det, 1911th AACS Sq (AACS)(MATS)
19-5 Wea Det, 19th Wea Sq (AWS)(MATS)

SELFRIDGE AFB, Selfridge Fld, Mich.
1914-3 AACS Det, 1914th AACS Sq (AACS) (MATS)
Flt C, 2151st Rescue Unit, (ARS)(MATS)
16-8 Wea Det, 16th Wea Sq (AWS)(MATS)

STOUT FLD, Indianapolis, Ind.
1918-2 AACS Det, 1918th AACS Sq (AACS)(MATS)

WOLD-CHAMBERLAIN FLD, Minneapolis, Minn.
16-6 Wea Det. 16th Wea Sq (AWS)(MATS)
1918-1 AACS Det, 1918th AACS Sq (AACS) (MATS)

TWELFTH AIR FORCE

UNITS AND INSTALLATIONS

BARKSDALE AFB, Barksdale Fld, La. (AFTRC)

- 47th Bomb Wg, Lt, Hq & Hq Sq
  - 47th Bomb Gp, Lt, Hq
    - 84th Bomb Sq, Lt, Jet
    - 85th Bomb Sq, Lt, Jet
    - 86th Bomb Sq, Lt, Jet
  - 47th Maint & Supply Gp, Hq
    - 47th Maint Sq, Bomb, Lt, Jet
    - 47th Supply Sq, Bomb, Lt, Jet
    - 47th Motor Vehicle Sq, Bomb, Lt, Jet
  - 47th Air Base Gp, Hq & Hq Sq
    - 47th Comm Sq, Bomb, Lt, Jet
    - 47th Food Service Sq, Bomb, Lt, Jet
    - 47th Air Police Sq, Bomb, Lt, Jet
    - 47th Installations Sq, Bomb, Lt, Jet
    - 47th Base Service Sq, Bomb, Lt, Jet
    - 47th Finance Disb. Unit, Bomb, Lt, Jet
  - 47th Medical Gp
- 2590th AFRTC
- 1st Shoran Beacon Unit

BIGGS AFB, Brggs Fld, Tex. (SAC)

- 1st Tow Target Sq

BROOKS AFB, Texas

- Twelfth Air Force, Hq & Hq Sq
- 579th AF Band
- 2593d AFRTC
- 2595th Air Base Gp, Hq & Hq Sq
  - 2595th Base Service Sq
  - 2595th Maint & Supply Sq
  - 2595th Opns Sq
  - 2595th Medical Sq
- *2599th Avn Sq
- #Det B, 136th Radio Security Sq (USAF)
- 2597th AF Police Sq (off Base)

CAMP LEROY JOHNSON, New Orleans, La. (Army)

- 2594th AFCRD

ELLINGTON AFB, Houston, Tex. (AFTRC)

- 2591st AFRTC

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

BROOKS AFB, Texas

- 1116th SAM Sq, (Hq Comd, USAF)
- 24-26 Wea Det, 24th Wea Sq (AWS) (MATS)
- 1923-2 AACS Det, 1923d AACS Sq (AACS)(MATS)
- 8th Radio Sq, Mobile (USAF)
- 136th Radio Security Sq (USAF) (Security Service)
- 24th Wea Sq (AWS)(MATS)
- Hq & Hq Sq, USAF Security Service (USAF Comd)

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* Negro Personnel
# Attached for Adm & Log Support

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TWELFTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

HENSLEY FLD, Dallas, Texas (Navy)
2596th AFRTC

KIRTLAND AFB, Kirtland Fld, N. M. (AMC)
636th AC&W Sq

TINKER AFB, Oklahoma City, Okla. (AMC)
2592d AFRTC

SHEPPARD AFB, Wichita Falls, Tex. (AFTRC)
Co "A" 817th Engr Avn Bn
Co "B" 817th Engr Avn Bn

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

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FOURTEENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
BIRMINGHAM MUN APT, Birmingham, Ala. 2587th AFRTC	BIRMINGHAM MUN APT, Birmingham, Ala. 26-10 Wea Det, 26th Wea Sq (AWS)(MATS Det G, 3903d Radar Bomb Scoring Det (SAC)
GREENVILLE AFB, Greenville, S. C. 316th Tr Carr Wg, Medium, Hq & Hq Sq 316th Tr Carr Gp, Medium, Hq 36th Tr Carr Sq, Medium 37th Tr Carr Sq, Medium 75th Tr Carr Sq, Medium 316th Maint & Supply Gp, Hq 316th Maint Sq, Tr Carr, Medium 316th Supply Sq, Tr Carr, Medium 316th Motor Vehicle Sq, Tr Carr, Medium 316th Air Base Gp, Hq & Hq Sq 316th Comm Sq, Tr Carr, Medium 316th Air Police Sq, Tr Carr, Medium 316th Food Service Sq, Tr Carr, Medium 316th Installations Sq, Tr Carr, Medium 316th Base Service Sq, Tr Carr, Medium 316th Finance Disb. Unit, Tr Carr, Medium 316th Medical Gp 502d Tac Control Gp, Hq 605th Tac Control Sq 934th Sig Bn (Separate)(TAC) 12th Photo Tech Unit 256th Med Dispensary Unit, Avn (DA) 1st Vet Det, Avn (DA) 722d AF Band 5th Radar Calib Det 4410th Bomb Disposal Unit	GREENVILLE AFB, Greenville, S. C. 1924th AACS Sq (AACS)(MATS) 25-2 Wea Det, 25th Wea Sq (AWS)(MATS)
GUNTER AFB, Montgomery, Ala. (AU) 2586th AFRTC	
HAWKINS FLD, Jackson, Miss. 2588th AFRTC	HAWKINS FLD, Jackson, Miss. 26-4 Wea Det, 26th Wea Sq (AWS)(MATS)
LAWSON AFB, Ft. Benning, Ga. 4408th Air Base Sq	LAWSON AFB, Ft. Benning, Ga. 1926-3 AACS Det (AACS)(MATS) 25-3 Wea Det, 25th Wea Sq (AWS)(MATS)

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FOURTEENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
MacDILL AFB, MacDill Fld, Fla. (SAC) 2582d AFRTC	
MARIETTA AFB, Marietta, Ga. 2589th AFRTC	MARIETTA AFB, Marietta, Ga. 1115th SAM Sq (Hq Comd. USAF) 1924-1 AACS Det, 1924 AACS Sq (AACS) (MATS) 25-5 Wea Det, 25th Wea Sq (AWS)(MATS)
MEMPHIS MUN APT, Memphis, Tenn. 2584th AFRTC	MEMPHIS MUN APT, Memphis, Tenn. 26-7 Wea Det, 26th Wea Sq (AWS)(MATS) 1922-3 AACS Det, 1922d AACS Sq (AACS) (MATS) 1702-1 Det, 1702d Air Trans Gp (COND) (MATS)
MIAMI INTERNATIONAL APT, Miami, Fla. 2585th AFRTC	MIAMI INTERNATIONAL APT, Miami, Fla. 1925th AACS Sq (AACS)(MATS) 25-12 Wea Det, 25th Wea Sq (AWS)(MATS)
MOODY AFB, Valdosta, Ga. 4409th Standby Base Sq	MOODY AFB, Valdosta, Ga. 1926-1 AACS Det, 1926th AACS Sq (AACS) (MATS)
ORLANDO AFB, Orlando, Fla. Fourteenth Air Force, Hq & Hq Sq 2583d Air Base Gp, Hq & Hq Sq 2583d Base Service Sq 2583d Opns Sq 2583d Maint & Supply Sq 2583d Medical Sq 2583d Assembly Sq *2598th Avn 539th AC&W Gp, Hq 649th AC Sq 650th AC&W Sq 651st AC&W Sq 652d AC&W Sq 7th Radar Calib Det 769th AF Band 37th Comm Sq, Comd	ORLANDO AFB, Orlando, Fla. 1928-1 AACS Det, 1928th AACS Sq (AACS) (MATS) 25-6 Wea Det, 25th Wea Sq (AWS)(MATS)

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FOURTEENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

POPE AFB, Fort Bragg, N. C.
2600th Air Base Sq
8th Air Division (Tactical), Hq & Hq Sq
9th Air Division (Tactical), Hq & Hq Sq
Hq & Hq Sq (Prov) Tactical Air Force,
  Operational

SHAW AFB, Sumter, S. C.
20th Ftr Wg, Hq & Hq Sq
 20th Ftr Gp, Hq
  55th Ftr Sq, Jet
  77th Ftr Sq, Jet
  79th Ftr Sq, Jet
 20th Maint & Supply Gp, Hq
  20th Maint Sq, Ftr, Jet
  20th Supply Sq, Ftr, Jet
  20th Motor Vehicle Sq, Ftr, Jet
 20th Air Base Gp, Hq & Hq Sq
  20th Comm Sq, Ftr, Jet
  20th Air Police Sq, Ftr, Jet
  20th Food Service Sq, Ftr, Jet
  20th Installations Sq, Ftr, Jet
  20th Base Service Sq, Ftr, Jet
  20th Finance Disbursing Unit, Ftr, Jet
 20th Medical Gp
606th AC&W Sq (502d TAC Control Gp)
*30th Motor Transport Sq, Avn
2d Armament Sq, Chemical

SMYRNA AFB, Smyrna, Tenn.
314th Tr Carr Wg, Medium, Hq & Hq Sq
 314th Tr Carr Gp, Medium, Hq
  20th Tr Carr Sq, Medium
  334th Tr Carr Sq, Medium
 314th Maint & Supply Gp, Hq
  314th Maint Sq, Tr Carr, Medium
  314th Supply Sq, Tr Carr, Medium
  314th Motor Vehicle Sq, Tr Carr, Medium
 314th Air Base Gp, Hq & Hq Sq
  314th Comm Sq, Tr Carr, Medium
  314th Air Police Sq, Ftr, Jet
  314th Food Service Sq, Tr Carr, Medium
  314th Installations Sq, Tr Carr, Medium
  314th Base Service Sq, Tr Carr, Medium
  314th Finance Disb. Unit, Tr Carr, Medium
 314th Medical Gp

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

POPE AFB, Fort Bragg, N. C.
1113d SAM Sq (Hq Comd, USAF)
1913-1 AACS Det, 1913th AACS Sq (AACS)
  (MATS)
25-7 Wea Det, 25th Wea Sq (AWS)(MATS)
Hq Sq Flt Sect Det, Air Rescue Service
  (ARS)(MATS)
Flt C, 5th Rescue Sq (ARS)(MATS)

SHAW AFB, Sumter, S. C.
1924-2 AACS Det, 1924th AACS Sq (AACS)
  (MATS)
25-9 Wea Det, 25th Wea Sq (AWS)(MATS)

SMYRNA AFB, Smyrna Tenn.
1922-4 AACS Det, 1922d AACS Sq (AACS)
  (MATS)
26-9 Wea Det, 26th Wea Sq (AWS)(MATS)

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* Negro Personnel

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NUMERICAL LIST CONTINENTAL AIR COMMAND UNITS

UNIT	STATION	AIR FORCE
1st Shoran Beacon Unit	Barksdale AFB, La.	Twelfth
1st Tow Target Sq	Biggs AFB, Texas (SAC)	Twelfth
1st Vet Det, Avn (DA)	Greenville AFB, S. C.	Fourteenth
2d Armament Sq, Chemical	Shaw AFB, S. C.	Fourteenth
2d Ftr Sq, All Wea	Mitchel AFB, N. Y.	First
4th Ftr Wg, Hq & Hq Sq	Langley AFB, Va.	Ninth
4th Ftr Gp, Hq	Langley AFB, Va.	Ninth
4th Maint & Supply Gp, Hq	Langley AFB, Va.	Ninth
4th Maint Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Supply Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Motor Vehicle Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Air Base Gp, Hq & Hq Sq	Langley AFB, Va.	Ninth
4th Comm Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Air Police Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Food Service Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Installations Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Base Service Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Finance Disb. Unit, Ftr, Jet	Langley AFB, Va.	Ninth
4th Medical Gp	Langley AFB, Va.	Ninth
4th Photo Tech Sq	Langley AFB, Va.	Ninth
4th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
5th Ftr Sq, All Wea	Mitchel AFB, N. Y.	First
5th Radar Calib Det	Greenville AFB, S. C.	Fourteenth
7th Radar Calib Det	Orlando AFB, Fla.	Fourteenth
7th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
8th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
11th Radar Calib Det	McChord AFB, Wash.	Fourth
12th Photo Tech Unit	Greenville AFB, S. C.	Fourteenth
12th Radar Calib Det	Mitchel AFB, N. Y.	First

UNIT	STATION	AIR FORCE
14th Ftr Wg, Hq & Hq Sq	Dow AFB, Maine	First
14th Ftr Gp, Hq	Dow AFB, Maine	First
14th Maint & Supply Gp, Hq	Dow AFB, Maine	First
14th Maint Sq, Ftr, Jet	Dow AFB, Maine	First
14th Supply Sq, Ftr, Jet	Dow AFB, Maine	First
14th Motor Vehicle Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Base Gp, Hq & Hq Sq	Dow AFB, Maine	First
14th Comm Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Police Sq, Ftr, Jet	Dow AFB, Maine	First
14th Food Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Installations Sq, Ftr, Jet	Dow AFB, Maine	First
14th Base Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Finance Disb. Unit, Ftr, Jet	Dow AFB, Maine	First
14th Medical Gp	Dow AFB, Maine	First
20th Ftr Wg, Hq & Hq Sq	Shaw AFB, S. C.	Fourteenth
20th Ftr Gp, Hq	Shaw AFB, S. C.	Fourteenth
20th Maint & Supply Gp, Hq	Shaw AFB, S. C.	Fourteenth
20th Maint Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Supply Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Motor Vehicle Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Air Base Gp, Hq & Hq Sq	Shaw AFB, S. C.	Fourteenth
20th Comm Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Air Police Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Food Service Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Installations Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Base Service Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Finance Disb. Unit, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Medical Gp	Shaw AFB, S. C.	Fourteenth
20th Tr Carr Sq, Med	Smyrna AFB, Tenn.	Fourteenth
25th Air Defense Div, Hq & Hq Sq	Silver Lake, Wash.	ADC
(Mailing Address: Gen Delivery, Everett, Washington)		
26th Air Defense Div, Hq & Hq Sq	Roslyn, N. Y.	ADC
28th Comm Sq, Air Force	Mitchel AFB, N. Y.	ConAC
29th Comm Sq, Command	Langley AFB, Va.	Ninth
30th Motor Transport Sq, Avn	Shaw AFB, S. C.	Fourteenth
31st Ftr Wg, Hq & Hq Sq	Turner AFB, Ga.	Fourteenth
31st Ftr Gp, Hq	Turner AFB, Ga.	Fourteenth
31st Maint & Supply Gp, Hq	Turner AFB, Ga.	Fourteenth
31st Maint Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Supply Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Motor Vehicle Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Air Base Gp, Hq & Hq Sq	Turner AFB, Ga.	Fourteenth
31st Comm Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Air Police Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Food Service Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Installations Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Base Service Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth

UNIT	STATION	AIR FORCE
78th Base Service Sq, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Finance Disb. Unit, Ftr, Jet	Hamilton AFB, Calif.	Fourth
78th Medical Gp	Hamilton AFB, Calif.	Fourth
79th Ftr Sq, Jet	Shaw AFB, S. C.	Fourteenth
82d Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
83d Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
84th Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
84th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
85th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
86th Bomb Sq, Lt, Jet	Barksdale AFB, La.	Twelfth
*99th Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
*100th Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
136th Radio Security Sq, Radio Security Det B	Brooks AFB, Texas	Twelfth
161st Tac Recon Sq, Photo-Jet	Langley AFB, Va.	Ninth
162d Tac Recon Sq, Night-Photo	Langley AFB, Va.	Ninth
256th Med Dispensary Unit, Avn (DA)	Greenville AFB, S. C.	Fourteenth
*301st Ftr Sq, SE	Lockbourne AFB, Ohio	Ninth
307th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
308th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
309th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
314th Tr Carr Wg, Med, Hq & Hq Sq	Smyrna AFB, Tenn.	Fourteenth
314th Tr Carr Gp, Med, Hq	Smyrna AFB, Tenn.	Fourteenth
314th Maint & Supply Gp, Hq	Smyrna AFB, Tenn.	Fourteenth
314th Maint Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Supply Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Motor Vehicle Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Air Base Gp, Hq & Hq Sq	Smyrna AFB, Tenn.	Fourteenth
314th Comm Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Air Police Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Food Service Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Installations Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Base Service Sq, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314th Finance Disb Unit, Tr Carr, Med	Smyrna AFB, Tenn.	Fourteenth
314 Medical Gp	Smyrna AFB, Tenn.	Fourteenth
316th Tr Carr Wg, Med, Hq & Hq Sq	Greenville AFB, S. C.	Fourteenth
316th Tr Carr Gp, Med, Hq	Greenville AFB, S. C.	Fourteenth
316th Maint & Supply Gp, Hq	Greenville AFB, S. C.	Fourteenth
316th Maint Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Supply Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Motor Vehicle Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Air Base Gp, Hq & Hq Sq	Greenville AFB, S. C.	Fourteenth
316th Comm Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Air Police Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Food Service Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Installations Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth

* Negro Personnel

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UNIT	STATION	AIR FORCE
316th Base Service Sq, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Finance Disb. Unit, Tr Carr, Med	Greenville AFB, S. C.	Fourteenth
316th Medical Gp	Greenville AFB, S. C.	Fourteenth
317th Ftr Sq, All Wea	Moses Lake AFB, Wash.	Fourth
318th Ftr Sq, All Wea (325th Ftr Sq)	McChord AFB, Wash.	Fourth
325th Ftr Wg, Hq & Hq Sq	Moses Lake AFB, Wash.	Fourth
325th Ftr Gp, Hq	Moses Lake AFB, Wash.	Fourth
325th Maint & Supply Gp, Hq	Moses Lake AFB, Wash.	Fourth
325th Maint Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Supply Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Motor Vehicle Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Air Base Gp, Hq & Hq Sq	Moses Lake AFB, Wash.	Fourth
325th Air Police Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Comm Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Food Service Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Installations Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Base Sv Sq, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Finance Disb. Unit, Ftr, All Wea	Moses Lake AFB, Wash.	Fourth
325th Medical Gp	Moses Lake AFB, Wash.	Fourth
*332d Ftr Wg, Hq & Hq Sq	Lockbourne AFB, Ohio	Ninth
*332d Ftr Gp, Hq	Lockbourne AFB, Ohio	Ninth
*332d Maint & Supply Gp, Hq	Lockbourne AFB, Ohio	Ninth
*332d Maint Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Supply Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Motor Vehicle Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Air Base Gp, Hq & Hq Sq	Lockbourne AFB, Ohio	Ninth
*332d Comm Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Air Police Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Food Service Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Installations Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Base Service Sq, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Finance Disb. Unit, Ftr, SE	Lockbourne AFB, Ohio	Ninth
*332d Medical Gp	Lockbourne AFB, Ohio	Ninth
334th Ftr Sq, Jet	Langley AFB, Va.	Ninth
334th Tr Carr Sq, Med	Smyrna AFB, Tenn.	Fourteenth
335th Ftr Sq, Jet	Langley AFB, Va.	Ninth
336th Ftr Sq, Jet	Langley AFB, Va.	Ninth
363d Tac Recon Gp, Hq	Langley AFB, Va.	Ninth

* Negro Personnel

Revised 1 June 1949

UNIT	STATION	AIR FORCE
*449th Sig Heavy Const Bn, Avn (DA)	Lockbourne AFB, Ohio	Ninth
502d Tac Control Gp, Hq	Greenville AFB, S. C.	Fourteenth
503d AC&W Gp, Hq	Roslyn, N. Y.	First
505th AC&W Gp, Hq	McChord AFB, Wash.	Fourth
531st AC&W Gp, Hq	McChord AFB, Wash.	Fourth
539th AC&W Gp, Hq	Orlando AFB, Fla.	Fourteenth
564th AF Band	Langley AFB, Va.	Ninth
573d AF Band	Hamilton AFB, Calif.	Fourth
579th AF Band	Brooks AFB, Texas	Twelfth
581st AF Band	Mitchel AFB, N. Y.	First
605th Tac Control Sq	Greenville AFB, S. C.	Fourteenth
606th AC&W Sq (502d Tac Control Gp)	Shaw AFB, S. C.	Fourteenth
607th AC&W Sq (502d Tac Control Gp)	Turner AFB, Ga.	Fourteenth
632d AC&W Sq	McChord AFB, Wash.	Fourth
634th AC Sq (Mailing Address: P.O. Box 909, Everett, Wash.)	Everett, Wash.	Fourth
635th AC&W Sq	McChord AFB, Wash.	Fourth
636th AC&W Sq	Kirtland AFB, N. M.(AMC)	Twelfth
637th AC&W Sq (505th AC&W Gp)	Moses Lake AFB, Wash.	Fourth
645th AC Sq	Selfridge AFB, Mich.	Tenth
646th AC&W Sq	Roslyn, N. Y.	First
647th AC&W Sq	Grenier AFB, N. H.	First
648th AC&W Sq	Pine Camp, N. Y.	First
649th AC Sq	Orlando AFB, Fla.	Fourteenth
650th AC&W Sq	Orlando AFB, Fla.	Fourteenth
651st AC&W Sq	Orlando AFB, Fla.	Fourteenth
652d AC&W Sq	Orlando AFB, Fla.	Fourteenth
679th AF Band	Ft. Slocum, N. Y.	First
691st AF Band	Ft. Benj. Harrison, Ind.	Tenth
722d AF Band	Greenville AFB, S. C.	Fourteenth
*766th AF Band	Lockbourne AFB, Ohio	Ninth
769th AF Band	Orlando AFB, Fla.	Fourteenth
*770th AF Band	Lockbourne AFB, Ohio	Ninth
817th Engr Avn Bn (DA)	March AFB, Calif.	Fourth
*837th Engr Avn Bn (DA)	Langley AFB, Va.	Ninth
934th Sig Bn (separate)(Tac)	Greenville AFB, S. C.	Fourteenth
2220th Extension Gp, Hq & Hq Sq	Ft. Benj.Harrison, Ind.	Tenth
*2221st Special Service Unit	Lockbourne AFB, Ohio	Ninth
*2222d Special Service WAF Unit	Lockbourne AFB, Ohio	Ninth
2225th AFORD	Camp Kilmer, N. J.	First
2226th Air Base Gp, Hq & Hq Sq	Ft. Slocum, N. Y.	First
2226th Base Service Sq	Ft. Slocum, N. Y.	First
2226th Assembly & Processing Sq	Ft. Slocum, N. Y.	First
2227th AFRTC	Westover AFB, Mass(MATS)	First
2228th AFRTC	Dow AFB, Maine	First
2229th AFRTC	Griffiss AFB, N.Y.(AMC)	First
2230th AFRTC	Mitchel AFB, N. Y.	First
2231st AFRTC	Newark Mun Apt, N. J.	First
2232d AFRTC	Stewart Field, N. Y.	First

* Negro Personnel

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UNIT	STATION	AIR FORCE
2234th AFRTC	Hanscom Apt, Bedford, Mass.	First
2235th AFRTC	Byrd Fld, Richmond, Va.	Ninth
2236th AFRTC	Godman AFB, Ky.	Ninth
2237th AFRTC	Reading Mun Apt, Pa.	Ninth
2238th AFRTC	Andrews AFB, Wash.D.C. (MATS)	Ninth
2239th AFRTC	Greater Pittsburgh Apt, Pa.	Ninth
2240th AFRTC	Cleveland Mun Apt, Ohio (AMC)	Ninth
2242d AFRTC	Selfridge AFB, Mich.	Tenth
2243d Waf Sq	Mitchel AFB, N. Y.	First
*2244th Avn Sq	Mitchel AFB, N. Y.	First
2344th AFRTC	Hill AFB, Utah, (AMC)	Fourth
2345th AFRTC	McChord AFB, Wash.	Fourth
2346th AFRTC	Hamilton AFB, Calif.	Fourth
2347th AFRTC	Long Beach Mun Apt, Calif.	Fourth
2348th AFRTC	Davis-Monthan AFB, Ariz. (SAC)	Fourth
2349th AFRTC	Hamilton AFB, Calif.	Fourth
2349th AFORD, Det	San Francisco POE, Calif.(Army)	Fourth
2349th AFORD, Det	Seattle POE, Seattle, Wash(Army)	Fourth
2351st WAF Sq	Hamilton AFB, Calif.	Fourth
*2352d Avn Sq	Hamilton AFB, Calif.	Fourth
2463d Air Base Gp, Hq & Hq Sq	Ft. Benj. Harrison, Ind.	Tenth
2463d Maint & Supply Sq	Ft. Benj. Harrison, Ind.	Tenth
2463d Base Service Sq	Ft. Benj. Harrison, Ind.	Tenth
2463d Medical Sq	Ft. Benj. Harrison, Ind.	Tenth
2464th AFRTC	Chanute AFB, Ill. (AFTRC)	Tenth
2465th AFRTC	Wold-Chamberlain Fld, Minn.	Tenth
2466th AFRTC	Stout Field, Ind.	Tenth
2467th AFRTC	Baer Field, Ft. Wayne, Ind.	Tenth
2468th AFRTC	Lowry AFB, Colo. (AFTRC)	Tenth
2469th AFRTC	Scott AFB, Ill. (AFTRC)	Tenth
2470th AFRTC	Sioux City Mun Apt, Iowa	Tenth
2471st AFRTC	Chicago-Orchard Apt, Ill.	Tenth
2472d AFRTC	Fairfax Fld, Kan.	Tenth
2473d AFRTC	Offutt AFB, Neb. (SAC)	Tenth
2475th WAF Sq	Ft. Benj. Harrison, Ind.	Tenth
2476th Base Service Sq	Oscoda AFB, Mich.	Tenth
2582d AFRTC	MacDill AFB, Fla. (SAC)	Fourteenth
2583d Air Base Gp, Hq & Hq Sq	Orlando AFB, Fla.	Fourteenth
2583d Base Service Sq	Orlando AFB, Fla.	Fourteenth
2583d Opns Sq	Orlando AFB, Fla.	Fourteenth
2583d Maint & Supply Sq	Orlando AFB, Fla.	Fourteenth
2583d Assembly Sq	Orlando AFB, Fla.	Fourteenth
2583d Medical Sq	Orlando AFB, Fla.	Fourteenth
2584th AFRTC	Memphis Mun Apt, Tenn.	Fourteenth
2585th AFRTC	Miami International Apt, Fla.	Fourteenth
2586th AFRTC	Gunter AFB, Montgomery,Ala.(AU)	Fourteenth
2587th AFRTC	Birmingham Mun Apt, Ala.	Fourteenth
2588th AFRTC	Hawkins AFB, Jackson, Miss.	Fourteenth
2589th AFRTC	Marietta AFB, Ga.	Fourteenth
2590th AFRTC	Barksdale AFB, La.	Twelfth
2591st AFRTC	Ellington AFB, Texas	Twelfth

* Negro Personnel

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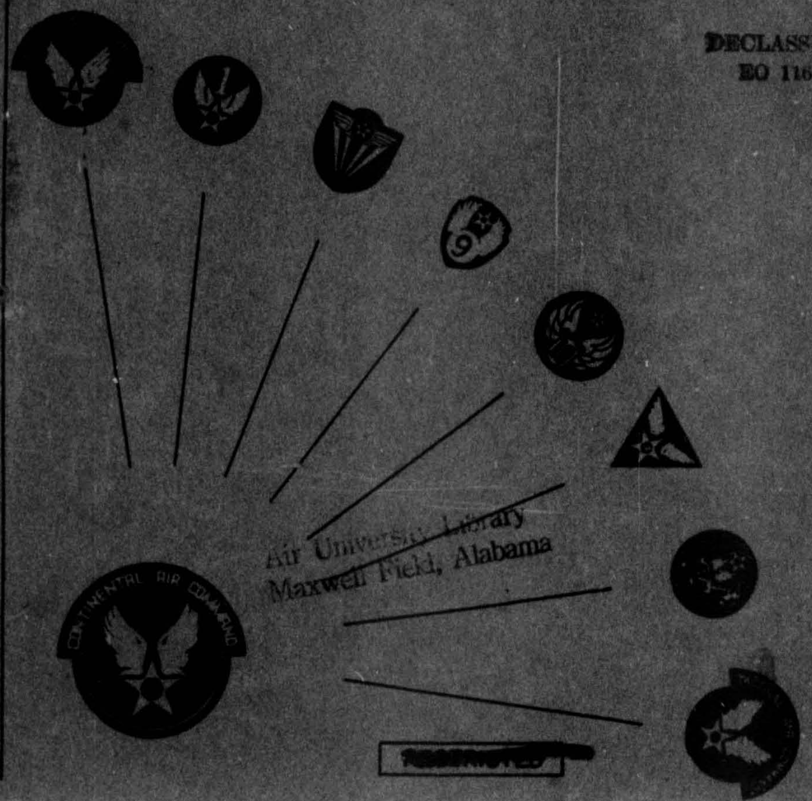

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HEADQUARTERS

CONTINENTAL AIR COMMAND

MITCHEL AIR FORCE BASE, NEW YORK

DIRECTORY

of

UNITS AND INSTALLATIONS

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Mitchel Air Force Base, New York

DIRECTORY
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UNITS AND INSTALLATIONS

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HEADQUARTERS
CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

DIRECTORY
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UNITS AND INSTALLATIONS

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ABBREVIATIONS

AACS - Airways & Air Communications Service
AC - Aircraft Control
AC&W - Aircraft Control & Warning
ADC - Air Defense Command
Adm - Administrative
AF - Air Force
AFB - Air Force Base
AFTRC - Air Training Command
AFRTC - Air Force Reserve Training Center
AMC - Air Materiel Command
Apl - Airplane
Apt - Airport
Atchd - Attached
AU - Air University
Avn - Aviation
AWS - Air Weather Service
Base Sv - Base Services
BN - Battalion
Bomb - Bombardment
Calib - Calibration
Carr - Carrier
Co - Company
Comd - Command
Comm - Communitcation

ABBREVIATIONS (contd)

ConAC - Continental Air Command
Const - Construction
Det - Detachment
Div - Division
Engr - Engineering or Engineer
Fld - Field
Flt - Flight
Ftr - Fighter
Gp - Group
Hq - Headquarters
JP - Jet-Propelled
L - Light
LB - Light Bombardment
Loc - Location
Maint - Maintenance
Mat - Materiel
MATS - Military Air Transport Service
Med - Medical
Mun - Municipal
Oprs - Operations
Oprg - Operating
AFORD - Air Force Overseas Replacement Depot
Ph - Photo
POE - Port of Embarkation
Rcn - Reconnaissance

ABBREVIATIONS (Contd)

Res - Reserve

SAC - Strategic Air Command

SAM - Special Air Missions

Sch - School

SE - Single Engine

Sep - Separation

SEPD - Seattle Port Detachment

SFPD - San Francisco Port Detachment

Sig- - Signal

Sq - Squadron

Sta - Station

Sv - Service(s)

TAC - Tactical Air Command

Tech - Technical

Trp - Troop

VH = Very Heavy

VHB - Very Heavy Bombarment

VLR - Very Long Range

Wea - Weather

Wg - Wing

Wpns - Weapons

WRAMA - Warner Robins Air Materiel Area

CONTINENTAL AIR COMMAND
DIRECTORY
OF
UNITS AND INSTALLATIONS

Part I

COMMANDS AND AIR FORCES

Continental Air Command, Hq & Hq Sq
Mitchel Air Force Base, New York

Air Defense Command, Hq & Hq Sq
Mitchel Air Force Base, New York

Tactical Air Command, Hq & Hq Sq
Langley Air Force Base, Virginia

First Air Force, Hq & Hq Sq
Fort Slocum, New York
(Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New Yok, Rhode Island and Vermont)

Fourth Air Force, Hq & Hq Sq
Hamilton Air Force Base, Hamilton, California
(Arizona, California, Idaho, Montana, Nevada, Oregon, Utah and Washington)

Ninth Air Force, Hq & Hq Sq
Langley Air Force Base, Virginia
(District of Columbia, Delaware, Kentucky, Maryland, Ohio, Pennsylvania, Virginia and West Virginia)

Tenth Air Force, Hq & Hq Sq
Fort Benjamin Harrison, Indiana
(Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin and Wyoming)

Twelfth Air Force, Hq & Hq Sq
Brooks Air Force Base, Texas
(Arkansas, Louisiana, New Mexico, Oklahoma and Texas)

Fourteenth Air Force, Hq & Hq Sq
Orlando Air Force Base, Orlando, Florida
(Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina and Tennessee)

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Part II

REGULAR USAF UNITS

UNITS AND INSTALLATIONS OF CONTINENTAL AIR COMMAND AND UNITS OF OTHER COMMANDS ON CONTINENTAL AIR COMMAND INSTALLATIONS

(Note: Command jurisdiction of installations noted in parentheses)

UNITS AND INSTALLATIONS

CAMP KILMER, Stelton, N.J. (Army)
2225th AFORD

DOW AFB, Bangor, Me.
14th Ftr Wg Hq & Hq Sq
14th Ftr Gp, Hq
37th Ftr Sq, Jet
48th Ftr Sq, Jet
49th Ftr Sq, Jet
14th Maint & Supply Gp, Hq
14th Maint Sq, Ftr, Jet
14th Supply Sq, Ftr, Jet
14th Motor Vehicle Sq, Ftr, Jet
14th Air Base Gp, Hq & Hq Sq
14th Comm Sq, Ftr, Jet
14th Air Police Sq, Ftr, Jet
14th Food Service Sq, Ftr, Jet
14th Installations Sq,Ftr, Jet
14th Base Service Sq, Ftr, Jet
14th Finance Disbursing Unit, Ftr, Jet
14th Medical Gp
2228th AFRTC

FORT SLOCUM, N.Y.
First Air Force, Hq & Hq Sq
34th Comm Sq, Command
**22d Sig Radar Maint Unit (Type A) (DA)
**284th Sig Radar Maint Unit (Type C)(DA)
679th AF Band
2226th Air Base Gp, Hq & Hq Sq
2226th Base Service Sq
2226th Assembly & Processing Sq

GRENIER AFB, Manchester, N.H. (SAC)
647th AC&W Sq (503d AC&W Gp)

GRIFFISS AFB, Rome, N.Y. (AMC)
2229th AFRTC

HANSCOM APT, Bedford, Mass.
2234th AFRTC

UNITS OF OTHER COMMANDS ON ConAC STATIONS

DOW AFB, Bangor, Me.
12-6 Wea Det, 12 Wea Sq (AWS)(MATS)
1915th AACS Sq (AACS)(MATS

HANSCOM APT, Bedford, Mass.
12-2 Wea Det, 12 Wea Sq. (AWS)(MATS

** No Personnel Assigned

Part II

UNITS AND INSTALLATIONS OF CONTINENTAL AIR COMMAND AND UNITS OF OTHER COMMANDS ON CONTINENTAL AIR COMMAND INSTALLATIONS

(Note: Command jurisdiction of installations noted in parentheses)

FIRST AIR FORCE

UNITS AND INSTALLATIONS

BUFFALO, New York
Det 2, 645th AC Sq (503d AC Gp)

CAMP KILMER, Stelton, N.J.(Army)
1225th AFORD

DOW AFB, Bangor, Me. (ConAC)
14th Ftr Wg, Hq & Hq Sq
- 14th Ftr Gp, Hq
  - 37th Ftr Sq, Jet
  - 48th Ftr Sq, Jet
  - 49th Ftr Sq, Jet
- 14th Maint & Supply Gp, Hq
  - 14th Maint Sq, Ftr, Jet
  - 14th Supply Sq, Ftr, Jet
  - 14th Motor Vehicle Sq, Ftr, Jet
- 14th Air Base Gp, Hq & Hq Sq
  - 14th Comm Sq, Ftr, Jet
  - 14th Air Police Sq, Ftr, Jet
  - 14th Food Service Sq, Ftr, Jet
  - 14th Installations Sq, Ftr, Jet
  - 14th Base Service Sq, Ftr, Jet
  - 14th Finance Disb Unit, Ftr, Jet
- 14th Medical Gp

Det 1, 647th AC&W Sq (503d AC&W Gp)

FLOYD BENNETT NAS, New York (Navy)
1230th AFRTC

FORT WILLIAMS, Portland, Maine(Army)
Det 3, 647th AC&W Sq (503d AC&W Gp)

FORT ETHAN ALLEN, Burlington, Vt. (Army)
Det 1, 648th AC&W Sq (503d AC&W Gp)

GRENIER AFB, Manchester, N.H. (ConAC)
82d Ftr Wg, Hq & Hq Sq
- 82d Ftr Gp, Hq
  - 95th Ftr Sq, SE
  - 96th Ftr Sq, SE
  - 97th Ftr Sq, SE

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

DOW AFB, Bangor, Me.
12-6 Wea Det, 12 Wea Sq (AWS)(MATS)
1916th AACS Sq (AACS)(MATS)

GRENIER AFB, Manchester, N.H.
12-7 Wea Det, 12 Wea Sq (AWS) (MATS)
1917-1 AACS Det, 1917 AACS Sq (AACS) (MATS)

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FIRST AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

2d Maint & Supply Gp, Hq
2d Maint Sq, Ftr, SE
2d Supply Sq, Ftr, SE
2d Motor Vehicle Sq, Ftr, SE
2d Air Base Gp, Hq & Hq Sq
2d Comm Sq, Ftr, SE
2d Air Police Sq, Ftr, SE
2d Food Service Sq, Ftr, SE
2d Base Service Sq, Ftr, SE
2d Installations Sq, Ftr, SE
2d Finance Disb Unit, Ftr, SE
2d Medical Gp
[illegible]th AC&W Sq ([illegible] AC&W Gp)

HANSCOM AFB, Bedford, Mass. (ConAC)
[illegible]th AFRTC

MITCHEL AFB, N.Y. (ConAC)
Continental Air Command, Hq & Hq Sq
[illegible]th Comm Sq, Air Force
Air Defense Command, Hq & Hq Sq
52d Ftr Wg, Hq & Hq Sq
52d Ftr Gp, Hq
2d Ftr Sq, A/W
5th Ftr Sq, A/W

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

HANSCOM AFB, Bedford, Mass.
12-2 Wea Det, 12 Wea Sq (AWS) (

MITCHEL AFB, N.Y.
2102d Wea Gp, Hq & Hq Sq (AWS) (MAT
12th Wea Sq (AWS) (MATS)
1112th SAM Sq (Hq Comd, USAF)
1802d AACS Gp, Hq & Hq Sq (AACS)(
1910th AACS Sq (AACS) (MATS)
12-10 Wea Det, 12 Wea Sq (AWS)(MA
2059-1 Wea Det, 2059th Wea Wg (AWS)
(MATS

FIRST AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

MITCHEL AFB, N. Y.

- #Continental Air Command, Hq & Hq Sq
  - 28th Comm Sq, Air Force
- #Air Defense Command, Hq & Hq Sq
- 52d Ftr Wg, Hq & Hq Sq
  - 52d Ftr Gp, Hq
    - 2d Ftr Sq, All Wea
    - 5th Ftr Sq, All Wea
  - 52d Maint & Supply Gp, Hq
    - 52d Maint Sq, Ftr, All Wea
    - 52d Supply Sq, Ftr, All Wea
    - 52d Motor Vehicle Sq, Ftr, All Wea
  - 52d Air Base Gp, Hq & Hq Sq
    - 52d Comm Sq, Ftr, All Wea
    - 52d Air Police Sq, Ftr, All Wea
    - 52d Food Service Sq, Ftr, All Wea
    - 52d Installations Sq, Ftr, All Wea
    - 52d Base Service Sq, Ftr, All Wea
    - 52d Finance Disbursing Unit, Ftr, All Wea
  - 52d Medical Gp
- 12th Radar Calib Det
- 581st AF Band
- 2230th AFRTC
- 2243d WAF Sq
- *2244th Avn Sq

NEWARK MUN APT, Newark, N. J.

- 2231st AFRTC

OTIS AFB, Falmouth, Mass.

- 33d Ftr Wg, Hq & Hq Sq
  - 33d Ftr Gp, Hq
    - 58th Ftr Sq, Jet
    - 59th Ftr Sq, Jet
    - 60th Ftr Sq, Jet
  - 33d Maint & Supply Gp, Hq
    - 33d Maint Sq, Ftr, Jet
    - 33d Supply Sq, Ftr, Jet
    - 33d Motor Vehicle Sq, Ftr, Jet
  - 33d Air Base Gp, Hq & Hq Sq
    - 33d Comm Sq, Ftr, Jet
    - 33d Air Police Sq, Ftr, Jet
    - 33d Food Service Sq, Ftr, Jet
    - 33d Installations Sq, Ftr, Jet
    - 33d Base Service Sq, Ftr, Jet
    - 33d Finance Disbursing Unit, Ftr, Jet
  - 33d Medical Gp

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

MITCHEL AFB, N. Y.

- 2102d Wea Gp, Hq & Hq Sq (AWS)(MATS)
- 12th Wea Sq,(AWS)(MATS)
- 1112th SAM Sq (Hq Comd, USAF)
- 1802d AACS Gp, Hq & Hq Sq (AACS)(MATS)
- 1916th AACS Sq (AACS)(MATS)
- 12-10 Wea Det, 12 Wea Sq, (AWS)(MATS)
- 2059-4 Wea Det, 2059th Wea Sq (AWS)(MATS)

NEWARK MUN APT, Newark, N. J.

- 12-11 Wea Det, 12 Wea Sq (AWS)(MATS)

OTIS AFB, Falmouth, Mass.

- 12-24 Wea Det, 12th Wea Sq (AWS)(MATS)
- 1917-2 AACS Det, 1917th AACS Sq (AACS) (MATS)

Asgd to ConAC
* Negro Personnel

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FIRST AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

PINE CAMP, Great Bend, N. Y. (Army)
648th AC&W Sq (503d AC&W Gp)

ROSLYN, N. Y. (Sub-base, Mitchel AFB)
‡28th Air Defense Division, Hq & Hq Sq
- 503d AC&W Gp, Hq
  - Det 1 & 2, 645th AC Sq
  - 646th AC&W Sq
  - Det 1 & 2, 647th AC&W Sq
  - Det 2 & 3, 648th AC&W Sq
- 672d AC&W Sq (503d AC&W Gp)
  - Det 1, 2 & 3, 672d AC&W Sq

STEWART FIELD, Newburgh, N. Y.
2232d AFRTC
4400th Air Base Gp, Hq & Hq Sq
- 4401st Maint & Supply Sq
- 4402d Air Installation Sq
- 4403d Station Medical Sq

WESTOVER AFB, Westover Fld, Mass. (MATS)
2227th AFRTC

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

STEWART FIELD, Newburgh, N. Y.
12-15 Wea Det, 12 Wea Sq, (AWS) (MATS)
1916-3 AACS Det, 1916th AACS Sq (AACS) (MATS)

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‡ Asgd Air Defense Command

FOURTH AIR FORCE

UNITS AND INSTALLATIONS

EVERETT, Wash.
(Mailing Address: P.O. Box 909, Everett, Wash.)
[illegible]4th AC Sq (505th AC&W Gp)

HAMILTON AFB, Hamilton, Calif. (ConAC)

- Fourth Air Force, Hq & Hq Sq
  - [illegible]5th Comm Sq, Command
  - 78th Ftr Wg, Hq & Hq Sq
    - 78th Ftr Gp, Hq
      - 82d Ftr Sq, Jet
      - 83d Ftr Sq, Jet
      - 84th Ftr Sq, Jet
    - 78th Maint & Supply Gp, Hq
      - 78th Maint Sq, Ftr, Jet
      - 78th Supply Sq, Ftr, Jet
      - 78th Motor Vehicle Sq, Ftr, Jet
    - 78th Air Base Gp, Hq & Hq Sq
      - 78th Comm Sq, Ftr, Jet
      - 78th Air Police Sq, Ftr, Jet
      - 78th Food Service Sq, Ftr, Jet
      - 78th Installations Sq, Ftr, Jet
      - 78th Base Service Sq, Ftr, Jet
      - 78th Finance Disb Unit, Ftr, Jet
    - 78th Medical Gp
  - [illegible]73d AF Band
  - [illegible]46th AFRTC
  - [illegible]349th AFCRD
  - [illegible]351st WAF Sq
  - *2352d Avn Sq

LETTERMAN GENERAL HOSPITAL, Presidio of San Francisco, Calif. (Army)
[illegible]08th Hosp Sq (Letterman Gen Hosp)

LONG BEACH MUN APT, Long Beach, Calif. (ConAC)
[illegible]47th AFRTC

MADIGAN GENERAL HOSPITAL, Tacoma, Wash. (Army)
[illegible]10th Hosp Sq (Madigan Gen Hosp)

McCHORD AFB, Wash. (ConAC)

- [illegible]2d Tr Carr Wg Hq & Hq Sq
  - [illegible]2d Tr Carr Gp, Hq
    - [illegible]th Tr Carr Sq, M
    - [illegible]th Tr Carr Sq, M
    - [illegible]th Tr Carr Sq, M

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

HAMILTON AFB, Hamilton, Calif. (ConAC)
1117th SAM Sq (Hq Comd, USAF)
1801st AACS Gp Hq (AACS)(MATS)
1902d AACS Sq (AACS)(MATS)
10-5 Wea Det, 5th Wea Sq (AWS)
Det 7, Hamilton Flt Service Ctr
2150th Rescue Unit (ARS)(MATS)
Flt A, 2150th Rescue Unit (ARS)(MATS)

LONG BEACH MUN APT, Long Beach, Calif.
9-[illegible]0 Wea Det, [illegible]th Wea Sq (AWS)(MATS)

McCHORD AFB, Wash. (ConAC)
1905th AACS Sq (AACS)(MATS)
Flt C, 2150th Rescue Unit (ARS)(MATS)

10-10 Wea Det, 10th Wea Sq (AWS)(MATS)
Det 9, McChord Flt Serv Ctr (MATS)

* Negro Personnel

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FOURTH AIR FORCE (contd)

UNITS AND INSTALLATIONS

62d Maint & Supply Gp, Hq
 62d Maint Sq, Tr Carr, M
 62d Supply Sq, Tr Carr, M
 62d Motor Vehicle Sq, Tr Carr, M
62d Air Base Gp, Hq & Hq Sq
 62d Comm Sq, Tr Carr, M
 62d Air Police Sq, Tr Carr, M
 62d Food Service Sq, Tr Carr, M
 62d Installations Sq, Tr Carr, M
 62d Base Service Sq, Tr Carr, M
 62d Finance Disb Unit, Tr Carr, M
62d Medical Gp
318th Ftr Sq, A/W (325th Ftr Gp)
319th Ftr Sq, A/W (325th Ftr Gp)
11th Radar Calbr Det
505th AC&W Gp, Hq
 635th AC&W Sq

MOSES LAKE AFB, Moses Lake, Wash. (ConAC)
325th Ftr Wg, Hq & Hq Sq
 325th Ftr Gp, Hq
  317th Ftr Sq, A/W
 325th Maint & Supply Gp, Hq
  325th Maint Sq, Ftr, A/W
  325th Supply Sq, Ftr, A/W
  325th Motor Vehicle Sq, Ftr, A/W
 325th Air Base Gp, Hq &Hq Sq
  325th Comm Sq, Ftr, A/W
  325th Air Police Sq, Ftr, A/W
  325th Food Service Sq, Ftr, A/W
  325th Installations Sq, Ftr, A/W
  325th Base Service Sq, Ftr, A/W
  325th Finance Disb Unit, Ftr, A/W
 325th Medical Gp
637th AC&W Sq (505th AC&W Gp)

PORTLAND MUN APT, Portland, Oregon (ConAC)
2343d AFRTC

SAN FRANCISCO PE, Ft. Mason, Calif.(ConAC)
Det, 2349th AFORD

SEATTLE PE, Seattle, Wash. (Army)
Det, 2349th AFORD

SILVER LAKE, Wash.
(Mailing Address: P.O.Box 909, Everett, Wash.)
 25th Air Division, (Defense) Hq & Hq Sq

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

MOSES LAKE AFB, Moses Lake, Wash.
10-7 Wea Det, 10th Wea Sq (AWS)(MATS)
1905-5 AACS Det (AACS)(MATS)
Co "C", 817th Engr Avn Bn (SAC)

PORTLAND MUN APT, Portland, Oregon
1905-4 AACS Det. 1905th AACS Sq
 (AACS)(MATS)
2101-23 Wea Det, 2103d Wea Sq (AWS)(

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FOURTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

MOSES LAKE AFB, Moses Lake, Wash.

- 325th Ftr Wg, Hq & Hq Sq
  - 325th Ftr Gp, Hq
    - 317th Ftr Sq, All Wea
  - 325th Maint & Supply Gp, Hq
    - 325th Maint Sq, Ftr, All Wea
    - 325th Supply Sq, Ftr, All Wea
    - 325th Motor Vehicle Sq, Ftr, All Wea
  - 325th Air Base Gp, Hq & Hq Sq
    - 325th Comm Sq, Ftr, All Wea
    - 325th Air Police Sq, Ftr, All Wea
    - 325th Food Service Sq, Ftr, All Wea
    - 325th Installations Sq, Ftr, All Wea
    - 325th Base Service Sq, Ftr, All Wea
    - 325th Finance Disb. Unit, Ftr, All Wea
  - 325th Medical Gp
- 637th AC&W Sq (505th AC&W Gp)

SILVER LAKE, Wash.
(Mailing Address: Gen Del, Everett, Wash.)
‡25th Air Defense Division, Hq & Hq Sq

SAN FRANCISCO POE, Ft. Mason, Calif. (Army)
Det, 2349th AFORD

SEATTLE POE, Seattle, Wash. (Army)
Det, 2349th AFORD

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

MOSES LAKE AFB, Moses Lake, Wash.
10-7 Wea Det, 10th Wea Sq (AWS) (MATS)
1905-5 AACS Det (AACS)(MATS)

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‡ Asgd to ADC

NINTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
ANDREWS AFB, Washington 20, D. C. (USAF Comd) 2238th AFRTC	
BYRD FLD, Richmond, Va. 2235th AFRTC	BYRD FLD, Richmond, Va. 12-4 Wea Det, 12 Wea Sq (AWS)(MATS)
CLEVELAND MUN APT, Cleveland, Ohio (AMC) 2240th AFRTC	
DOVER AFB, Dover, Del. (Inactive) 4404th Standby Base Sq	
GODMAN AFB, Fort Knox, Ky. 2236th AFRTC 3d Depot Unit A (Type A)	GODMAN AFB, Fort Knox, Ky. 16-3 Wea Det, 16 Wea Sq (AWS)(MATS) 1918-4 AACS Det, 1918 AACS Sq (AACS) (MATS)
GREATER PITTSBURGH APT, Coraopolis, Pa. 2239th AFRTC	GREATER PITTSBURGH APT, Coraopolis, Pa. 12-21 Wea Det, 12 Wea Sq (AWS)(MATS) 1912-1 AACS Det, 1912 AACS Sq (AACS) (MATS)

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NINTH AIR FORCE (contd)

UNITS AND INSTALLATIONS

LANGLEY AFB, Va. (contd)
4th Air Base Gp, Hq & Hq Sq
  4th Comm Sq, Ftr, Jet
  4th Air Police Sq, Ftr, Jet
  4th Food Service Sq, Ftr, Jet
  4th Installations Sq, Ftr, Jet
  4th Base Service Sq, Ftr, Jet
  4th Finance Disb Unit, Ftr, Jet
 4th Medical Gp
363d Tac Recon Gp, Hq
 161st Tac Recon Sq, Photo-Jet
 162d Tac Recon Sq, Night-Photo
4412th WAF Sq
564th AF Band
363 Recon Tech Sq
29th Comm Sq, Command
4415th Liaison Flt
Det 2, 672d AC&W Sq (503d AC&W Gp)

LOCKBOURNE AFB, Columbus, Ohio (ConAC)
*2260th Air Base Sq

RAVENNA ARSENAL, Apco, Ohio
Det 1, 615th AC&W Sq (503d AC&W Gp)

READING MUN APT, Reading, Pa.
2237th AFRTC

VALLEY FORGE GEN HOSP,
Phoenixville, Pa(Army)
2203d Hosp Sq (Valley Forge Gen Hosp)

WASHINGTON NATIONAL AIRPORT, Gravelly Point, Va.
672d AC&W Sq (503d AC&W Gp)
 (less Dets 1, 2 and 3)

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

LOCKBOURNE AFB, Columbus, Ohio
1914-2 AACS Det, 1914th AACS Sq
 (AACS)(MATS)
1-19 Wea Det, 1st Wea Sq (AACS) (MATS)

READING MUN APT, Reading, Pa.
12-14 Wea Det, 12th Wea Sq (AWS)(MATS)

* Negro Personnel

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TENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
ATTERBURY AFB, Columbus, Ind. (ConAC) 2466th AFRTC	
BAER FLD, Fort Wayne, Ind. (ConAC) (Caretaker Status)	
FAIRFAX FLD, Kansas City, Kans. (ConAC) 2472 AFRTC	**FAIRFAX FLD, Kansas City, Kansas** Acft Assy Plant #2 (AMC) 19-1 Wea Det, 19th Wea Sq (AWS) (MATS)
BENJAMIN HARRISON AFB, Fort Benjamin Harrison, Ind. Tenth Air Force, Hq & Hq Sq 36th Comm Sq, Command 601st AF Band 2475th WAF Sq 2211th Medical Service Sq 2463d Air Base Gp, Hq & Hq Sq 2463d Maint & Supply Sq 2463d Air Police Sq 2463d Air Installations Sq 2463 Food Service Sq 2463d Medical Sq #2220th Extension Gp, Hq & Hq Sq ConAC Publications Depot ConAC Harrison Fld Printing Plant USAF Extension Course Dept	
FITZSIMONS GEN HOSP, Denver, Colo. (Army) 2208th Hosp Sq (Fitzsimons Gen Hosp)	
MARSHALL AFB, Ft. Riley, Kans. (ConAC) 2406th Air Base Sq	**MARSHALL AFB, Ft. Riley, Kans.** 1911-2 AACS Det, 1911th AACS Sq (MATS) 19-10 Wea Det, 19th Wea Sq (AWS) (MATS)
OFFUTT AFB, Omaha, Neb. (SAC) 2473d AFRTC	
O'HARE INTERNATIONAL APT, Park Ridge, Ill, (ConAC) 2471st AFRTC	**O'HARE INTERNATIONAL APT, Park Ridge, Ill** 16-4 Wea Det, 16th Wea Sq (AWS) (MATS) 1114th SAM Sq (Hq Comd, USAF) Det 2750th AFB Hq & Hq Sq (Air Museum) (AMC)
OSCODA AFB, Oscoda, Mich. (Sub-base, Selfridge AFB) (ConAC) 2470th Base Service Sq	
PERCY JONES GEN HOSP, Battle Creek, Mich. (Army) 2204th Hosp Sq (Percy Jones Gen Hosp)	

#Asgd Direct to ConAC

TENTH AIR FORCE (contd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
SCOTT AFB, Belleville, Ill.(AFTRC) 2469th AFRTC	
SHERMAN AFB, Ft. Leavenworth, Kans.(ConAC) 4405th Air Base Sq	SHERMAN AFB, Ft. Leavenworth, Kans 1911-3 AACS Det, 1911th AACS Sq (AACS)(MATS) 19-5 Wea Det, 19th Wea Sq (AWS)(MATS)
SELFRIDGE AFB, Selfridge Fld, Mich.(ConAC) 56th Ftr Wg, Hq & Hq Sq 56th Ftr Gp, Hq 61st Ftr Sq, Jet 62d Ftr Sq, Jet 63d Ftr Sq, Jet 56th Maint & Supply Gp, Hq 56th Maint Sq, Ftr, Jet 56th Supply Sq, Ftr, Jet 56th Motor Vehicle Sq, Ftr, Jet 56th Air Base Gp, Hq & Hq Sq 56th Comm Sq, Ftr, Jet 56th Air Police Sq, Ftr, Jet 56th Food Service Sq, Ftr, Jet 56th Installations Sq, Ftr, Jet 56th Base Service Sq, Ftr, Jet 56th Finance Disb Unit, Ftr, Jet 56th Medical Gp 645th AC Sq (503d AC&W Gp) less Dets 1, 2 & 3 2242d AFRTC	SELFRIDGE AFB, Selfridge Fld 1914-3 AACS Det, 1914th AACS Sq(AACS)(MATS) Flt C, 2151st Rescue Unit, (ARS)(MATS) 16-8 Wea Det, 16th Wea Sq (AWS)(MATS)
SIOUX CITY MUN APT, Sioux City, Iowa (ConAC) (Caretaker Status)	
STOUT FLD, Indianapolis, Ind.(ConAC) No units assigned	STOUT FLD, Indianapolis, Ind. 1918-2 AACS Det, 1918th AACS Sq(AACS)(MATS) 16-9 Wea Det, 16th Wea Sq(AWS)(MATS)
WOLD-CHAMBERLAIN FLD, Minneapolis, Minn, (ConAC) 2465th AFRTC	WOLD-CHAMBERLAIN FLD, Minneapolis 16-6 Wea Det, 16th Wea Sq (AWS)(MATS) 1918-1 AACS Det, 1918th AACS Sq(AACS)(MATS)

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TWELFTH AIR FORCE

UNITS AND INSTALLATIONS

ARMY & NAVY GENERAL HOSPITAL,
Hot Springs Nat'l Park, Ark.
2205th Hosp Sq (A & N Gen Hosp)

BARKSDALE AFB, La. (AFTRC)
47th Bomb Wg, L , Hq & Hq Sq
47th Bomb Gp, L , Hq
84th Bomb Sq, L , Jet
85th Bomb Sq, L , Jet
86th Bomb Sq, L , Jet
47th Maint & Supply Gp, Hq
47th Maint Sq, Bomb, L , Jet
47th Supply Sq, Bomb, L , Jet
47th Motor Vehicle Sq, Bomb, L , Jet
47th Air Base Gp, Hq & Hq Sq
47th Comm Sq, Bomb, L , Jet
47th Food Service Sq, Bomb, L , Jet
47th Air Police Sq, Bomb, L , Jet
47th Installations Sq, Bomb, L , Jet
47th Base Service Sq, Bomb, L , Jet
47th Finance Disb. Unit, Bomb, L , Jet
47th Medical Gp
1st Shoran Beacon Unit

BIGGS AFB, Biggs Fld, Tex. (SAC)
1st Tow Target Sq

BROOKE ARMY MEDICAL CENTER, Fort Sam
Houston, Texas (Army)
2206th Hosp Sq (Brooke Army Med Ctr)

BROOKS AFB, Texas (ConAC)
Twelfth Air Force, Hq & Hq Sq
40th Comm Sq, Comd
570th AF Band
2595th Air Base Gp, Hq & Hq Sq
2595th Base Service Sq
2595th Maint & Supply Sq
2595th Opns Sq
2595th Medical Sq
*2590th Avn Sq
#Det B, 136th Radio Security Sq (USAF)
2597th AF Police Sq (Off-Base)

CAMP LEROY JOHNSON, New Orleans, La. (Army)
2594th AFORD

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

BROOKS AFB, Texas
1110th SAM Sq, (Hq Comd, USAF)
24-4 Wea Det, 24th Wea Sq (AWS) (MATS)
1923-2 AACS Det, 1923d AACS Sq (AACS) (MATS)
8th Radio Sq, Mobile (USAF)
156th Radio Security Sq (USAF) (Security Service)
24th Wea Sq (AWS) (MATS)
Hq & Hq Sq, USAF Security Service (USAF Comd)

*Negro Personnel
#Attached for Adm & Log Support

Revised 1 Sep 1949

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TENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
ATTERBURY AFB, Columbus Ind.(Sub-base, Stout Fld, Ind.) (No units)	
BAER FLD, Fort Wayne, Ind. 2467th AFRTC	
CHANUTE AFB, Chanute Fld, Ill. (AFTRC) 2464th AFRTC	
CHICAGO-ORCHARD APT, Park Ridge, Ill. 2471st AFRTC	CHICAGO-ORCHARD APT, Ill. 16-4 Wea Det, 16th Wea Sq, (AWS)(MATS) 1114th SAM Sq (Hq Comd, USAF) Det 2750 AFB Hq & Hq Sq (Air Museum)(AMC)
FAIRFAX FLD, Kansas City, Kans. 2472d AFRTC	FAIRFAX FLD, Kansas City, Kans. ACFT Assy Plant #2 (AMC) 19-1 Wea Det, 19 Wea Sq (AWS) (MATS)
FORT BENJAMIN HARRISON, Ind. Tenth Air Force, Hq & Hq Sq 36th Comm Sq, Command 691st AF Band 2475th WAF Sq 2463d Air Base Gp, Hq & Hq Sq 2463d Maint & Supply Sq 2463d Base Service Sq 2463d Medical Sq #2220th Extension Gp, Hq & Hq Sq	
LOWRY AFB, Denver, Colo. (AFTRC) 2468th AFRTC	
MARSHALL AFB, Ft Riley, Kans. 4406th Air Base Sq	MARSHALL AFB, Ft Riley, Kans. 1911-2 AACS Det, 1911th AACS (MATS) 19-10 Wea Det, 19 Wea Sq (AWS)(MATS)
OFFUTT AFB, Fort Crook, Nebr. (SAC) 2473d AFRTC	
OSCODA AFB, Oscoda, Mich. (Sub-base, Selfridge AFB) 2476th Base Service Sq	

# Asgd direct to ConAC

Revised 1 May 1949

TENTH AIR FORCE (Cont'd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
SCOTT AFB, Belleville, Ill, (AFTRC) 2469th AFRTC	
SHERMAN AFB, Ft Leavenworth, Kans. 4405th Air Base Sq	SHERMAN AFB, Ft Leavenworth, Kans. 1911-3 AACS Det, 1911th AACS Sq (AACS)(MATS) 19-5 Wea Det, 19th Wea Sq, (AWS)(MATS)
SELFRIDGE AFB, Selfridge Fld, Mich. 56th Ftr Wg, Hq & Hq Sq 56th Ftr Gp, Hq 61st Ftr Sq, Jet 62d Ftr Sq, Jet 63d Ftr Sq, Jet 56th Maint & Supply Gp, Hq 56th Maint Sq, Ftr, Jet 56th Supply Sq, Ftr, Jet 56th Motor Vehicle Sq, Ftr, Jet 56th Air Base Gp, Hq & Hq Sq 56th Comm Sq, Ftr, Jet 56th Air Police Sq, Ftr, Jet 56th Food Service Sq, Ftr, Jet 56th Installations Sq, Ftr, Jet 56th Base Service Sq, Ftr, Jet 56th Finance Disbursing Unit, Ftr, Jet 56th Medical Gp 645th AC&W Sq (503d AC&W Gp) Less Det 1 & 2 2242d AFRTC	SELFRIDGE AFB, Selfridge Fld, Mich. 1914-3 AACS Det, 1914th AACS Sq, (AACS)(MATS) Flt C, 2151st Rescue Unit, (ARS)(MATS) 16-8 Wea Det, 16 Wea Sq (AWS)(MATS)
SIOUX CITY MUN APT, Sioux City, Iowa 2470th AFRTC	
STOUT FLD, Indianapolis, Ind. 2466th AFRTC	STOUT FLD, Indianapolis, Ind. 1918-2 AACS Det, 1918th AACS Sq (AACS)(MATS) 16-9 Wea Det, 16 Wea Sq, (AWS)(MATS)
WOLD-CHAMBERLAIN FLD, Minneapolis, Minn. 2465th AFRTC	WOLD-CHAMBERLAIN, Minn. 16-6 Wea Det, 16th Wea Sq, (AWS)(MATS) 1918-1 AACS Det, 1918th AACS Sq (AACS)(MATS)

FOURTEENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
BIRMINGHAM MUN APT, Birmingham, Ala(ConAC) 2587th AFRTC	BIRMINGHAM MUN APT, Birmingham, Ala. 26-10 Wea Det, 26th Wea Sq (AWS)(MATS) Det G, 3903d Radar Bomb Scoring Det (SAC)
GREENVILLE AFB, Greenville, S.C.(ConAC) 316th Tr Carr Wg, M, Hq & Hq Sq 316th Tr Carr Gp, M 36th Tr Carr Sq, M 37th Tr Carr Sq, M 75th Tr Carr Sq, M 316th Maint & Supply Gp, Hq 316th Maint Sq, Tr Carr, M 316th Supply Sq, Tr Carr, M 316th Motor Vehicle Sq, Tr Carr, M 316th Air Base Gp, Hq & Hq Sq 316th Comm Sq, Tr Carr, M 316th Air Police Sq, Tr Carr, M 316th Food Service Sq, Tr Carr, M 316th Installations Sq, Tr Carr, M 316th Base Service Sq, Tr Carr, M 316th Finance Disb Unit, Tr Carr, M 316th Medical Gp *4410th Bomb Disposal Unit	GREENVILLE AFB, Greenville, S.C. 1924th AACS Sq (AACS)(MATS) 25-2 Wea Det, 25th Wea Sq (AWS)(MATS)
HAWKINS FLD, Jackson, Miss (ConAC) 2610th Standby Base Sq	HAWKINS FLD, Jackson, Miss. 26-4 Wea Det, 26th Wea Sq (AWS)(MATS)
LAWSON AFB, Ft. Benning, Ga. (ConAC) 4408th Air Base Sq	LAWSON AFB, Ft. Benning, Ga. 1926-3 AACS Det (AACS)(MATS) 25-3 Wea Det, 25th Wea Sq (AWS)(MATS)
MARIETTA AFB, Marietta, Ga.(ConAC) 2589th AFRTC	MARIETTA AFB, Marietta, Ga. 1115th SAM Sq (Hq Comd, USAF) 1924-1 AACS Det, 1924th AACS Sq (AACS) (MATS) 25-5 Wea Det, 25th Wea Sq (AWS)(MATS)
MEMPHIS MUN APT, Memphis, Tenn. (ConAC) 2584th AFRTC	MEMPHIS MUN APT, Memphis, Tenn. 26-7 Wea Det, 26th Wea Sq (AWS)(MATS) 1922-3 AACS Det, 1922d AACS Sq (AACS) (MATS)

*Operational control (ConAC)

FOURTEENTH AIR FORCE (contd)

MIAMI INTERNATIONAL APT, Miami, Fla. (ConAC)
2585th AFRTC

MOODY AFB, Valdosta, Ga. (ConAC)
4409th Standby Base Sq

OLIVER GENERAL HOSPITAL, Augusta, Ga. (Army)
2202d Hosp Sq (Oliver Gen Hosp)

ORLANDO AFB, Orlando, Fla. (ConAC)
Fourteenth Air Force, Hq & Hq Sq
 2583d Air Base Gp, Hq & Hq Sq
  2583d Base Service Sq
  2583d Opns Sq
  2583d Maint & Supp Sq
  2583d Medical Sq
  2583d Assembly Sq
*2598th Avn Sq
539th AC&W Gp, Hq
 649th AC Sq
 659th AC&W Sq
 651st AC&W Sq
 652d AC&W Sq
7th Radar Calbr Det
769th AF Band
37th Comm Sq, Cond

POPE AFB, Fort Bragg, N.C. (ConAC)
Hq & Hq Sq (Prov) Tactical Air Force
  Operational
2600th Air Base Sq
8th Air Division (Tactical), Hq & Hq Sq
9th Air Division (Tactical), Hq & Hq Sq
502d Tac Control Gp, Hq
 605th Tac Control Sq
 5th Radar Calbr Det
934th Signal Bn (Sep) (TAC)
2d Radio Relay Sq

UNITS OF OTHER COMMANDS
ON ConAC INSTALLATIONS

MIAMI INTERNATIONAL APT, Miami, Fla
1925th AACS Sq (AACS) (MATS)

MOODY AFB, Valdosta, Ga.
1926-1 AACS Det, 1926th AACS Sq
  (AACS)(MATS)

ORLANDO AFB, Orlando, Fla.
1928-1 AACS Det, 1928th AACS Sq
  (AACS) (MATS)
25-6 Wea Det, 25th Wea Sq (AWS)
  (MATS)

POPE AFB, Fort Bragg, N.C.
1113d SAM Sq (Hq Comd, USAF)
1913-1 AACS Det, 1913th AACS Sq
  (AACS)(MATS)
25-7 Wea Det, 25th Wea Sq (AWS)
  (MATS)

*Negro Personnel

FOURTEENTH AIR FORCE

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
BIRMINGHAM MUN APT, Birmingham, Ala. 2587th AFRTC	**BIRMINGHAM MUN APT, Birmingham, Ala.** 26-10 Wea Det, 26th Wea Sq (AWS) (MATS) Det G, 3903d Radar Bomb Scoring Det (SAC)
GREENVILLE AFB, Greenville, S. C. 316th Tr Carr Wg, Medium, Hq & Hq Sq 316th Tr Carr Gp, Medium, Hq 36th Tr Carr Sq, Medium 37th Tr Carr Sq, Medium 75th Tr Carr Sq, Medium 316th Maint & Supply Gp, Hq 316th Maint Sq, Tr Carr, Medium 316th Supply Sq, Tr Carr, Medium 316th Motor Vehicle Sq, Tr Carr, Medium 316th Air Base Gp, Hq & Hq Sq 316th Comm Sq, Tr Carr, Medium 316th Air Police Sq, Tr Carr, Medium 316th Food Service Sq, Tr Carr, Medium 316th Installations Sq, Tr Carr, Medium 316th Base Service Sq, Tr Carr, Medium 316th Finance Disb. Unit, Tr Carr, Medium 316th Medical Gp 502d Tac Control Gp, Hq 605th Tac Control Sq 934th Sig Bn (Separate) (TAC) 12th Photo Tech Unit 256th Med Dispensary Unit, Avn (DA) 1st Vet Det, Avn (DA) 722d AF Band 5th Radar Calib Det 4410th Bomb Disposal Unit 4411th WAF Sq	**GREENVILLE AFB, Greenville, S. C.** 1924th AACS Sq (AACS)(MATS) 25-2 Wea Det, 25th Wea Sq (AWS) (MATS)
GUNTER AFB, Montgomery, Ala. (AU) 2586th AFRTC	
HAWKINS FLD, Jackson, Miss. 2588th AFRTC	**HAWKINS FLD, Jackson, Miss.** 26-4 Wea Det, 26th Wea Sq (AWS)(MATS)
LAWSON AFB, Ft. Benning, Ga. 4408th Air Base Sq	**LAWSON AFB, Ft. Benning, Ga.** 1926-3 AACS Det (AACS)(MATS) 25-3 Wea Det, 25th Wea Sq (AWS) (MATS)

FOURTEENTH AIR FORCE

UNITS AND INSTALLATIONS

BIRMINGHAM MUN APT, Birmingham, Ala.
2587th AFRTC

GREENVILLE AFB, Greenville, S.C.
- 316th Tr Carr Wg, Medium, Hq & Hq Sq
  - 316th Tr Carr Gp, Medium, Hq
    - 36th Tr Carr Sq, Medium
    - 37th Tr Carr Sq, Medium
    - 75th Tr Carr Sq, Medium
  - 316th Maint & Supply Gp, Hq
    - 316th Maint Sq, Tr Carr, Medium
    - 316th Supply Sq, Tr Carr, Medium
    - 316th Motor Vehicle Sq, Tr Carr, Medium
  - 316th Air Base Gp, Hq & Hq Sq
    - 316th Comm Sq, Tr Carr, Medium
    - 316th Air Police Sq, Tr Carr, Medium
    - 316th Food Service Sq, Tr Carr, Medium
    - 316th Installations Sq, Tr Carr, Medium
    - 316th Base Service Sq, Tr Carr, Medium
    - 316th Finance Disbursing Unit, Tr Carr, Medium
  - 316th Medical Gp
- 502d Tac Control Gp, Hq
  - 605th Tac Control Sq
- 934th Sig Bn (Separate) (TAC)
- 12th Photo Tech Unit
- 256th Med Dispensary Unit, Avn (DA)
- 1st Vet Det, Avn (DA)
- 722d AF Band
- 5th Radar Calib Det
- 4410th Bomb Disposal Unit
- 4411th WAF Sq

GUNTER AFB, Montgomery, Ala. (AU)
2586th AFRTC

HAWKINS FLD, Jackson, Miss.
2588th AFRTC

LAWSON AFB, Ft Benning, Ga.
4408th Air Base Sq

UNIT OF OTHER COMMANDS ON ConAC STATIONS

BIRMINGHAM MUN APT, Birmingham, Al
26-10 Wea Det, 26th Wea Sq (AWS)(MATS)

GREENVILLE AFB, Greenville, S.C.
1924th AACS Sq (AACS)(MATS)
25-2 Wea Det, 25th Wea Sq (AWS) (MATS)

HAWKINS FLD, Jackson, Miss.
26-4 Wea Det, 25th Wea Sq (AWS)(MATS)

LAWSON AFB, Ft Benning, Ga.
1926-3 AACS Det (AACS)(MATS)
25-3 Wea Det, 25th Wea Sq (AWS)(MATS)

FOURTEENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS	UNIT OF OTHER COMMANDS ON ConAC STATIONS
MacDILL AFB, MacDill Fld, Fla. (SAC) 2582d AFRTC	
MARIETTA AFB, Marietta, Ga. 2589th AFRTC	MARIETTA AFB, Marietta, Ga. 1115th SAW Sq (Hq Comd, USAF) 1924-1 AACS Det, 1924 AACS Sq (AACS)(MATS) 25-5 Wea Det, 25th Wea Sq, (AWS)(MATS)
MEMPHIS MUN APT, Memphis, Tenn. 2584th AFRTC	MEMPHIS MUN APT, Memphis, Tenn. 26-7 Wea Det, 26th Wea Sq, (AWS)(MATS) 1922-3 AACS Det, 1922d AACS Sq (AACS)(MATS) 1702-1 Det, 1702 Air Trans Gp (COND)(MATS)
MIAMI INTERNATIONAL APT, Miami, Fla. 2585th AFRTC	MIAMI INTERNATIONAL APT, Miami,Fl 1925th AACS Sq (AACS)(MATS) 25-12 Wea Det, 25th Wea Sq (AWS)(MATS)
MOODY AFB, Valdosta, Ga. 4409th Standby Base Sq	MOODY AFB, Valdosta, Ga. 1926-1 AACS Det, 1926th AACS Sq (AACS)(MATS)
ORLANDO AFB, Orlando, Fla. Fourteenth Air Force, Hq & Hq Sq 2583d Air Base Gp, Hq & Hq Sq 2583d Base Service Sq 2583d Oprns Sq 2583d Maint & Supply Sq 2583d Medical Sq 2583d Assembly Sq *2598th Avn Sq 539th AC&W Gp, Hq 649th AC Sq 650th AC&W Sq 651st AC&W Sq 652d AC&W Sq 7th Radar Calib Det 769th AF Band 37th Comm Sq, Comd	ORLANDO AFB, Orlando, Fla. 1928-1 AACS Det, 1928th AACS Sq (AACS)(MATS) 25-6 Wea Det, 25th Wea Sq, (AWS)(MATS)

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NUMERICAL LIST CONTINENTAL AIR COMMAND UNITS

UNITS	STATION	AIR FORCE
1st Shoran Beacon Unit	Barksdale AFB, La.	Twelfth
1st Tow Target Sq	Biggs AFB, Texas	Twelfth
2d Radio Relay Sq	Pope AFB, N.C.	Fourteenth
2d Armament Sq, Chemical	Shaw AFB, S.C.	Fourteenth
2d Ftr Sq, A/W	Mitchel AFB, N.Y.	First
4th Ftr Wg, Hq & Hq Sq	Langley AFB, Va.	Ninth
4th Ftr Gp, Hq	Langley AFB, Va.	Ninth
4th Maint & Supply Gp, Hq	Langley AFB, Va.	Ninth
4th Maint Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Supply Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Motor Vehicle Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Air Base Gp, Hq & Hq Sq	Langley AFB, Va.	Ninth
4th Comm Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Air Police Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Food Service Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Installations Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Base Service Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Finance Disb Unit, Ftr, Jet	Langley AFB, Va.	Ninth
4th Medical Gp	Langley AFB, Va.	Ninth
4th Tr Carr Sq, M	McChord AFB, Wash.	Fourth
5th Ftr Sq, A/W	Mitchel AFB, N.Y.	First
5th Radar Calbr Det	Pope AFB, N.C.	Fourteenth
7th Radar Calbr Det	Orlando AFB, Fla.	Fourteenth
7th Tr Carr Sq, M	McChord AFB, Wash.	Fourth
8th Tr Carr Sq, M	McChord AFB, Wash.	Fourth
8th Air Division (Tactical),Hq&Hq Sq	Pope AFB, N.C.	Fourteenth
9th Air Division (Tactical),Hq&Hq Sq	Pope AFB, N.C.	Fourteenth
11th Radar Calbr Det	McChord AFB, Wash.	Fourth
12th Radar Calbr Det	Mitchel AFB, N.Y.	First
14th Ftr Wg, Hq & Hq Sq	Dow AFB, Maine	First
14th Ftr Gp, Hq	Dow AFB, Maine	First
14th Maint & Supply Gp, Hq	Dow AFB, Maine	First
14th Maint Sq, Ftr, Jet	Dow AFB, Maine	First
14th Supply Sq, Ftr, Jet	Dow AFB, Maine	First
14th Motor Vehicle Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Base Gp, Hq & Hq Sq	Dow AFB, Maine	First
14th Comm Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Police Sq, Ftr, Jet	Dow AFB, Maine	First
14th Food Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Installations Sq, Ftr, Jet	Dow AFB, Maine	First
14th Base Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Finance Disb Unit, Ftr, Jet	Dow AFB, Maine	First
14th Medical Gp	Dow AFB, Maine	First

FOURTEENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS	UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS
POPE AFB, Fort Bragg, N. C. 5th Depot Unit, Army 2600th Air Base Sq 8th Air Division (Tactical), Hq & Hq Sq) 9th Air Division (Tactical), Hq & Hq Sq)	**POPE AFB, Fort Bragg, N. C.** 1113d SAM Sq (Hq Comd, USAF) 1913-1 AACS Det, 1913th AACS Sq (AACS)(MATS) 25-7 Wea Det, 25th Wea Sq (AWS) (MATS) Hq Sq Flt Sect Det, Air Rescue Service (ARS)(MATS) Flt C, 5th Rescue Sq (ARS)(MATS)
SHAW AFB, Sumter, S. C. 20th Ftr Wg, Hq & Hq Sq 20th Ftr Gp, Hq 55th Ftr Sq, Jet 77th Ftr Sq, Jet 79th Ftr Sq, Jet 20th Maint & Supply Gp, Hq 20th Maint Sq, Ftr, Jet 20th Supply Sq, Ftr, Jet 20th Motor Vehicle Sq, Ftr, Jet 20th Air Base Gp, Hq & Hq Sq 20th Comm Sq, Ftr, Jet 20th Air Police Sq, Ftr, Jet 20th Food Service Sq, Ftr, Jet 20th Installations Sq, Ftr, Jet 20th Base Service Sq, Ftr, Jet 20th Finance Disbursing Unit, Ftr, Jet 20th Medical Gp 606th AC&W Sq (502d Tac Control Gp) *30th Motor Transport Sq, Avn 2d Armament Sq, Chemical	**SHAW AFB, Sumter, S. C.** 1924-2 AACS Det, 1924th AACS Sq (AACS)(MATS) 25-9 Wea Det, 25th Wea Sq (AWS) (MATS)
SMYRNA AFB, Smyrna, Tenn. 314th Tr Carr Wg, Medium, Hq & Hq Sq 314th Tr Carr Gp, Medium, Hq 20th Tr Carr Sq, Medium 334th Tr Carr Sq, Medium 314th Maint & Supply Gp, Hq 314th Maint Sq, Tr Carr, Medium 314th Supply Sq, Tr Carr, Medium 314th Motor Vehicle Sq, Tr Carr, Medium 314th Air Base Gp, Hq & Hq Sq 314th Comm Sq, Tr Carr, Medium 314th Air Police Sq, Ftr, Jet 314th Food Service Sq, Tr Carr, Medium 314th Installations Sq, Tr Carr, Medium 314th Base Service Sq, Tr Carr, Medium 314th Finance Disbursing Unit, Tr Carr, Medium 314th Medical Gp	**SMYRNA AFB, Smyrna, Tenn.** 1922-4 AACS Det, 1922d AACS Sq (AACS) (MATS) 26-9 Wea Det, 26th Wea Sq (AWS)(MATS)

* Negro Personnel

FOURTEENTH AIR FORCE (cont'd)

UNITS AND INSTALLATIONS

TURNER AFB, Albany, Ga.

- 31st Ftr Wg, Hq & Hq Sq
  - 31st Ftr Gp, Hq
    - 307th Ftr Sq, Jet
    - 308th Ftr Sq, Jet
    - 309th Ftr Sq, Jet
  - 31st Maint & Supply Gp, Hq
    - 31st Maint Sq, Ftr, Jet
    - 31st Supply Sq, Ftr, Jet
    - 31st Motor Vehicle Sq, Ftr, Jet
  - 31st Air Base Gp, Hq & Hq Sq
    - 31st Comm Sq, Ftr, Jet
    - 31st Air Police Sq, Ftr, Jet
    - 31st Food Service Sq, Ftr, Jet
    - 31st Installations Sq, Ftr, Jet
    - 31st Base Service Sq, Ftr, Jet
    - 31st Finance Disb. Unit, Ftr, Jet
  - 31st Medical Gp
- 607th AC&W Sq (502d Tac Control Gp)

UNITS OF OTHER COMMANDS ON ConAC INSTALLATIONS

TURNER AFB, Albany, Ga.

1926-2 AACS Det, 1926th AACS Sq
(AACS)(MATS)

25-10 Wea Det, 25th Wea Sq
(AWS)(MATS)

UNIT	STATION	AIR FORCE
34th Comm Sq, Command	Slocum AFB, N.Y.	First
35th Comm Sq, Command	Hamilton AFB, Calif.	Fourth
36th Comm Sq, Command	Benj.Harrison AFB, Ind.	Tenth
36th Tr Carr Sq, M	Greenville AFB, S.C.	Fourteenth
37th Comm Sq, Command	Orlando AFB, Fla.	Fourteenth
37th Ftr Sq, Jet	Dow AFB, Maine	First
37th Tr Carr Sq, M	Greenville AFB, S.C.	Fourteenth
47th Bomb Wg, L, Hq & Hq Sq	Barksdale AFB, La.	Twelfth
47th Bomb Gp, L, Hq	Barksdale AFB, La.	Twelfth
47th Maint & Supply Gp, Hq	Barksdale AFB, La.	Twelfth
47th Maint Sq, Bomb, L, Jet	Barksdale AFB, La.	Twelfth
47th Supply Sq, Bomb, L, Jet	Barksdale AFB, La.	Twelfth
47th Motor Vehicle Sq, Bomb,L,Jet	Barksdale AFB, La.	Twelfth
47th Air Base Gp, Hq & Hq Sq	Barksdale AFB, La.	Twelfth
47th Comm Sq, Bomb, L, Jet	Barksdale AFB, La.	Twelfth
47th Food Service Sq, Bomb,L,Jet	Barksdale AFB, La.	Twelfth
47th Air Police Sq, Bomb, L,Jet	Barksdale AFB, La.	Twelfth
47th Installations Sq, Bomb, L,Jet	Barksdale AFB, La.	Twelfth
47th Base Service Sq, Bomb,L,Jet	Barksdale AFB, La.	Twelfth
47th Finance Disb Unit,Bomb,L,Jet	Barksdale AFB, La.	Twelfth
47th Medical Gp	Barksdale AFB, La.	Twelfth
48th Ftr, Sq, Jet	Dow AFB, Maine	First
49th Ftr Sq, Jet	Dow AFB, Maine	First
52d Ftr Wg, Hq & Hq Sq	Mitchel AFB, N.Y.	First
52d Ftr Gp, Hq	Mitchel AFB, N.Y.	First
52d Maint & Supply Gp, Hq	Mitchel AFB, N.Y.	First
52d Maint Sq, Ftr, A/W	Mitchel AFB, N.Y.	First
52d Supply Sq, Ftr, A/W	Mitchel AFB, N.Y.	First
52d Motor Vehicle Sq, Ftr, A/W	Mitchel AFB, N.Y.	First
52d Air Base Gp, Hq & Hq Sq	Mitchel AFB, N.Y.	First
52d Comm Sq, Ftr, A/W	Mitchel AFB, N.Y.	First
52d Food Service Sq, Ftr, A/W	Mitchel AFB, N.Y.	First
52d Installations Sq, Ftr, A/W	Mitchel AFB, N.Y.	First
52d Base Service Sq, Ftr, A/W	Mitchel AFB, N.Y.	First
52d Finance Disb. Unit,Ftr,A/W	Mitchel AFB, N.Y.	First
52d Medical Gp	Mitchel AFB, N.Y.	First
55th Ftr Sq, Jet	Shaw AFB, S.C.	Fourteenth
56th Ftr Wg, Hq & Hq Sq	Selfridge AFB, Mich.	Tenth
56th Ftr Gp, Hq	Selfridge AFB, Mich.	Tenth
56th Maint & Supply Gp, Hq	Selfridge AFB, Mich.	Tenth
56th Maint Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Supply Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Motor Vehicle Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Air Base Gp, Hq & Hq Sq	Selfridge AFB, Mich.	Tenth
56th Comm Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Air Police Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Food Service Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Installations Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Base Service Sq, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Finance Disb Unit, Ftr, Jet	Selfridge AFB, Mich.	Tenth
56th Medical Gp	Selfridge AFB, Mich.	Tenth

NUMERICAL LIST CONTINENTAL AIR COMMAND UNITS

UNIT	STATION	AIR FORCE
1st Depot Unit, Army	Camp Hood, Texas (Army)	Twelfth
1st Shoran Beacon Unit	Barksdale AFB, La.	Twelfth
1st Tow Target Sq	Biggs AFB, Texas (SAC)	Twelfth
1st Vet Det, Avn (DA)	Greenville AFB, S. C.	Fourteenth
2d Armament Sq, Chemical	Shaw AFB, S. C.	Fourteenth
2d Ftr Sq, All Wea	Mitchel AFB, N. Y.	First
3d Depot Unit, A (Type A)	Godman AFB, Ky.	Ninth
4th Ftr Wg, Hq & Hq Sq	Langley AFB, Va.	Ninth
4th Ftr Gp, Hq	Langley AFB, Va.	Ninth
4th Maint & Supply Gp, Hq	Langley AFB, Va.	Ninth
4th Maint Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Supply Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Motor Vehicle Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Air Base Gp, Hq & Hq Sq	Langley AFB, Va.	Ninth
4th Comm Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Air Police Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Food Service Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Installations Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Base Service Sq, Ftr, Jet	Langley AFB, Va.	Ninth
4th Finance Disb. Unit, Ftr, Jet	Langley AFB, Va.	Ninth
4th Medical Gp	Langley AFB, Va.	Ninth
4th Depot Unit, Army	Ft. Lewis, Wash. (Army)	Fourth
4th Photo Tech Sq	Langley AFB, Va.	Ninth
4th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
5th Depot Unit, Army	Pope AFB, N. C.	Fourteenth
5th Ftr Sq, All Wea	Mitchel AFB, N. Y.	First
5th Radar Calib Det	Greenville AFB, S. C.	Fourteenth
7th Radar Calib Det	Orlando AFB, Fla.	Fourteenth
7th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
8th Depot Unit, Army	Post Field, Ft. Sill, Okla.	Twelfth
8th Tr Carr Sq, Med	McChord AFB, Wash.	Fourth
11th Radar Calib Det	McChord AFB, Wash.	Fourth
12th Photo Tech Unit	Greenville AFB, S. C.	Fourteenth
12th Radar Calib Det	Mitchel AFB, N. Y.	First

UNIT	STATION	AIR FORCE
14th Ftr Wg, Hq & Hq Sq	Dow AFB, Maine	First
14th Ftr Gp, Hq	Dow AFB, Maine	First
14th Maint & Supply Gp, Hq	Dow AFB, Maine	First
14th Maint Sq, Ftr, Jet	Dow AFB, Maine	First
14th Supply Sq, Ftr, Jet	Dow AFB, Maine	First
14th Motor Vehicle Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Base Gp, Hq & Hq Sq	Dow AFB, Maine	First
14th Comm Sq, Ftr, Jet	Dow AFB, Maine	First
14th Air Police Sq, Ftr, Jet	Dow AFB, Maine	First
14th Food Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Installations Sq, Ftr, Jet	Dow AFB, Maine	First
14th Base Service Sq, Ftr, Jet	Dow AFB, Maine	First
14th Finance Disb. Unit, Ftr, Jet	Dow AFB, Maine	First
14th Medical Gp	Dow AFB, Maine	First
20th Ftr Wg, Hq & Hq Sq	Shaw AFB, S. C.	Fourteenth
20th Ftr Gp, Hq	Shaw AFB, S. C.	Fourteenth
20th Maint & Supply Gp, Hq	Shaw AFB, S. C.	Fourteenth
20th Maint Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Supply Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Motor Vehicle Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Air Base, Gp, Hq & Hq Sq	Shaw AFB, S. C.	Fourteenth
20th Comm Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Air Police Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Food Service Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Installations Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Base Service Sq, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Finance Disb. Unit, Ftr, Jet	Shaw AFB, S. C.	Fourteenth
20th Medical Gp	Shaw AFB, S. C.	Fourteenth
20th Tr Carr Sq, Med	Smyrna AFB, Tenn.	Fourteenth
25th Air Defense Div, Hq & Hq Sq (Mailing Address: Gen. Delivery, Everett, Washington)	Silver Lake, Wash.	ADC
26th Air Defense Div, Hq & Hq Sq	Roslyn, N. Y.	ADC
28th Comm Sq, Air Force	Mitchel AFB, N. Y.	ConAC
29th Comm Sq, AF	Langley AFB, Va.	Ninth
30th Motor Transport Sq, Avn.	Shaw AFB, S. C.	Fourteenth
31st Ftr Wg, Hq & Hq Sq	Turner AFB, Ga.	Fourteenth
31st Ftr Gp, Hq	Turner AFB, Ga.	Fourteenth
31st Maint & Supply Gp, Hq	Turner AFB, Ga.	Fourteenth
31st Maint Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Supply Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Motor Vehicle Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Air Base Gp, Hq & Hq Sq	Turner AFB, Ga.	Fourteenth
31st Comm Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Air Police Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Food Service Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Installations Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth
31st Base Service Sq, Ftr, Jet	Turner AFB, Ga.	Fourteenth

UNIT	STATION	AIR FORCE
82d Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
82d Ftr Wg, Hq & Hq Sq	Grenier AFB, N.H.	First
82d Ftr Gp, Hq	Grenier AFB, N.H.	First
82d Maint & Supply Gp, Hq	Grenier AFB, N.H.	First
82d Maint Sq, Ftr, SE	Grenier AFB, N.H.	First
82d Supply Sq, Ftr, SE	Grenier AFB, N.H.	First
82d Air Base Gp, Hq & Hq Sq	Grenier AFB, N.H.	First
82d Comm Sq, Ftr, SE	Grenier AFB, N.H.	First
82d Air Police Sq, Ftr, Sq	Grenier AFB, N.H.	First
82d Food Service Sq, Ftr, SE	Grenier AFB, N.H.	First
82d Base Service Sq, Ftr, SE	Grenier AFB, N.H.	First
82d Installations Sq, Ftr, SE	Grenier AFB, N.H.	First
82d Finance Disb Unit, Ftr, Se	Grenier AFB, N.H.	First
82d Medical Gp	Grenier AFB, N.H.	First
83d Ftr Sq, Jet	Grenier AFB, N.H.	First
84th Ftr Sq, Jet	Hamilton AFB, Calif.	Fourth
84th Bomb Sq, L, Jet	Hamilton AFB, Calif.	Fourth
85th Bomb Sq, L, Jet	Barksdale AFB, La.	Twelfth
86th Bomb Sq, L, Jet	Barksdale AFB, La.	Twelfth
91st Ftr Sq, SE	Barksdale AFB, La.	Twelfth
92d Ftr Sq, SE	Kirtland AFB, N.M.	Twelfth
93d Ftr Sq, SE	Kirtland AFB, N.M.	Twelfth
95th Ftr Sq, SE	Kirtland AFB, N.M.	Twelfth
96th Ftr Sq, SE	Grenier AFB, N.H.	First
97th Ftr Sq, SE	Grenier AFB, N.H.	First
136th Radio Security Sq, Radio Security Det B	Grenier AFB, N.H.	First
	Brooks AFB, Texas	Twelfth
161st Tac Recon Sq, Photo-Jet	Langley AFB, Va.	Ninth
162d Tac Recon Sq, Night-Photo	Langley AFB, Va.	Ninth
307th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
308th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
309th Ftr Sq, Jet	Turner AFB, Ga.	Fourteenth
314th Tr Carr Wg, M, Hq & Hq Sq	Smyrna AFB, Tenn.	Fourteenth
314th Tr Carr Gp, M, Hq	Smyrna AFB, Tenn.	Fourteenth
314th Maint & Supply Gp, Hq	Smyrna AFB, Tenn.	Fourteenth
314th Maint Sq, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Supply Sq, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Motor Vehicle Sq, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Air Base Gp, Hq & Hq Sq	Smyrna AFB, Tenn.	Fourteenth
314th Comm Sq, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Air Police Sq, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Food Service Sq, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Installations Sq, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Base Service Sq, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Finance Disb Unit, Tr Carr, M	Smyrna AFB, Tenn.	Fourteenth
314th Medical Gp	Smyrna AFB, Tenn.	Fourteenth
316th Tr Carr Wg, M, Hq & Hq Sq	Greenville AFB, S.C.	Fourteenth
316th Tr Carr Gp, M, Hq	Greenville AFB, S.C.	Fourteenth
316th Maint & Supply Gp, Hq	Greenville AFB, S.C.	Fourteenth
316th Maint Sq, Tr Carr, M	Greenville AFB, S.C.	Fourteenth
316th Supply Sq, Tr Carr, M	Greenville AFB, S.C.	Fourteenth
316th Motor Vehicle Sq, Tr Carr, M	Greenville AFB, S.C.	Fourteenth

UNIT	STATION	AIR FORCE
316th Air Base Gp, Hq & Hq Sq	Greenville AFB, S.C.	Fourteenth
316th Comm Sq, Tr Carr, M	Greenville AFB, S.C.	Fourteenth
316th Air Police Sq, Tr Carr, M	Greenville AFB, S.C.	Fourteenth
316th Food Service Sq, Tr Carr, M	Greenville AFB, S.C.	Fourteenth
316th Installations Sq, Tr Carr, M	Greenville AFB, S.C.	Fourteenth
316th Base Service Sq, Tr Carr, M	Greenville AFB, S.C.	Fourteenth
316th Finance Disb Unit, Tr Carr, M	Greenville AFB, S.C.	Fourteenth
316th Medical Gp	Greenville AFB, S.C.	Fourteenth
317th Ftr Sq, A/W	Moses Lake AFB, Wash.	Fourth
318th Ftr Sq, A/W	McChord AFB, Wash.	Fourth
319th Ftr Sq, A/W	McChord AFB, Wash.	Fourth

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UNIT	STATION	AIR FORCE
325th Ftr Wg, Hq & Hq Sq	Moses Lake AFB, Wash.	Fourth
325th Ftr Gp, Hq	Moses Lake AFB, Wash.	Fourth
325th Maint & Supply Gp, Hq	Moses Lake AFB, Wash.	Fourth
325th Maint Sq, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Supply Sq, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Motor Vehicle Sq, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Air Base Gp, Hq & Hq Sq	Moses Lake AFB, Wash.	Fourth
325th Comm Sq, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Air Police Sq, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Food Service Sq, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Installations Sq, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Base Service Sq, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Finance Disb. Unit, Ftr, A/W	Moses Lake AFB, Wash.	Fourth
325th Medical Gp	Moses Lake AFB, Wash.	Fourth
334th Ftr Sq, Jet	Langley AFB, Va.	Ninth
334th Tr Carr Sq, M	Smyrna AFB, Tenn.	Fourteenth
335th Ftr Sq, Jet	Langley AFB, Va.	Ninth
336th Ftr Sq, Jet	Langley AFB, Va.	Ninth
363d Recon Tech Sq	Langley AFB, Va.	Ninth
363d Tac Recon Gp, Hq	Langley AFB, Va.	Ninth
502d Tac Control Gp, Hq	Pope AFB, N.C.	Fourteenth
503d AC&W Gp, Hq	Roslyn, N. Y.	First
505th AC&W Gp, Hq	McChord AFB, Wash.	Fourth
539th AC&W Gp, Hq	Orlando AFB, Fla.	Fourteenth
564th AF Band	Langley AFB, Va.	Ninth
573d AF Band	Hamilton AFB, Calif.	Fourth
579th AF Band	Brooks AFB, Texas	Twelfth
581st AF Band	Mitchel AFB, N. Y.	First
605th Tac Control Sq	Pope AFB, N. C.	Fourteenth
606th AC&W Sq	Shaw AFB, S. C.	Fourteenth
607th AC&W Sq	Turner AFB, Ga.	Fourteenth
634th AC Sq	Everett, Wash.	Fourth
(Mailing Address: P.O. Box 908,	Everett, Wash.	
635th AC&W Sq	McChord AFB, Wash.	Fourth
636th AC&W Sq	Kirtland AFB, N.M.	Twelfth
637th AC&W Sq	Moses Lake AFB, Wash.	Fourth
645th AC Sq	Selfridge AFB, Mich.	Tenth
646th AC&W Sq	Roslyn, N. Y.	First
647th AC&W Sq	Grenier AFB, N.H.	First
648th AC&W Sq	Pine Camp, N.Y.	First
649th AC Sq	Orlando AFB, Fla.	Fourteenth
650th AC&W Sq	Orlando AFB, Fla.	Fourteenth
651st AC&W Sq	Orlando AFB, Fla.	Fourteenth
652d AC&W Sq	Orlando AFB, Fla.	Fourteenth
672d AC&W Sq (503d AC&W Gp)	Washington National Airport	Ninth
(less dets 1, 2 & 3)	Gravelly Point, Va.	
679th AF Band	Stewart AFB, N. Y.	First
691st AF Band	Benj. Harrison AFB, Ind.	Tenth
709th AF Band	Orlando AFB, Fla.	Fourteenth

*Negro Personnel

UNIT	STATION	AIR FORCE
934th Sig Bn (Sep) (Tac)	Pope AFB, N.C.	Fourteenth
2200th Hosp Sq (Murphy Gen Hosp)	Waltham 54, Mass.	First
2201st Hosp Sq (Army Med Ctr)	Washington 12, D. C.	Ninth
2202nd Hosp Sq (Oliver Gen Hosp)	Augusta, Ga.	Fourteenth
2203d Hosp Sq (Valley Forge Gen Hosp)	Phoenixville, Pa.	Ninth
2204th Hosp Sq (Percy Jones Gen Hosp)	Battle Creek, Mich.	Tenth
2205th Hosp Sq (Army & Navy Gen Hosp)	Hot Springs Nat'l Pk, Ark.	Twelfth
2206th Hosp Sq (Brooks Army Med Ctr)	Fort Sam Houston, Tex.	Twelfth
2207th Hosp Sq (Wm Beaumont Gen Hosp)	El Paso, Tex.	Twelfth
2208th Hosp Sq (Fitzsimons Gen Hosp)	Denver, Colo.	Tenth
2209th Hosp Sq (Letterman Gen Hosp)	Presidio of San Francisco, Calif.	Fourth
2210th Hosp Sq (Madigan Gen Hosp)	Tacoma, Wash.	Fourth
2211th Med Serv Sq	Benj. Harrison AFB, Ind.	Tenth
2220th Extension Gp, Hq & Hq Sq	Benj. Harrison AFB, Ind.	Tenth
2225th AFORD	Camp Kilmer, N. J.	First
2226th Air Base Gp, Hq & Hq Sq	Slocum AFB, N.Y.	First
2226th Base Service Sq	Slocum AFB, N. Y.	First
2226th Assembly & Processing Sq	Slocum AFB, N. Y.	First
2230th AFRTC	Floyd Bennett NAS, N.Y.	First
2234th AFRTC	Hanscom Apt, Bedford, Mass.	First
2236th AFRTC	Godman AFB, Ky.	Ninth
2237th AFRTC	Reading Mun Apt, Pa.	Ninth
2239th AFRTC	Gtr Pittsburgh Apt, Pa.	Ninth
2240th AFRTC	Cleveland Mun Apt, Ohio	Ninth
2242d AFRTC	Selfridge AFB, Mich.	Tenth
2243d WAF Sq	Mitchel AFB, N. Y.	First
2244th Avn Sq	Mitchel AFB, N. Y.	First
2261st Standby Base Sq	Byrd Fld, Va.	Ninth
2343d AFRTC	Portland Mun Apt. Oreg.	Fourth
2346th AFRTC	Hamilton AFB, Calif.	Fourth
2347th AFRTC	Long Beach Mun Apt, Calif.	Fourth
2349th AFORD	Hamilton AFB, Calif.	Fourth
2349th AFORD, Det	San Francisco PE, Calif.	Fourth
2349th AFORD, Det	Seattle PE, Seattle, Wash.	Fourth
2351st WAF Sq	Hamilton AFB, Calif.	Fourth
2352d Avn Sq	Hamilton AFB, Calif.	Fourth
2463d Air Base Gp, Hq & Hq Sq	Benj. Harrison AFB, Ind.	Tenth
2463d Maint & Supply Sq	Benj. Harrison AFB, Ind.	Tenth
2463d Air Police Sq	Benj. Harrison AFB, Ind.	Tenth
2463d Air Installations Sq	Benj. Harrison AFB, Ind.	Tenth
2463d Food Service Sq	Benj. Harrison AFB, Ind.	Tenth
2463d Medical Sq	Benj. Harrison AFB, Ind.	Tenth
2465th AFRTC	Wold-Chamberlain Fld, Minn.	Tenth
2466th AFRTC	Atterbury AFB, Ind.	Tenth
2469th AFRTC	Scott AFB, Ill.	Tenth
2471st AFRTC	O'Hare Int'l Apt, Ill.	Tenth
2472d AFRTC	Fairfax Fld, Kan.	Tenth
2473d AFRTC	Offutt AFB, Neb.	Tenth
2475th WAF Sq	Benj. Harrison AFB, Ind.	Tenth
2476th Base Service Sq	Oscoda AFB, Mich.	Tenth

UNIT	STATION	AIR FORCE
2583d Air Base Gp, Hq & Hq Sq	Orlando AFB, Fla.	Fourteenth
2583d Base Service Sq	Orlando AFB, Fla.	Fourteenth
2583d Opns Sq	Orlando AFB, Fla.	Fourteenth
2583d Maint & Supply Sq	Orlando AFB, Fla.	Fourteenth
2583d Assembly Sq	Orlando AFB, Fla.	Fourteenth
2583d Medical Sq	Orlando AFB, Fla.	Fourteenth
2584th AFRTC	Memphis Mun Apt, Tenn	Fourteenth
2585th AFRTC	Miami Inter, Apt, Fla.	Fourteenth
2587th AFRTC	Birmingham Mun Apt, Ala	Fourteenth
2589th AFRTC	Marietta AFB, Ga.	Fourteenth
2592d AFRTC	Tinker AFB, Okla.	Twelfth
2594th AFGAD	Camp LeRoy Johnson, La.	Twelfth
2595th Air Base Gp, Hq & Hq Sq	Brooks AFB, Texas	Twelfth
2595th Base Service Sq	Brooks AFB, Texas	Twelfth
2595th Maint & Supply Sq	Brooks AFB, Texas	Twelfth
2595th Opns Sq	Brooks AFB, Texas	Twelfth
2595th Medical Sq	Brooks AFB, Texas	Twelfth
2596th AFRTC	Hensley Fld, Texas	Twelfth
2597th Air Police Sq (Off Base)	Brooks AFB, Texas	Twelfth
*2598th Avn Sq	Orlando AFB, Fla.	Fourteenth
*2599th Avn Sq	Brooks AFB, Texas	Twelfth
2600th Air Base Sq	Pope AFB, N.C.	Fourteenth
2610th Standby Base Sq	Hawkins Fld, Miss.	Fourteenth
4400th Air Base Gp, Hq & Hq Sq	Stewart Fld, N. Y.	First
4401st Maint & Supply Sq	Stewart Fld, N. Y.	First
4402d Air Installations Sq	Stewart Fld, N. Y.	First
4403d Station Medical Sq	Stewart Fld, N. Y.	First
4404th Air Base Sq (Bomb & Gunnery Range)	Dover AFB, Del. (Inactive)	Ninth
4405th Air Base Sq	Sherman AFB, Kans.	Tenth
4406th Air Base Sq	Marshall AFB, Kans.	Tenth
4408th Air Base Sq	Lawson AFB, Ga.	Fourteenth
4409th Standby Base Sq	Moody AFB, Ga.	Fourteenth
4410th Bomb Disposal Unit	Greenville AFB, S. C.	Fourteenth
4412th WAF Sq	Langley AFB, Va.	Ninth
4415th Liaison Flt	Langley AFB, Va.	Ninth

*Negro Personnel

UNIT	STATION	AIR FORCE
*449th Sig Heavy Const Bn, Avn (DA)	Lockbourne AFB, Ohio	Ninth
502d Tac Control Gp, Hq	Greenville AFB, S.C.	Fourteenth
503d AC&W Gp, Hq	Roslyn, N.Y.	First
505th AC&W Gp, Hq	McChord AFB, Wash.	Fourth
531st AC&W Gp, Hq	McChord AFB, Wash.	Fourth
539th AC&W Gp, Hq	Orlando AFB, Fla.	Fourteenth
564th AF Band	Langley AFB, Va.	Ninth
573d AF Band	Hamilton AFB, Calif.	Fourth
579th AF Band	Brooks AFB, Texas	Twelfth
581st AF Band	Mitchel AFB, N.Y.	First
605th Tac Control Sq	Greenville AFB, S.C.	Fourteenth
606th AC&W Sq (502d Tac Control Gp)	Shaw AFB, S.C.	Fourteenth
607th AC&W Sq (502d Tac Control Gp)	Turner AFB, Ga.	Fourteenth
622d Engr Maint Co (Avn)	March AFB, Calif.	Fourth
626th AC&W Sq	McChord AFB, Wash.	Fourth
632d AC&W Sq	McChord AFB, Wash.	Fourth
634th AC Sq	Everett, Wash.	Fourth
(Mailing Address: General Delivery, Everett, Wash.)		
635th AC&W Sq	McChord AFB, Wash.	Fourth
636th AC&W Sq	Kirtland AFB, N.M.(AMC)	Twelfth
637th AC&W Sq (505th AC&W Gp)	Moses Lake AFB, Wash.	Fourth
645th AC Sq	Selfridge AFB, Mich.	Tenth
646th AC&W Sq	Roslyn, N.Y.	First
647th AC&W Sq	Grenier AFB, N.H.	First
648th AC&W Sq	Pine Camp, N.Y.	First
649th AC Sq	Orlando AFB, Fla.	Fourteenth
650th AC&W Sq	Orlando AFB, Fla.	Fourteenth
651st AC&W Sq	Orlando AFB, Fla.	Fourteenth
652d AC&W Sq	Orlando AFB, Fla.	Fourteenth
679th AF Band	Ft. Slocum, N.Y.	First
691st AF Band	Ft. Benjamin Harrison, Ind.	Tenth
722d AF Band	Greenville AFB, S.C.	Fourteenth
*766th AF Band	Lockbourne AFB, Ohio	Ninth
769th AF Band	Orlando AFB, Fla.	Fourteenth
*770th AF Band	Lockbourne AFB, Ohio	Ninth
817th Engr Avn Bn (DA)	March AFB, Calif.	Fourth
*837th Engr Avn Bn (DA)	Langley AFB, Va.	Ninth
924th Engr Avn Gp, Hq&Hq&Sv Co (DA)	March AFB, Calif.	Fourth
934th Sig Bn (Separate)(Tac)	Greenville AFB, S.C.	Fourteenth
2220th Extension Gp, Hq & Hq Sq	Ft. Benjamin Harrison, Ind.	Tenth
*2221st Special Service Unit	Lockbourne AFB, Ohio	Ninth
*2222d Special Service WF Unit	Lockbourne AFB, Ohio	Ninth
2225th AFORD	Camp Kilmer, N.J.	First
2226th Air Base Gp, Hq & Hq Sq	Ft. Slocum, N.Y.	First
2226th Base Service Sq	Ft. Slocum, N.Y.	First
2226th Assembly & Processing Sq	Ft. Slocum, N.Y.	First
2227th AFRTC	Westover AFB, Mass. (MATS)	First
2228th AFRTC	Dow AFB, Maine	First
2229th AFRTC	Griffiss AFB, N.Y.(AMC)	First
2230th AFRTC	Mitchel AFB, N.Y.	First
2231st AFRTC	Newark Mun Apt., N.J.	First
2232d AFRTC	Stewart Field, N.Y.	First

*Negro Personnel

UNIT	STATION	AIR FORCE
2234th AFRTC	Hanscom Apt, Bedford, Mass	First
2235th AFRTC	Byrd Fld, Richmond, Va.	Ninth
2236th AFRTC	Godman AFB, Ky.	Ninth
2237th AFRTC	Reading Mun Apt, Pa.	Ninth
2238th AFRTC	Andrews AFB, Wash., D. C.(MATS)	Ninth
2239th AFRTC	Greater Pittsburgh Apt, Pa.	Ninth
2240th AFRTC	Cleveland Mun Apt, Ohio (AMC)	Ninth
2242d AFRTC	Selfridge AFB, Mich.	Tenth
2243d WAF Sq	Mitchel AFB, N. Y.	First
*2244th Avn Sq	Mitchel AFB, N. Y.	First
2344th AFRTC	Hill AFB, Utah, (AMC)	Fourth
2345th AFRTC	McChord AFB, Wash.	Fourth
2346th AFRTC	Hamilton AFB, Calif.	Fourth
2347th AFRTC	Long Beach Mun Apt, Calif.	Fourth
2348th AFRTC	Davis-Monthan AFB, Ariz. (SAC)	Fourth
2349th AFORD	Hamilton AFB, Calif.	Fourth
2349th AFORD, Det	San Francisco POE, Calif.(Army)	Fourth
2349th AFORD, Det	Seattle POE, Seattle, Wash.(Army)	Fourth
2351st WAF Sq	Hamilton AFB, Calif.	Fourth
*2352d Avn Sq	Hamilton AFB, Calif.	Fourth
2463d Air Base Gp, Hq & Hq Sq	Ft. Benjamin Harrison, Ind.	Tenth
2463d Maint & Supply Sq	Ft. Benjamin Harrison, Ind.	Tenth
2463 Base Service Sq	Ft. Benjamin Harrison, Ind.	Tenth
2463d Medical Sq	Ft. Benjamin Harrison, Ind.	Tenth
2464th AFRTC	Chanute AFB, Ill. (AFTRC)	Tenth
2465th AFRTC	Wold-Chamberlain Fld, Minn.	Tenth
2466th AFRTC	Stout Field, Ind.	Tenth
2467th AFRTC	Baer Field, Ft. Wayne, Ind.	Tenth
2468th AFRTC	Lowry AFB, Colo. (AFTRC)	Tenth
2469th AFRTC	Scott AFB, Ill. (AFRTC)	Tenth
2470th AFRTC	Sioux City Mun Apt, Iowa	Tenth
2471st AFRTC	Chicago-Orchard Apt, Ill.	Tenth
2472d AFRTC	Fairfax Fld, Kan.	Tenth
2473d AFRTC	Offutt AFB, Neb. (SAC)	Tenth
2475th WAF Sq	Ft. Benjamin Harrison, Ind.	Tenth
2476th Base Service Sq	Oscoda AFB, Mich.	Tenth
2582d AFRTC	MacDill AFB, Fla. (SAC)	Fourteenth
2583d Air Base Gp, Hq & Hq Sq	Orlando AFB, Fla.	Fourteenth
2583d Base Service Sq	Orlando AFB, Fla.	Fourteenth
2583d Opns Sq	Orlando AFB, Fla.	Fourteenth
2583d Maint & Sup Sq	Orlando AFB, Fla.	Fourteenth
2583d Assembly Sq	Orlando AFB, Fla.	Fourteenth
2583d Med Sq	Orlando AFB, Fla.	Fourteenth
2584th AFRTC	Memphis Mun Apt, Tenn.	Fourteenth
2585th AFRTC	Miami International Apt, Fla.	Fourteenth
2586th AFRTC	Gunter AFB, Montgomery, Ala.(AU)	Fourteenth
2587th AFRTC	Birmingham Mun Apt, Ala.	Fourteenth
2588th AFRTC	Hawkins Fld, Jackson, Miss.	Fourteenth
2589th AFRTC	Marietta AFB, Ga.	Fourteenth
2590th AFRTC	Barksdale AFB, La.	Twelfth
2591st AFRTC	Ellington AFB, Texas	Twelfth

*Negro personnel

UNIT	STATION	AIR FORCE
2592d AFRTC	Tinker AFB, Okla. (AMC)	Twelfth
2593d AFRTC	Brooks AFB, Texas	Twelfth
2594th AFORD	Camp LeRoy Johnson, La. (Army)	Twelfth
2595th Air Base Gp, Hq & Hq Sq	Brooks AFB, Texas	Twelfth
2595th Base Service Sq	Brooks AFB, Texas	Twelfth
2595th Maint & Supply Sq	Brooks AFB, Texas	Twelfth
2595th Cpns Sq	Brooks AFB, Texas	Twelfth
2595th Medical Sq	Brooks AFB, Texas	Twelfth
2596th AFRTC	Hensley Fld, Texas	Twelfth
2597th Air Police Sq (Off Base)	Brooks AFB, Texas	Twelfth
*2598th Avn Sq	Orlando AFB, Fla.	Fourteenth
*2599th Avn Sq	Brooks AFB, Texas	Twelfth
2600th Air Base Sq	Pope AFB, N. C.	Fourteenth
4400th Air Base Gp, Hq & Hq Sq	Stewart Fld, N. Y.	First
401st Maint & Supply Sq	Stewart Fld, N. Y.	First
402d Air Installations Sq	Stewart Fld, N. Y.	First
4403d Station Medical Sq	Stewart Fld, N. Y.	First
4404th Standby Base Sq	Dover AFB, Del. (Inactive)	Ninth
4405th Air Base Sq	Sherman AFB, Kans.	Tenth
4406th Air Base Sq	Marshall AFB, Kans.	Tenth
4408th Air Base Sq	Lawson AFB, Kans.	Fourteenth
4409th Standby Base Sq	Moody AFB, Ga.	Fourteenth
4410th Bomb Disposal Unit	Greenville AFB, S. C.	Fourteenth
4412th WAF Sq	Langley AFB, Va.	Ninth
*4413th WAF Sq	Lockbourne AFB, Ohio	Ninth
4415th Liaison Flt	Langley AFB, Va.	Ninth

* Negro Personnel

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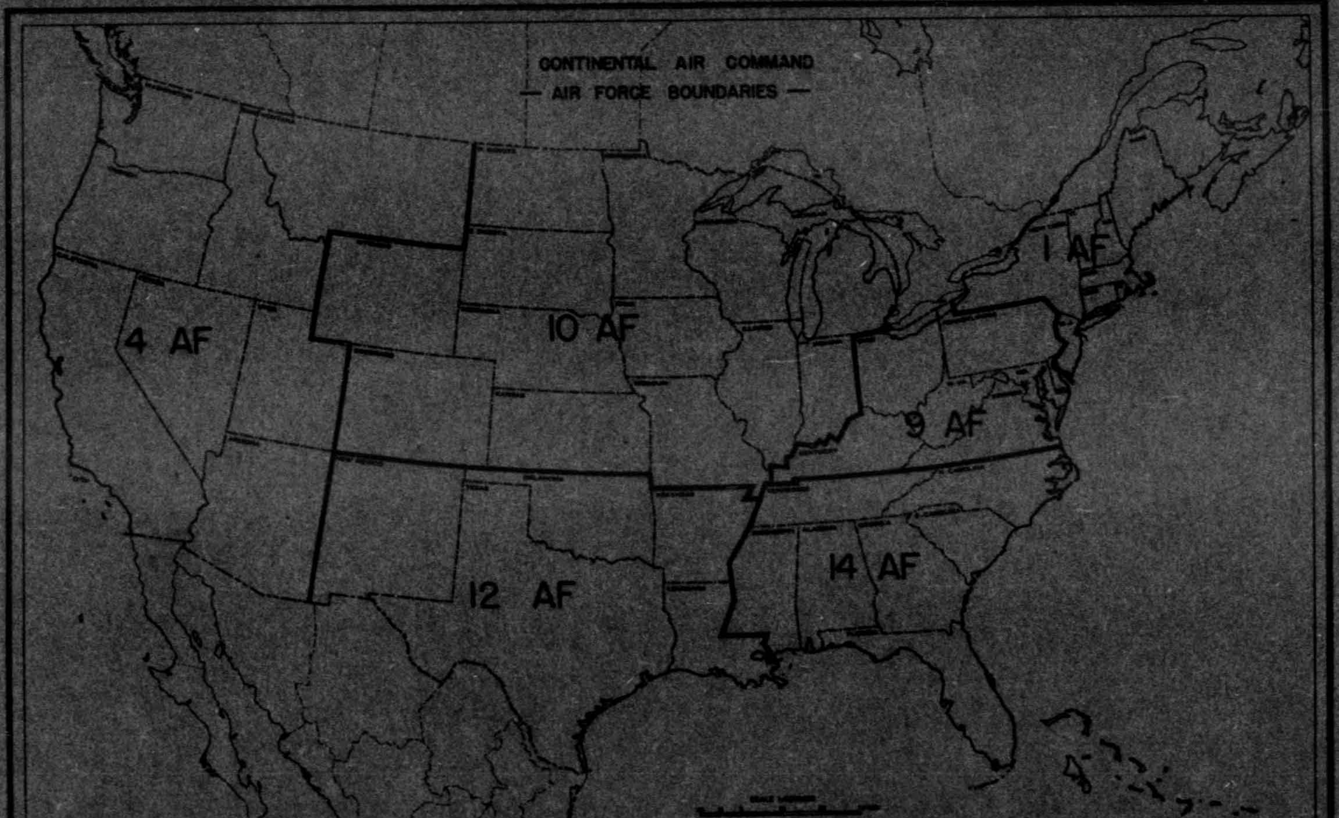

CONTINENTAL AIR COMMAND

— AIR FORCE BOUNDARIES —

4 AF
10 AF
1 AF
9 AF
12 AF
14 AF

2-3416-26A

411.278
1949

DIVISION
BRANCH

Map of Conac (1949)

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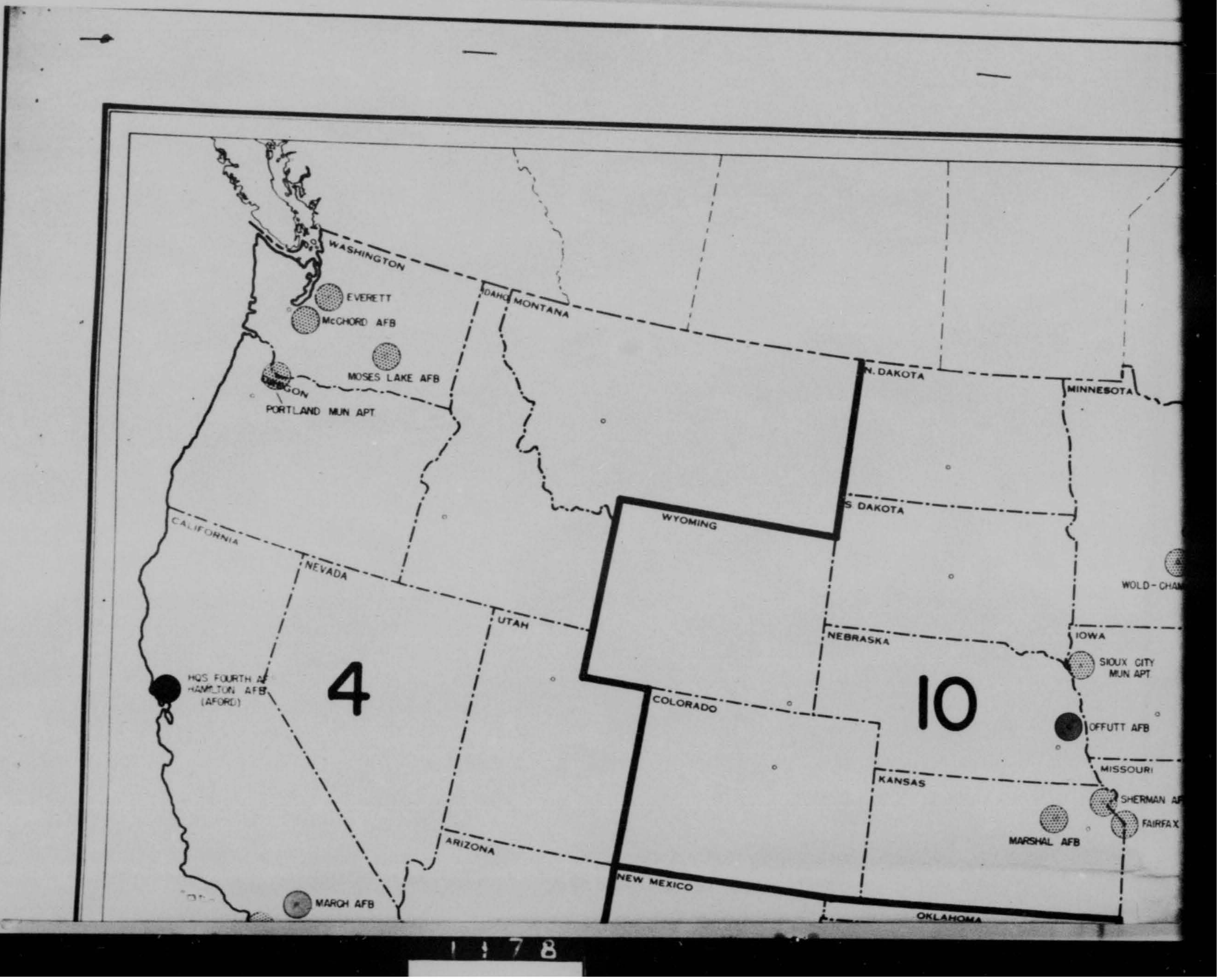
WASHINGTON
EVERETT
McCHORD AFB
MOSES LAKE AFB
OREGON
PORTLAND MUN APT
IDAHO
MONTANA
N. DAKOTA
MINNESOTA
S DAKOTA
WYOMING
CALIFORNIA
NEVADA
UTAH
NEBRASKA
IOWA
WOLD-CHAM
SIOUX CITY MUN APT
HQS FOURTH AF HAMILTON AFB (AFORD)
4
10
COLORADO
OFFUTT AFB
MISSOURI
KANSAS
SHERMAN AF
FAIRFAX
MARSHAL AFB
ARIZONA
NEW MEXICO
MARCH AFB
OKLAHOMA

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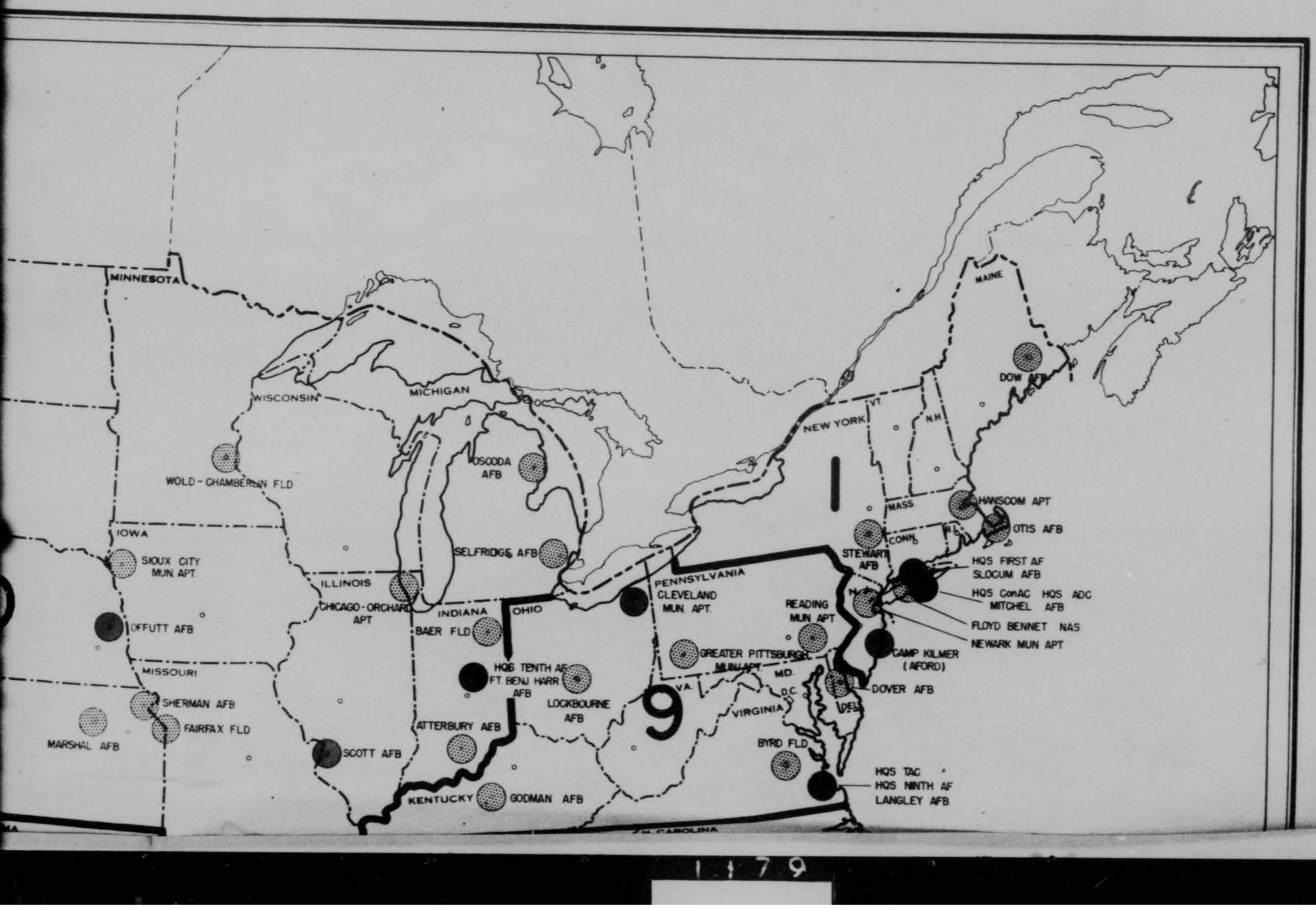
MINNESOTA
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MAINE
DOW AFB
OSCODA AFB
WOLD-CHAMBERLIN FLD
IOWA
SIOUX CITY MUN APT.
OFFUTT AFB
SELFRIDGE AFB
ILLINOIS
CHICAGO-ORCHARD APT
INDIANA
OHIO
BAER FLD
PENNSYLVANIA
CLEVELAND MUN. APT.
1
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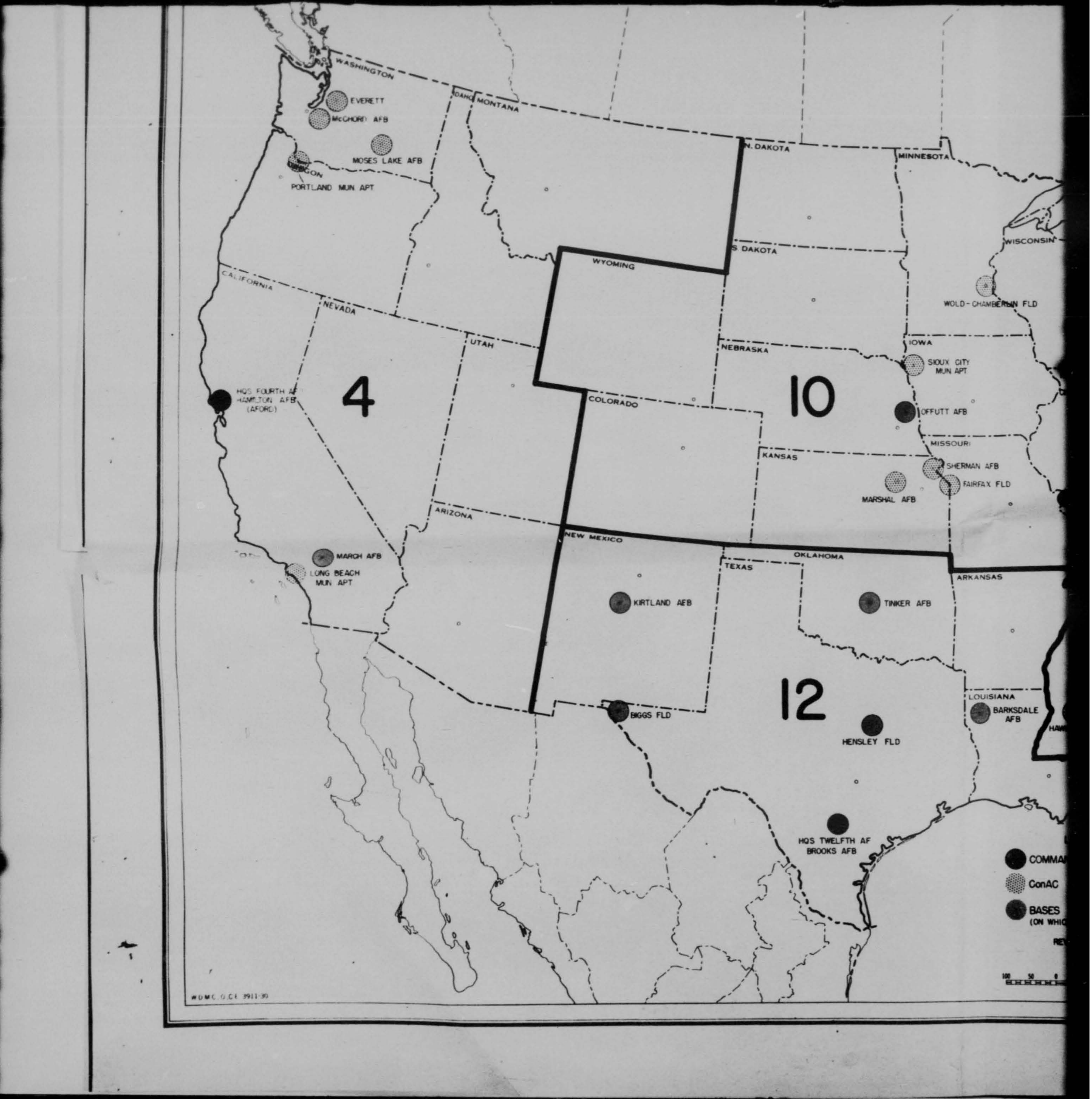
HANSCOM APT
OTIS AFB
STEWART AFB
HQS FIRST AF
SLOCUM AFB
HQS ConAC HQS ADC
MITCHEL AFB
FLOYD BENNET NAS
NEWARK MUN APT
N.J.
READING MUN APT
CAMP KILMER (AFORD)
GREATER PITTSBURGH MUN APT
MD.
D.C.
DEL
DOVER AFB
MISSOURI
HQS TENTH AF
FT. BENJ HARR AFB
LOCKBOURNE AFB
9
W.VA
VIRGINIA
SHERMAN AFB
FAIRFAX FLD
MARSHAL AFB
SCOTT AFB
ATTERBURY AFB
BYRD FLD
HQS TAC
HQS NINTH AF
LANGLEY AFB
KENTUCKY
GODMAN AFB
N. CAROLINA


WASHINGTON
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MOSES LAKE AFB
OREGON
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NEVADA
UTAH
NEBRASKA
IOWA
SIOUX CITY MUN APT
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HQS FOURTH AF HAMILTON AFB (AFORD)
COLORADO
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OFFUTT AFB
MISSOURI
KANSAS
SHERMAN AFB
FAIRFAX FLD
MARSHAL AFB
ARIZONA
NEW MEXICO
OKLAHOMA
ARKANSAS
TEXAS
MARCH AFB
LONG BEACH MUN APT
KIRTLAND AFB
TINKER AFB
12
LOUISIANA
BARKSDALE AFB
BIGGS FLD
HENSLEY FLD
HQS TWELFTH AF BROOKS AFB
● COMMAN
▨ ConAC
● BASES (ON WHIC
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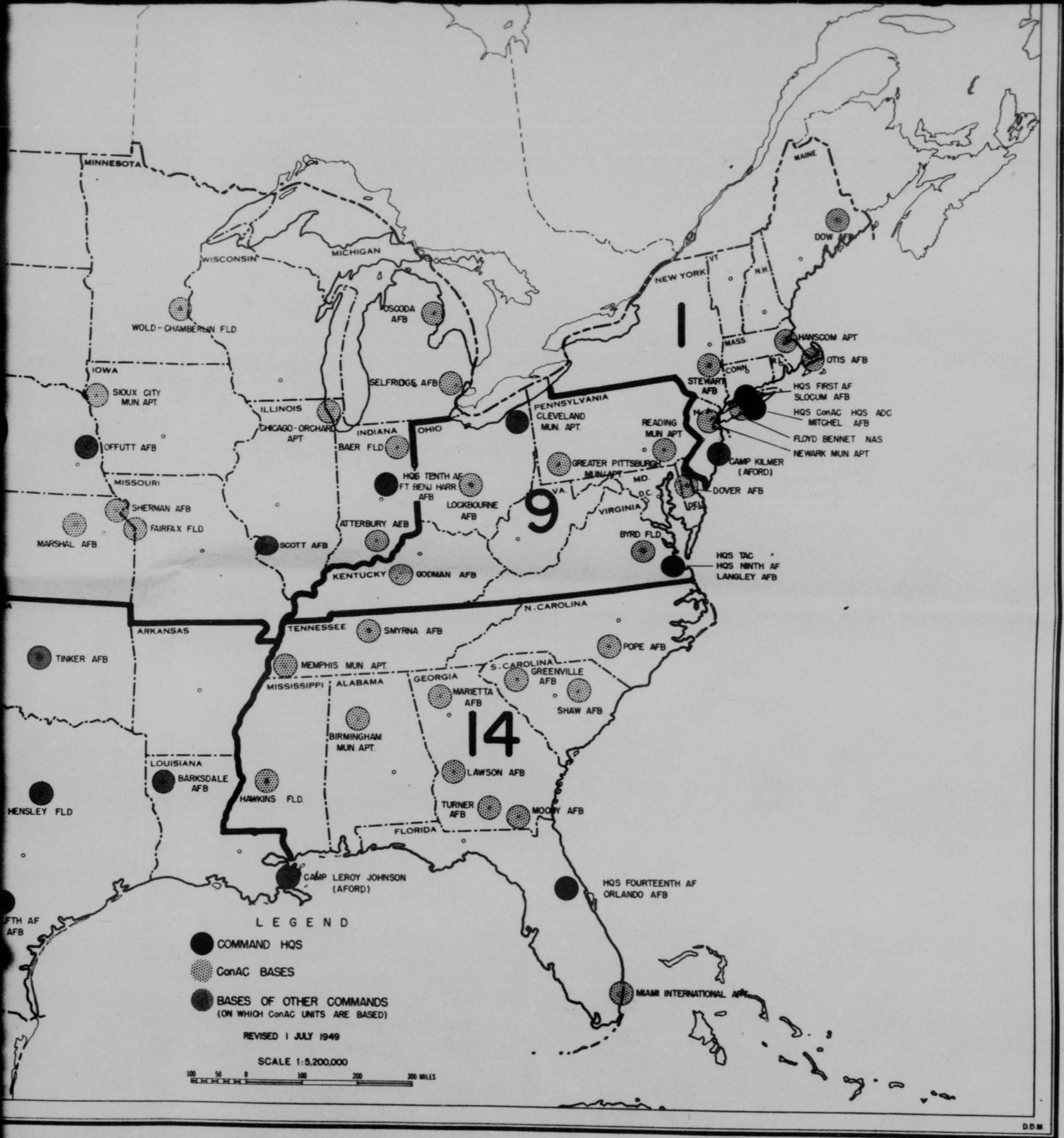
MINNESOTA
WISCONSIN
MICHIGAN
NEW YORK
VT
N.H.
MAINE
DOW AFB
WOLD-CHAMBERLIN FLD
OSCODA AFB
1
MASS.
HANSCOM APT
OTIS AFB
CONN.
R.I.
STEWART AFB
HQS FIRST AF
SLOCUM AFB
HQS ConAC HQS ADC
MITCHEL AFB
FLOYD BENNET NAS
NEWARK MUN APT
N.J.
IOWA
SIOUX CITY MUN. APT.
SELFRIDGE AFB
ILLINOIS
CHICAGO-ORCHARD APT
PENNSYLVANIA
CLEVELAND MUN. APT.
READING MUN APT
INDIANA
OHIO
BAER FLD
GREATER PITTSBURGH MUN. APT.
CAMP KILMER (AFORD)
OFFUTT AFB
HQS TENTH AF
FT. BENJ HARR. AFB
LOCKBOURNE AFB
MD.
D.C.
DEL.
DOVER AFB
MISSOURI
W. VA.
VIRGINIA
SHERMAN AFB
FAIRFAX FLD
9
MARSHAL AFB
ATTERBURY AFB
BYRD FLD
SCOTT AFB
HQS TAC
HQS NINTH AF
LANGLEY AFB
KENTUCKY
GODMAN AFB
N. CAROLINA
ARKANSAS
TENNESSEE
SMYRNA AFB
POPE AFB
TINKER AFB
MEMPHIS MUN. APT.
S. CAROLINA
GREENVILLE AFB
MISSISSIPPI
ALABAMA
GEORGIA
MARIETTA AFB
SHAW AFB
BIRMINGHAM MUN. APT.
14
LOUISIANA
BARKSDALE AFB
LAWSON AFB
HAWKINS FLD.
HENSLEY FLD
TURNER AFB
MOODY AFB
FLORIDA
CAMP LEROY JOHNSON (AFORD)
HQS FOURTEENTH AF
ORLANDO AFB
FTH AF
AFB
LEGEND
● COMMAND HQS
ConAC BASES
BASES OF OTHER COMMANDS (ON WHICH ConAC UNITS ARE BASED)
MIAMI INTERNATIONAL APT
REVISED 1 JULY 1949
SCALE 1:5,200,000
100 50 0 100 200 300 MILES
D.D.M.

UNCLASSIFIED

411 296-1
30 Apr 1950

Status of Conac Appropriated Funds
Fiscal Year 1950.
30 April 1950

UNCLASSIFIED

MICROFILMED.

2-3416-25

Legend:
01 - Personal Services
02 - Travel
99 - All other operating expenses
BA - Budget Authorization
AR - Allocation Received
OI - Obligations Incurred

CONTINENTAL AIR COMMAND

Status of ConAC Appropriated Funds Fiscal Year 1950

As of 30 April 1950

Comptroller Chart I
Prepared by:
Budget Directorate
Office of Comptroller
Hq Continental Air Command
15 May 1950

Number (1)	Title (2)	Fund Evaluation Category (3)	(4)	ConAC Total (5)	Hq ConAC (6)	1st AF (7)	4th AF (8)	9th AF (9)	10th AF (10)	12th AF (11)	14th AF (12)	BALANCE (13)	(14)
570400	MAINTENANCE AND OPERATIONS												
411-99	Aircraft Supplies and Equipment	Surplus	BA	30,000		3,340	8,589	6,535	2,501	0	9,035	BA Unissued	0
			AR	30,000		3,340	8,589	6,535	2,501	0	9,035	AR Unissued	0
			OI	14,692		1,663	4,516	1,249	998	0	6,266	AR Unobligated	15,308
412-99	Fuel and Oil, Aircraft	Adequate	BA	30,800		3,680	5,785	10,184	5,366	1,575	4,210	BA Unissued	0
			AR	30,800		3,680	5,785	10,184	5,366	1,575	4,210	AR Unissued	0
			OI	22,152		2,405	6,416	7,448	1,792	948	3,143	AR Unobligated	8,648
413-99	Contracts for Specialized Services and Salvage of Aircraft	Adequate	BA	800		0	0	0	650	0	0	BA Unissued	150
			AR	800		0	0	0	650	0	0	AR Unissued	150
			OI	650		0	0	0	650	0	0	AR Unobligated	150
421-02	Ferrying of Aircraft	Adequate	BA	155,000		11,800	25,000	10,100	5,200	8,800	30,000	BA Unissued	64,100
			AR	155,000		11,800	25,000	10,100	5,200	8,800	30,000	AR Unissued	64,100
			OI	87,266		11,220	22,791	11,101	5,959	7,166	29,029	AR Unobligated	67,734
441	Maintenance of Installations	Critical	BA	16,116,302		4,402,450	3,335,215	2,002,622	2,632,973	470,012	3,063,470	BA Unissued	209,560
			AR	16,116,302		4,402,450	3,335,215	2,002,622	2,632,973	470,012	3,063,470	AR Unissued	209,560
			OI	11,131,205		3,183,121	2,146,428	1,344,567	1,619,657	344,065	2,493,367	AR Unobligated	4,985,097
	Object Class -01		OI	6,154,691		1,821,652	1,050,655	939,161	993,862	220,601	1,128,760		
	Object Class -99		OI	4,976,514 *		1,361,469	1,095,773	405,406	625,795	123,464	1,364,607		
	Of the above, obligations were incurred for Special R&D Work Projects as follows:												
	Object Class -01		OI		0	4,847	0	0	17,100	0	0		
	Object Class -99		OI		0	116,949	162,846	15,600	30,236	7,731	541,960		
442	Operation of Installations	Adequate (A)	BA	16,429,200	65,500	4,949,515	3,160,488	2,149,330	1,894,305	775,787	3,306,299	BA Unissued	127,976
		(A)	AR	16,429,200	65,500	4,949,515	3,160,488	2,149,330	1,894,305	775,787	3,306,299	AR Unissued	127,976
		(A)	OI	13,696,746	49,347	4,209,731	2,508,904	1,823,071	1,568,458	655,277	2,881,090	AR Unobligated	2,734,154
	Object Class -01	(A)	OI	11,419,798	19,977	3,629,235	1,969,564	1,542,594	1,334,383	532,292	2,390,865		
	Object Class -02		OI	546,490	12,377	90,202	113,588	68,440	65,850	51,453	144,580		
	Object Class -99		OI	1,730,458	16,993	490,294	425,732	212,037	168,225	71,532	345,645		
443-99	Leased Real Property Rentals	Adequate	BA	119,036	0	48,094	14,827	1,500	28,000	100	13,000	BA Unissued	13,515
			AR	119,036	0	48,094	14,827	1,500	28,000	100	13,000	AR Unissued	13,515
			OI	65,435	0	43,233	13,201	569	4,689	0	3,743	AR Unobligated	53,601
445	Master Planning	Adequate	BA	36,400	0	5,000	8,400	400	400	400	7,700	BA Unissued	14,100
			AR	36,400	0	5,000	8,400	400	400	400	7,700	AR Unissued	14,100
			OI	425	0	0	425	0	0	0	0	AR Unobligated	35,975
446	Field Printing Plant	Adequate	BA	111,321	4,078	0	4,078	29,600	64,300	0	0	BA Unissued	9,265
			AR	111,321	4,078	0	4,078	29,600	64,300	0	0	AR Unissued	9,265
			OI	83,632	3,446	0	3,457	26,116	50,613	0	0	AR Unobligated	27,689
	Object Class -01		OI	77,010	3,446	0	3,457	24,270	45,837	0	0		
	Object Class -99		OI	6,622	0	0	0	1,846	4,776	0	0		
451-99	Air Force Commercial Transportation within ZI	Critical	BA	1,235,000	2,500	457,500	148,700	176,500	82,700	7,100	360,000	BA Unissued	0
			AR	1,235,000	2,500	457,500	148,700	176,500	82,700	7,100	360,000	AR Unissued	0
			OI	1,078,412	1,350	417,111	130,324	175,241	66,739	5,206	284,391	AR Unobligated	156,5[illegible]
488	Air Combat Maneuvers	Adequate	BA	840,000	73,207	31,519	126,750	30,876	37,306	32,471	474,937	BA Unissued	32,[illegible]
			AR	840,000	73,207	31,519	126,750	30,876	37,306	32,471	474,937	AR Unissued	32,[illegible]
			OI	634,912	76,349	32,842	70,564	17,365	16,693	22,314	398,765	AR Unobligated	205,[illegible]
	Object Class -01		OI	3,265	0	0	0	0	0	0	3,265		
	Object Class -02		OI	414,968	59,335	29,971	33,736	14,267	16,683	22,304	238,672		
	Object Class -99		OI	216,659	17,014	2,871	36,828	3,098	10	10	156,828		
496	Aviation Cadet Recruitment	Surplus	BA	145,825	0	28,656	21,153	21,817	32,310	14,750	27,139	BA Unissued	0
			AR	145,825	0	28,656	21,153	21,817	32,310	14,750	27,139	AR Unissued	0
			OI	100,791	0	20,468	12,536	14,111	24,363	10,807	18,506	AR Unobligated	45,034
	Object Class -02		OI	0	0	14,528	10,520	13,275	23,828	9,408	17,025		
	Object Class -99		OI	0	0	5,940	2,016	836	535	1,399	481		
570500	MILITARY PERSONNEL REQUIREMENTS												
533.6	PCS Movements of Individuals within ZI - Major Command Directed	Critical	BA	240,000	10,000	29,000	30,000	19,000	19,010	14,000	32,000	BA Unissued	86,990
			AR	240,000	10,000	29,000	30,000	19,000	19,010	14,000	32,000	AR Unissued	86,990
			OI	37,099	0	6,516	7,939	3,339	4,541	5,694	9,274	AR Unobligated	202,901
551	Organizational Movement Training - TDY	Adequate	BA	104,000	0	14,334	28,910	26	2,720	5,166	52,759	BA Unissued	85
			AR	104,000	0	14,334	28,910	26	2,720	5,166	52,759	AR Unissued	85
			OI	61,815	0	8,776	13,056	26	2,384	4,206	33,367	AR Unobligated	42,185
	Object Class -02		OI	49,817	0	8,776	13,056	26	2,384	4,206	21,369		
	Object Class -99		OI	11,998	0	0	0	0	0	0	11,998		
552-02	Individual or Group Movements for Attendance at Schools	Adequate	BA	639,300	26,000	117,500	150,800	73,500	69,500	61,500	140,500	BA Unissued	0
			AR	639,300	26,000	117,500	150,800	73,500	69,500	61,500	140,500	AR Unissued	0
			OI	517,556	22,251	93,629	121,734	66,391	54,706	49,534	111,411	AR Unobligated	121,744
572-99	Individual Clothing, Uniforms and Allowances	Adequate	BA	5,460	0	390	780	780	390	1,950	1,170	BA Unissued	0
			AR	5,460	0	390	780	780	390	1,950	1,170	AR Unissued	0
			OI	2,340 *	0	0	0	0	0	1,950	390	AR Unobligated	3,120
570800	SALARIES AND EXPENSES, ADMINISTRATION												
421-02	Ferrying of Aircraft	Adequate	BA	1,500	1,500	0	0	0	0	0	0	BA Unissued	0
			AR	1,500	1,500	0	0	0	0	0	0	AR Unissued	0
			OI	619	619	0	0	0	0	0	0	AR Unobligated	881
811-01	Personal Services	Adequate	BA	1,239,500	1,239,500	0	0	0	0	0	0	BA Unissued	0
			AR	1,239,500	1,239,500	0	0	0	0	0	0	AR Unissued	0
			OI	1,011,397	1,011,397	0	0	0	0	0	0	AR Unobligated	228,103
821-02	Temporary Duty Travel	Critical	BA	77,000	77,000	0	0	0	0	0	0	BA Unissued	0
			AR	77,000	77,000	0	0	0	0	0	0	AR Unissued	0
			OI	62,084	62,084	0	0	0	0	0	0	AR Unobligated	14,916
841-99	Other Administrative Expenses (Communication Services)	Adequate	BA	18,000	18,000	0	0	0	0	0	0	BA Unissued	0
			AR	18,000	18,000	0	0	0	0	0	0	AR Unissued	0
			OI	17,419	17,419	0	0	0	0	0	0	AR Unobligated	581
570450	CONTINGENCIES												
661-99	Public Relations Activities	Adequate	BA	1,375	405	210	135	225	120	135	145	BA Unissued	0
			AR	1,375	405	210	135	225	120	135	145	AR Unissued	0
			OI	813	305	110	97	147	80	69	45	AR Unobligated	562
881-99	Official Entertainment	Adequate	BA	2,050	1,000	0	0	50	200	0	650	BA Unissued	150
			AR	2,050	1,000	0	0	50	200	0	650	AR Unissued	150
			OI	446	21	0	0	39	198	0	188	AR Unobligated	1,604

FOOTNOTES: * Action has been initiated to adjust Critical and Surplus Funds -
(A) Includes Bolling AF Base: BA - 1700 - AR 1700 - OI - 868
(B) Includes Bolling AF Base: BA - 14,733 - AR 14,733 - OI - 11,058
(C) Includes Bolling AF Base: BA - 16,433 - AR 16,433 - OI - 11,926

Incl #25

2-3716-25

1185

Number (1)	Title (2)	Fund Evaluation Category * (3)	(4)	ConAC Total (5)	No ConAC (6)	1st AF (7)	4th AF (8)	9th AF (9)	10th AF (10)	12th AF (11)	14th AF (12)	B A L A N C E (13)	(14)
5704910	AIR FORCE RESERVE												
411-99	Aircraft Supplies and Equipment	Surplus	BA –	6,395	0	360	710	605	3,400	920	400	BA Unissued	0
			AR	6,395	0	360	710	605	3,400	920	400	AR Unissued	0
			OI	2,736	0	211	580	180	887	577	301	AR Unobligated	3,659
412-99	Fuel and Oil, Aircraft	Adequate	BA –	7,865	0	720	1,800	755	2,925	505	1,160	BA Unissued	0
			AR	7,865	0	720	1,800	755	2,925	505	1,160	AR Unissued	0
			OI	6,282	0	563	1,226	534	2,554	466	939	AR Unobligated	1,583
421-02	Ferrying of Aircraft	Adequate	BA –	60,000	176	10,049	9,456	10,318	17,365	3,043	9,593	BA Unissued	0
			AR	60,000	176	10,049	9,456	10,318	17,365	3,043	9,593	AR Unissued	0
			OI	35,256	42	5,996	6,196	4,382	12,026	671	5,943	AR Unobligated	24,744
441	Maintenance of Installations	Adequate	BA –	4,333,200	0	450,210	594,956	609,750	1,415,449	220,342	633,417	BA Unissued	409,076
			AR	4,333,200	0	450,210	594,956	609,750	1,415,449	220,342	633,417	AR Unissued	409,076
			OI	2,502,124	0	350,338	400,315	383,285	790,854	86,405	490,927	AR Unoblige	1,831,076
	Object Class -01		OI	1,219,574	0	197,479	152,909	210,156	367,006	58,115	233,909		
	Object Class -99		OI	1,282,550	0	152,859	247,406	173,129	423,848	28,290	257,018		
	Of the above, obligations were incurred for Special R&U Work Projects as follows:												
	Object Class -01		OI		0	0	0	2,054	898	1,401	4,722		
	Object Class -99		OI		0	31,010	115,547	6,761	12,106	0	48,458		
442	Operation of Installations	Adequate	(B) BA –	6,580,933	100,000	863,789	884,609	918,847	2,194,793	423,510	1,162,046	BA Unissued	16,606
			(B) AR	6,580,933	100,000	863,789	884,609	918,847	2,194,793	423,510	1,162,046	AR Unissued	48,072
			(B) OI	5,339,893	49,347	725,322	700,479	696,474	1,853,491	345,339	958,383	AR Unoblige	1,241,040
	Object Class -01		(B) OI	4,939,701	19,977	682,716	644,389	634,715	1,738,337	328,968	879,541		
	Object Class -02		OI	53,254	12,377	2,159	7,034	9,084	14,195	1,243	7,162		
	Object Class -99		OI	346,938	16,993	40,447	49,056	52,675	100,959	15,128	71,680		
443-99	Leased Real Property Rentals	Undetermined	BA –	403,000	0	76,500	77,500	35,500	54,500	19,000	86,500	BA Unissued	53,500
			AR	403,000	0	76,500	77,500	35,500	54,500	19,000	86,500	AR Unissued	53,500
			OI	156,545	0	36,679	38,118	12,137	10,365	863	58,383	AR Unoblige	246,455
451-99	Air Force Commercial Transportation within ZI	Adequate	BA –	139,300	400	10,300	7,325	20,325	39,550	2,050	22,550	BA Unissued	36,800
			AR	102,500	400	10,300	7,325	20,325	39,550	2,050	22,550	AR Unissued	0
			OI	76,287	200	4,687	4,433	12,526	36,401	1,377	16,661	AR Unoblige	26,213
484-99	Training Aids, Publications and Extension Courses for Air Force Reserve	Surplus	BA –	17,500	0	700	350	1,000	550	200	1,200	BA Unissued	13,500
			AR	8,750	0	700	350	1,000	550	200	1,200	AR Unissued	4,750
			OI	2,517	0	373	200	778	398	81	687	AR Unoblige	6,233
521-01	Pay of Air Force Reserve on Active Duty for Training Purposes	Adequate	BA –	5,133,230	78,900	796,000	1,238,100	937,900	898,150	513,200	618,300	BA Unissued	52,680
			AR	5,133,230	78,900	796,000	1,238,100	937,900	898,150	513,200	618,300	AR Unissued	52,680
			OI	2,380,665	43,026	281,380	549,647	261,154	795,183	223,111	227,164	AR Unoblige	2,752,565
522-01	Pay of Air Force Reserve on Inactive Duty	Surplus	BA –	6,854,295	113,800	947,000	835,700	1,067,400	1,190,600	465,400	641,900	BA Unissued	1,592,495
			AR	4,335,800	92,178	767,070	676,917	864,594	964,386	376,974	519,939	AR Unissued	73,742
			OI	4,166,897	66,015	686,459	766,585	600,030	1,203,074	354,213	490,521	AR Unoblige	168,903
523-02	Other Expenses of Air Force Reserve on Inactive Duty	Surplus	BA –	9,750	0	75	75	75	1,000	7,500	75	BA Unissued	950
			AR	8,800	0	75	75	75	1,000	5,200	75	AR Unissued	2,300
			OI	4,637	0	8	32	0	767	3,821	9	AR Unoblige	4,163
561-02	Travel of Air Force Reserve Personnel	Surplus	BA –	1,722,095	4,500	131,500	130,400	153,900	74,300	152,600	117,000	BA Unissued	957,895
			AR	784,897	4,500	131,500	130,400	153,900	74,300	152,600	117,000	AR Unissued	20,697
			OI	187,342	1,824	35,577	19,569	23,196	57,203	24,091	25,882	AR Unoblige	597,555
562-02	Travel and Other Expenses of Personnel, Reference Air Force Reserve Activities	Adequate	BA –	216,000	33,000	13,000	26,000	36,000	59,000	23,000	26,000	BA Unissued	0
			AR	216,000	33,000	13,000	26,000	36,000	59,000	23,000	26,000	AR Unissued	0
			OI	142,025	21,051	6,751	20,120	20,893	42,892	10,250	20,068	AR Unoblige	73,975
5704940	AIR RESERVE OFFICERS' TRAINING CORPS												
447	Operating Expenses at AROTC Institutions - Travel	Adequate	BA –	227,700	23,000	76,600	23,700	38,000	36,400	10,300	19,700	BA Unissued	0
			AR	227,700	23,000	76,600	23,700	38,000	36,400	10,300	19,700	AR Unissued	0
			OI	119,471	2,576	41,789	16,727	9,444	30,287	10,034	8,614	AR Unoblige	108,229
	Object Class -02		OI	33,329	1,848	3,350	5,344	5,018	6,876	4,298	6,595		
	Object Class -99		OI	86,142	728	38,439	11,383	4,426	23,411	5,736	2,019		
448	Operating Expenses at AROTC Summer Camps	Adequate	BA –	963,745	93,622	62,841	102,541	154,266	240,904	105,044	128,182	BA Unissued	76,345
			AR	963,745	93,622	62,841	102,541	154,266	240,904	105,044	128,182	AR Unissued	76,345
			OI	386,474	8,672	27,146	64,639	65,177	131,288	55,188	34,364	AR Unoblige	577,271
	Object Class -01		OI	49,892	0	422	2,713	10,967	15,083	18,151	2,556		
	Object Class -02		OI	268,970	627	25,451	61,338	44,976	73,088	33,314	30,176		
	Object Class -99		OI	67,612	8,045	1,273	588	9,234	43,117	3,723	1,632		
451-99	Commercial Transportation within ZI	Adequate	BA –	15,000	250	900	1,700	4,100	5,100	1,100	1,600	BA Unissued	250
			AR	15,000	250	900	1,700	4,100	5,100	1,100	1,600	AR Unissued	250
			OI	4,752	247	528	1,856	629	903	428	161	AR Unoblige	10,248
524	Pay and Allowances of AROTC Students	Adequate	BA –	3,937,035	0	466,660	505,700	717,985	936,715	645,600	605,885	BA Unissued	58,490
			AR	3,937,035	0	466,660	505,700	717,985	936,715	645,600	605,885	AR Unissued	58,490
			OI	3,161,764	0	391,355	437,118	588,826	799,075	546,886	398,504	AR Unoblige	775,271
	Object Class -01		OI	2,823,604	0	331,541	437,118	507,217	680,216	507,515	359,997		
	Object Class -99		OI	338,160	0	59,814	0	81,609	118,859	39,371	38,507		
5704970	AIR NATIONAL GUARD												
421-02	Ferrying of Aircraft	Adequate	BA –	50,000	0	7,000	9,060	2,150	2,600	120	975	BA Unissued	28,095
			AR	50,000	0	7,000	9,060	2,150	2,600	120	975	AR Unissued	28,095
			OI	22,651	0	7,375	9,638	2,201	2,354	156	927	AR Unoblige	27,349
563-02	Travel - Air National Guard	Adequate	BA –	162,300	9,600	25,125	20,900	37,150	28,900	19,800	19,000	BA Unissued	1,825
			AR	162,300	9,600	25,125	20,900	37,150	28,900	19,800	19,000	AR Unissued	1,825
			OI	118,701	2,232	21,009	14,539	23,405	24,928	14,733	17,855	AR Unoblige	43,599
GRAND TOTALS			BA (C)	68,418,912	1,975,938	14,042,317	11,540,192	9,279,071	12,080,150	4,006,980	11,618,497	BA Unissued	3,859,334
			AR (C)	64,916,719	1,954,316	13,862,387	11,381,409	9,076,265	11,853,936	3,916,254	11,496,536	AR Unissued	1,359,183
			OI (C)	47,444,925	1,439,820	10,654,371	8,114,163	6,193,979	9,215,452	2,785,926	9,029,288	AR Unoblige	17,471,794

FOOTNOTES: * Action has been initiated to adjust Critical and Surplus funds -
(A) Includes Bolling AF Base: BA - 1700 - AR 1700 - OI - 868
(B) Includes Bolling AF Base: BA - 14,733 - AR 14,733 - OI - 11,058
(C) Includes Bolling AF Base: BA - 16,433 - AR 16,433 - OI - 11,926

UNCLASSIFIED

419.296-1
31 May 1950

RETURN TO
RESEARCH STUDIES
INSTITUTE
U.S.A.F.
HISTORICAL DIVISION
ARCHIVES BRANCH

Status of Conac Appropriated
Funds Fiscal year 1950
May 1950

UNCLASSIFIED

MICROFILMED

C

2-3416-24

Legend:

01 - Personal Services
02 - Travel
99 - All other operating expenses
BA - Budget Authorization
AR - Allocation Received
OI - Obligations Incurred

CONTINENTAL AIR COMMAND

Status of ConAC Appropriated Funds Fiscal Year 1950

As of May 1950

Controller Chart I
Prepared by:
Budget Directorate
Office of Comptroller
Hq Continental Air Command
13 June 1950

Number (1)	Title (2)	Fund Evaluation Category (3)	(4)	ConAC Total (5)	Hq ConAC (6)	1st AF (7)	4th AF (8)	9th AF (9)	10th AF (10)	12th AF (11)	14th AF (12)	BALANCE (13)	(14)
5704400	MAINTENANCE AND OPERATIONS												
F411-99	Aircraft Supplies and Equipment	Surplus	BA	30,000		3,340	8,589	6,535	2,501	0	9,035	BA Unissued	0
			AR	30,000		3,340	8,589	6,535	2,501	0	9,035	AR Unissued	0
			OI	15,971		1,683	4,912	1,249	1,020	0	7,107	AR Unobligated	14,029
F412-99	Fuel and Oil, Aircraft	Surplus	BA	30,800		2,905	5,785	9,334	5,366	1,575	5,060	BA Unissued	775
			AR	30,800		2,905	5,785	9,334	5,366	1,575	5,060	AR Unissued	775
			OI	25,507		2,999	7,198	7,448	3,697	968	3,217	AR Unobligated	5,293
F413-99	Contracts for Specialized Services and Salvage of Aircraft	Adequate	BA	1,050		0	250	0	650	0	0	BA Unissued	150
			AR	1,050		0	250	0	650	0	0	AR Unissued	150
			OI	650		0	0	0	650	0	0	AR Unobligated	400
F421-02	Ferrying of Aircraft	Surplus	BA	155,000		32,800	33,974	14,740	20,584	10,082	42,820	BA Unissued	0
			AR	155,000		32,800	33,974	14,740	20,584	10,082	42,820	AR Unissued	0
			OI	92,427		11,394	24,052	11,199	8,209	7,545	30,028	AR Unobligated	62,573
F441	Maintenance of Installations	Adequate	BA	16,333,465		4,420,295	3,335,215	2,006,122	2,632,973	447,212	3,073,070	BA Unissued	418,578
			AR	16,333,465		4,420,295	3,335,215	2,006,122	2,632,973	447,212	3,073,070	AR Unissued	418,578
			OI	12,357,185		3,498,123	2,476,844	1,498,558	1,802,190	380,815	2,700,655	AR Unobligated	3,976,280
	Object Class -01		OI	6,826,601		2,022,611	1,204,863	1,037,225	1,083,653	249,333	1,228,916		
	Object Class -99		OI	5,530,584		1,475,512	1,271,981	461,333	718,537	131,482	1,471,739		
	Of the above, obligations were incurred for Special R&U Work Projects as follows:												
	Object Class -01		OI		0	4,847	0	0	17,100	1,649	0		
	Object Class -99		OI		0	139,899	182,132	15,600	33,286	11,768	533,524		
F442	Operation of Installations	Adequate	(A) BA	16,429,200	65,500	5,009,515	3,160,488	2,180,180	1,896,305	799,787	3,306,299		9,426
			(A) AR	16,429,200	65,500	5,009,515	3,160,488	2,180,180	1,896,305	799,787	3,306,299		9,426
			(A) OI	14,992,121	52,480	4,599,095	2,803,634	1,982,155	1,712,871	722,727	3,118,005		1,437,079
	Object Class -01		(A) OI	12,480,598	22,343	3,970,539	2,188,488	1,687,694	1,454,121	591,140	2,566,273		
	Object Class -02		OI	619,837	13,365	101,034	132,574	75,006	74,781	56,186	166,891		
	Object Class -99		OI	1,890,532	16,772	527,522	482,572	219,455	183,969	75,401	384,841		
F443-99	Leased Real Property Rentals	Adequate	BA	119,036	0	48,094	14,827	1,500	28,000	100	13,000	BA Unissued	13,515
			AR	119,036	0	48,094	14,827	1,500	28,000	100	13,000	AR Unissued	13,515
			OI	98,985	0	47,145	11,006	569	28,149	0	12,116	AR Unobligated	20,051
F445	Master Planning	Adequate	BA	47,300	0	5,000	8,400	400	400	400	7,700	BA Unissued	25,000
			AR	47,300	0	5,000	8,400	400	400	400	7,700	AR Unissued	25,000
			OI	11,961	0	4,350	911	0	0	0	6,700	AR Unobligated	35,339
F446	Field Printing Plant	Surplus	BA	111,321	4,078	0	4,078	32,991	64,300	0	0	BA Unissued	5,874
			AR	111,321	4,078	0	4,078	32,991	64,300	0	0	AR Unissued	5,874
			OI	89,175	3,829	0	3,829	30,018	51,499	0	0	AR Unobligated	22,146
	Object Class -01		OI	82,675	3,829	0	3,829	28,172	46,845	0	0		
	Object Class -99		OI	6,500	0	0	0	1,846	4,654	0	0		
F451-99	Air Force Commercial Transportation within ZI	Adequate	BA	1,269,000	2,500	447,500	151,850	218,000	93,900	7,100	330,000	BA Unissued	18,150
			AR	1,269,000	2,500	447,500	151,850	218,000	93,900	7,100	330,000	AR Unissued	18,150
			OI	1,158,582	1,350	423,211	146,211	192,726	70,380	5,781	318,923	AR Unobligated	110,418
F488	Air Combat Maneuvers	Surplus	BA	840,000	112,392	35,633	86,050	23,418	37,304	32,471	477,263	BA Unissued	35,469
			AR	840,000	112,392	35,633	86,050	23,418	37,304	32,471	477,263	AR Unissued	35,469
			OI	761,678	117,003	37,127	80,293	20,212	17,200	25,075	464,768	AR Unobligated	78,322
	Object Class -01		OI	3,285	0	0	0	0	0	0	3,285		
	Object Class -02		OI	499,056	99,617	31,228	40,730	16,078	17,200	25,065	269,138		
	Object Class -99		OI	259,337	17,386	5,899	39,563	4,134	0	10	192,345		
F492	Patent Fees and Custom Expenses	Surplus	BA	4,150	0	0	3,100	0	200	0	0	BA Unissued	850
			AR	4,150	0	0	3,100	0	200	0	0	AR Unissued	850
			OI	699	0	0	537	0	162	0	0	AR Unobligated	3,451
F496	Aviation Cadet Recruitment	Surplus	BA	145,825	0	23,656	15,153	19,317	27,310	12,750	24,139	BA Unissued	23,500
			AR	145,825	0	23,656	15,153	19,317	27,310	12,750	24,139	AR Unissued	23,500
			OI	105,550	0	21,229	13,830	14,345	25,130	10,752	20,264	AR Unobligated	40,275
	Object Class -02		OI	91,768	0	15,295	11,732	13,294	24,095	9,122	18,230		
	Object Class -99		OI	13,782	0	5,934	2,098	1,051	1,035	1,630	2,034		
5704500	MILITARY PERSONNEL REQUIREMENTS												
F533.6	PCS Movements of Individuals within ZI - Major Command Directed	Adequate	BA	240,000	10,000	29,000	30,000	19,481	19,010	15,224	32,000	BA Unissued	85,285
			AR	240,000	10,000	29,000	30,000	19,481	19,010	15,224	32,000	AR Unissued	85,285
			OI	~~65,685~~ 107,733	~~0~~ 8241	14,575	16,777	~~0~~ 8891	19,562	14,709	~~0~~ 24978	AR Unobligated	~~[illegible]~~ 172,767
F551	Organizational Movement Training - TDY	Critical	BA	104,000	7,500	10,834	24,910	111	2,720	5,166	49,759	BA Unissued	3,000
			AR	104,000	7,500	10,834	24,910	111	2,720	5,166	49,759	AR Unissued	3,000
			OI	88,245	7,500	10,663	27,463	26	2,396	4,548	35,649	AR Unobligated	15,755
	Object Class -02		OI	75,803	7,500	10,663	27,463	26	2,396	4,548	23,207		
	Object Class -99		OI	12,442	0	0	0	0	0	0	12,442		
F552	Individual or Group Movements for Attendance at Schools	Surplus	BA	639,300	26,000	117,500	150,800	73,500	69,500	61,500	140,500	BA Unissued	0
			AR	639,300	26,000	117,500	150,800	73,500	69,500	61,500	140,500	AR Unissued	0
			OI	555,557	24,446	99,340	127,730	70,356	62,477	51,375	119,833	AR Unobligated	83,743
	Object Class -02		OI	552,913	24,159	98,416	127,489	70,041	62,398	51,375	119,035		
	Object Class -99		OI	2,644	287	924	241	315	79	0	798		
F572-99	Individual Clothing, Uniforms and Allowances	Surplus	BA	5,460	0	390	780	780	390	1,950	1,170	BA Unissued	0
			AR	5,460	0	390	780	780	390	1,950	1,170	AR Unissued	0
			OI	2,340	0	0	0	0	0	1,950	390	AR Unobligated	3,120
5704800	SALARIES AND EXPENSES, ADMINISTRATION												
F421-02	Ferrying of Aircraft	Surplus	BA	1,500	1,500	0	0	0	0	0	0	BA Unissued	0
			AR	1,500	1,500	0	0	0	0	0	0	AR Unissued	0
			OI	797	797	0	0	0	0	0	0	AR Unobligated	703
F841-01	Personal Services	Adequate	BA	1,239,500	1,239,500	0	0	0	0	0	0	BA Unissued	0
			AR	1,239,500	1,239,500	0	0	0	0	0	0	AR Unissued	0
			OI	1,125,538	1,125,538	0	0	0	0	0	0	AR Unobligated	113,962
F821-02	Temporary Duty Travel	Adequate	BA	77,000	77,000	0	0	0	0	0	0	BA Unissued	0
			AR	77,000	77,000	0	0	0	0	0	0	AR Unissued	0
			OI	68,465	68,465	0	0	0	0	0	0	AR Unobligated	8,535
F841-99	Other Administrative Expenses (Communication Services)	Adequate	BA	18,000	18,000	0	0	0	0	0	0	BA Unissued	0
			AR	18,000	18,000	0	0	0	0	0	0	AR Unobligated	0
			OI	17,651	17,651	0	0	0	0	0	0	AR Unobligated	349
5704850	CONTINGENCIES												
F861-99	Public Relations Activities	Adequate	BA	1,375	405	210	135	225	120	135	145	BA Unissued	0
			AR	1,375	405	210	135	225	120	135	145	AR Unobligated	0
			OI	890	303	141	81	157	95	69	44	AR Unobligated	485
F861-99	Official Entertainment	Adequate	BA	2,050	500	0	250	50	400	0	439	BA Unissued	411
			AR	2,050	500	0	250	50	400	0	439	AR Unobligated	411
			OI	940	21	0	250	37	200	0	432	AR Unobligated	1,110

FOOTNOTE: * Action has been initiated to adjust Critical and Surplus funds - (A) Includes Bolling AF Base: BA - 1700 - AR - 1700; OI - 1154

Ind # 24

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Comptroller Chart 1 as of 31 May 1950

Number (1)	Title (2)	Fund Evaluation Category (3)	(4)	ComAC Total (5)	Hq ComAC (6)	1st AF (7)	4th AF (8)	9th AF (9)	10th AF (10)	12th AF (11)	14th AF (12)	BALANCE (13)	(14)
5704910	AIR FORCE RESERVE												
P411-99	Aircraft Supplies and Equipment	Surplus	BA	6,395	0	360	710	605	3,400	920	400	BA Unissued	0
			AR	6,395	0	360	710	605	3,400	920	400	AR Unissued	0
			OI	2,911	0	211	399	293	1,086	580	342	AR Unobligated	3,484
P412-99	Fuel and Oil, Aircraft	Surplus	BA	8,865	0	720	1,600	1,005	3,825	505	1,160	BA Unissued	50
			AR	8,865	0	720	1,600	1,005	3,825	505	1,160	AR Unissued	50
			OI	6,923	0	609	1,258	604	2,996	357	1,099	AR Unobligated	1,942
P421-02	Ferrying of Aircraft	Surplus	BA	94,000	176	17,049	11,456	16,318	24,365	10,063	14,593	BA Unissued	0
			AR	94,000	176	17,049	11,456	16,318	24,365	10,063	14,593	AR Unissued	0
			OI	39,726	42	6,629	7,428	4,946	13,030	743	6,908	AR Unobligated	54,274
P441	Maintenance of Installations	Adequate	BA	4,333,200	0	489,340	609,956	646,330	1,614,999	233,742	654,217	BA Unissued	84,616
			AR	4,333,200	0	489,340	609,956	646,530	1,614,999	233,742	654,217	AR Unissued	84,616
			OI	2,915,084	0	390,705	491,792	442,534	861,221	180,280	548,552	AR Unobligated	1,418,116
	Object Class -01		OI	1,368,176	0	219,491	178,802	240,433	412,293	63,293	253,864		
	Object Class -99		OI	1,546,908	0	171,214	312,990	202,101	448,928	116,987	294,688		
	Of the above, obligations were incurred for Special R&U Work Projects as follows:												
	Object Class -01		OI		0	0	0	2,054	0	1,401	4,722		
	Object Class -99		OI		0	38,238	167,107	40,241	7,731	0	58,994		
P442	Operation of Installations	Adequate	(B) BA	6,566,200	20,000	884,404	888,609	918,847	2,219,793	423,510	1,162,046	BA Unissued	34,258
			(B) AR	6,566,200	20,000	884,404	888,609	918,847	2,219,793	423,510	1,162,046	AR Unissued	34,258
			(B) OI	5,921,416	1,410	801,078	788,930	803,318	2,059,939	379,452	1,075,695	AR Unobligated	644,784
	Object Class -01		(B) OI	5,488,546	0	751,799	725,117	727,999	1,931,090	361,154	979,733		
	Object Class -02		OI	58,464	0	6,233	7,950	10,246	17,674	1,286	15,075		
	Object Class -99		OI	374,406	1,410	43,046	55,803	65,073	111,175	17,012	80,887		
P443-99	Leased Real Property Rentals	Surplus	BA	403,000	0	76,500	77,500	35,500	54,500	19,000	86,500	BA Unissued	53,500
			AR	403,000	0	76,500	77,500	35,500	54,500	19,000	86,500	AR Unissued	53,500
			OI	~~[illegible]~~ 181 388	0	50,913	41,880	12,770	10,831	~~[illegible]~~ 1238	63,756	AR Unobligated	~~[illegible]~~ 221 612
P451-99	Air Force Commercial Transportation within ZI	Surplus	BA	102,500	400	10,300	7,325	20,325	39,550	2,050	22,550	BA Unissued	0
			AR	102,500	400	10,300	7,325	20,325	39,550	2,050	22,550	AR Unissued	0
			OI	89,932	200	5,879	4,911	20,571	37,935	1,931	18,505	AR Unobligated	12,568
P484-99	Training Aids, Publications and Extension Courses for Air Force Reserve	Surplus	BA	17,500	0	700	350	1,300	550	200	1,320	BA Unissued	13,080
			AR	17,500	0	700	350	1,300	550	200	1,320	AR Unissued	13,080
			OI	3,198	0	555	205	1,099	468	81	790	AR Unobligated	14,302
P521-01	Pay of Air Force Reserve on Active Duty for Training Purposes	Adequate	BA	5,183,230	78,900	796,000	1,238,100	937,900	898,150	543,200	665,300	BA Unissued	25,680
			AR	5,183,230	78,900	796,000	1,238,100	937,900	898,150	543,200	665,300	AR Unissued	25,680
			OI	3,265,833	46,588	580,383	734,176	336,850	828,424	238,625	500,787	AR Unobligated	1,917,397
P522-01	Pay of Air Force Reserve on Inactive Duty	Surplus	BA	6,854,295	113,800	947,000	975,700	1,067,400	1,497,600	465,400	641,900	BA Unissued	1,141,495
			AR	5,511,230	113,800	947,000	855,700	1,067,400	1,244,600	465,400	641,900	AR Unissued	175,430
			OI	~~[illegible]~~ 4614256	66,542	~~[illegible]~~ 768 469	828,905	749,581	1,250,268	454,580	495,911	AR Unobligated	~~[illegible]~~ 896 974
P523-02	Other Expenses of Air Force Reserve on Inactive Duty	Surplus	BA	9,750	0	75	75	75	1,000	7,500	75	BA Unissued	950
			AR	8,800	0	75	75	75	1,000	7,500	75	AR Unissued	0
			OI	4,359	0	8	32	0	767	3,543	9	AR Unobligated	4,441
P561-02	Travel of Air Force Reserve Personnel	Surplus	BA	919,360	4,500	131,500	130,400	153,900	74,300	152,600	117,000	BA Unissued	155,160
			AR	819,897	4,500	131,500	130,400	153,900	74,300	152,600	117,000	AR Unissued	55,697
			OI	271,035	2,117	48,002	25,203	27,956	63,035	25,611	79,111	AR Unobligated	548,862
P562-02	Travel and Other Expenses of Personnel, Reference Air Force Reserve Activities	Adequate	BA	216,000	33,000	13,000	28,000	30,000	57,000	23,000	32,000	BA Unissued	0
			AR	216,000	33,000	13,000	28,000	30,000	57,000	23,000	32,000	AR Unissued	0
			OI	~~[illegible]~~ 165 825	22,563	9,021	22,045	23,732	47,428	15,777	~~[illegible]~~ 24 159	AR Unobligated	~~[illegible]~~ 50 975
5704960	AIR RESERVE OFFICERS' TRAINING CORPS												
P447	Operating Expenses at AROTC Institutions - Travel	Adequate	BA	227,700	17,050	76,600	23,700	38,000	36,400	16,250	19,700	BA Unissued	0
			AR	227,700	17,050	76,600	23,700	38,000	36,400	16,250	19,700	AR Unissued	0
			OI	133,427	2,804	43,931	18,250	15,417	28,641	13,918	10,466	AR Unobligated	94,273
	Object Class -02		OI	33,547	2,076	4,574	0	6,328	8,362	4,863	7,344		
	Object Class -99		OI	99,880	728	39,357	18,250	9,089	20,279	9,055	3,122		
P448	Operating Expenses at AROTC Summer Camps	Adequate	BA	963,745	93,622	72,331	113,211	168,897	258,648	117,985	139,051	BA Unissued	0
			AR	963,745	93,622	72,331	113,211	168,897	258,648	117,985	139,051	AR Unissued	0
			OI	469,287	8,749	31,114	64,416	118,951	155,428	55,295	35,334	AR Unobligated	494,458
	Object Class -01		OI	123,429	0	421	2,713	20,252	79,336	18,151	2,556		
	Object Class -02		OI	264,762	704	29,244	61,115	88,351	21,051	33,421	30,876		
	Object Class -99		OI	81,096	8,045	1,449	588	10,348	55,041	3,723	1,902		
P451-99	Commercial Transportation within ZI	Adequate	BA	15,000	250	900	1,700	4,100	5,100	1,100	1,600	BA Unissued	250
			AR	15,000	250	900	1,700	4,100	5,100	1,100	1,600	AR Unissued	250
			OI	6,010	252	550	1,821	1,841	1,015	346	185	AR Unobligated	8,990
P524	Pay and Allowances of AROTC Students	Adequate	BA	3,937,035	0	466,660	505,700	717,985	936,715	645,600	605,885	BA Unissued	58,490
			AR	3,937,035	0	466,660	505,700	717,985	936,715	645,600	605,885	AR Unissued	58,490
			OI	3,429,970	0	422,309	452,408	672,161	877,185	591,509	414,398	AR Unobligated	507,065
	Object Class -01		OI	3,071,584	0	360,149	452,408	584,548	749,697	550,408	374,374		
	Object Class -99		OI	358,386	0	62,160	0	87,613	127,488	41,101	40,024		
5704970	AIR NATIONAL GUARD												
P421-02	Ferrying of Aircraft	Adequate	BA	50,000	0	7,375	9,638	2,201	2,600	156	975	BA Unissued	27,055
			AR	50,000	0	7,375	9,638	2,201	2,600	156	975	AR Unissued	27,055
			OI	29,292	0	11,818	10,214	2,245	2,504	168	2,343	AR Unobligated	20,708
P441	Maintenance of Installations	Surplus	BA	11,289	0	0	0	0	0	11,289	0	BA Unissued	0
			AR	11,289	0	0	0	0	0	11,289	0	AR Unissued	0
			OI	11,289	0	0	0	0	0	11,289	0	AR Unobligated	0
P486	Charts and Maps Including Mock-ups		BA	5,000	0	0	0	0	5,000	0	0	BA Unissued	0
			AR	5,000	0	0	0	0	5,000	0	0	AR Unissued	0
			OI	3,320	0	0	0	0	3,320	0	0	AR Unobligated	1,680
P563-02	Travel - Air National Guard		BA	162,300	9,600	25,125	20,900	31,150	31,900	19,800	22,000	BA Unissued	1,825
			AR	162,300	9,600	25,125	20,900	31,150	31,900	19,800	22,000	AR Unissued	1,825
			OI	125,675	2,503	23,342	15,032	23,215	27,269	15,582	18,732	AR Unobligated	36,625
GRAND TOTALS			BA (C)	67,930,696	1,936,173	14,202,611	11,679,264	9,398,522	12,667,328	4,089,302	11,700,671	BA Unissued	2,240,392
			AR (C)	66,487,218	1,936,173	14,202,611	11,559,264	9,398,522	12,414,328	4,089,302	11,700,671	AR Unissued	1,169,914
			OI (C)	~~[illegible]~~ 53 368 003	~~[illegible]~~ 1 581 694	~~[illegible]~~ 11 966 601	9,254,863	~~[illegible]~~ 7 486 070	10,078,677	~~[illegible]~~ 3 317 199	~~[illegible]~~ 10 112 191	AR Unoblig	~~[illegible]~~ 13 119 215

FOOTNOTES: * Action has been initiated to adjust Critical and Surplus funds -
(B) Includes Bolling AF Base: BA - 14,733; AR - 14,733; OI - 11,594
(C) Includes Bolling AF Base: BA - 16,433; AR - 16,433; OI - 12,748

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Program FY 50.
30 April 50

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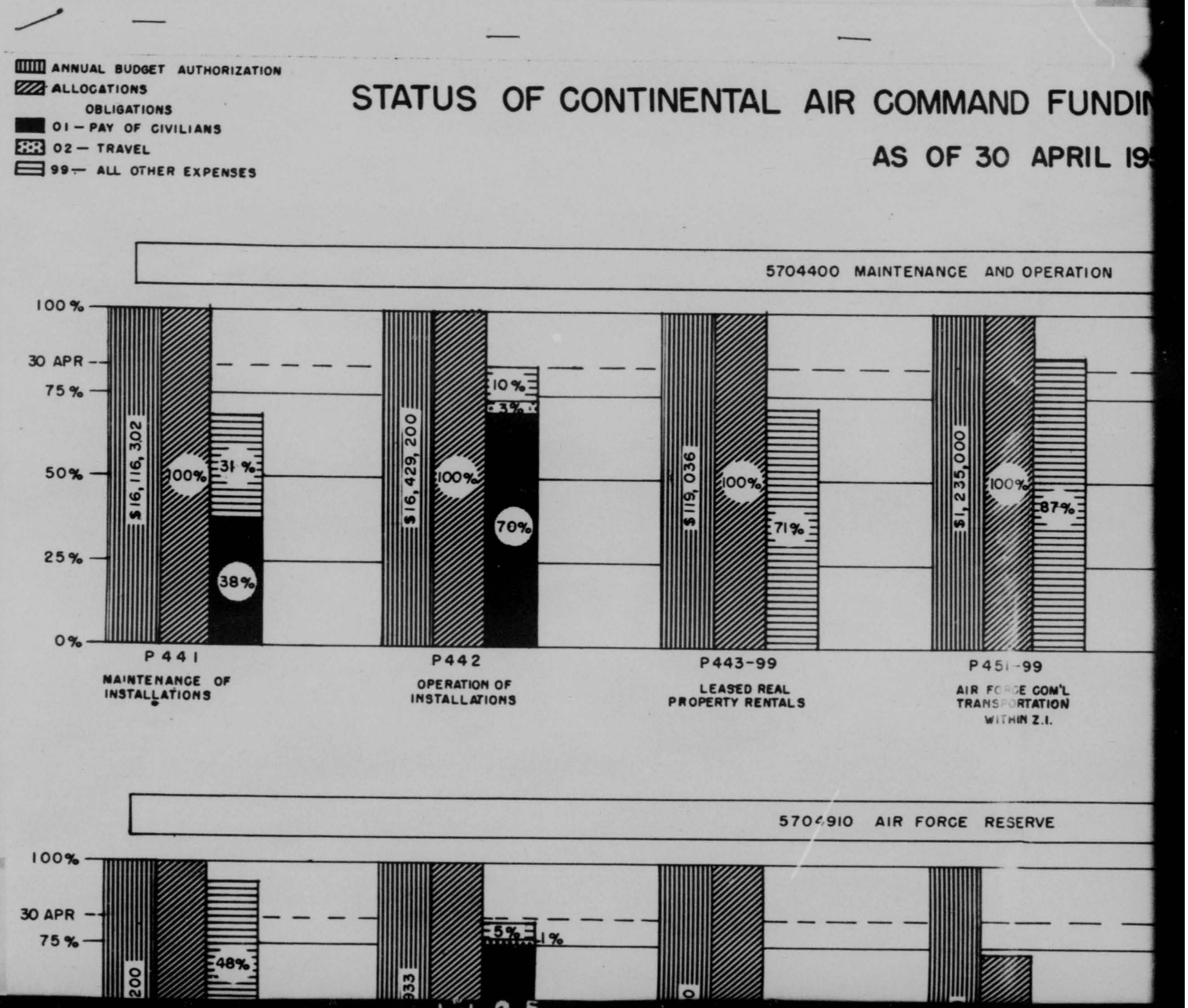


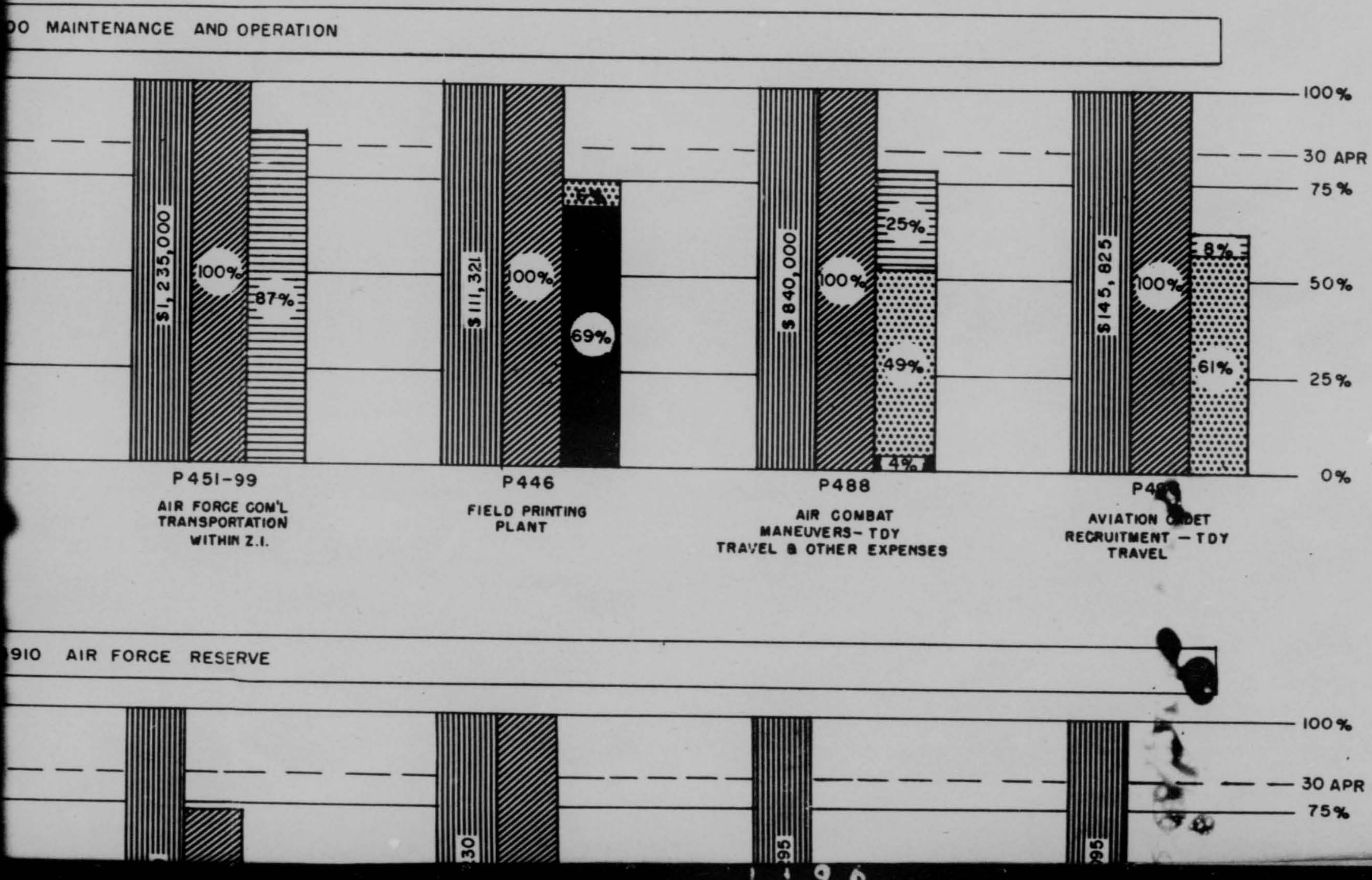
STATUS OF CONTINENTAL AIR COMMAND FUNDIN

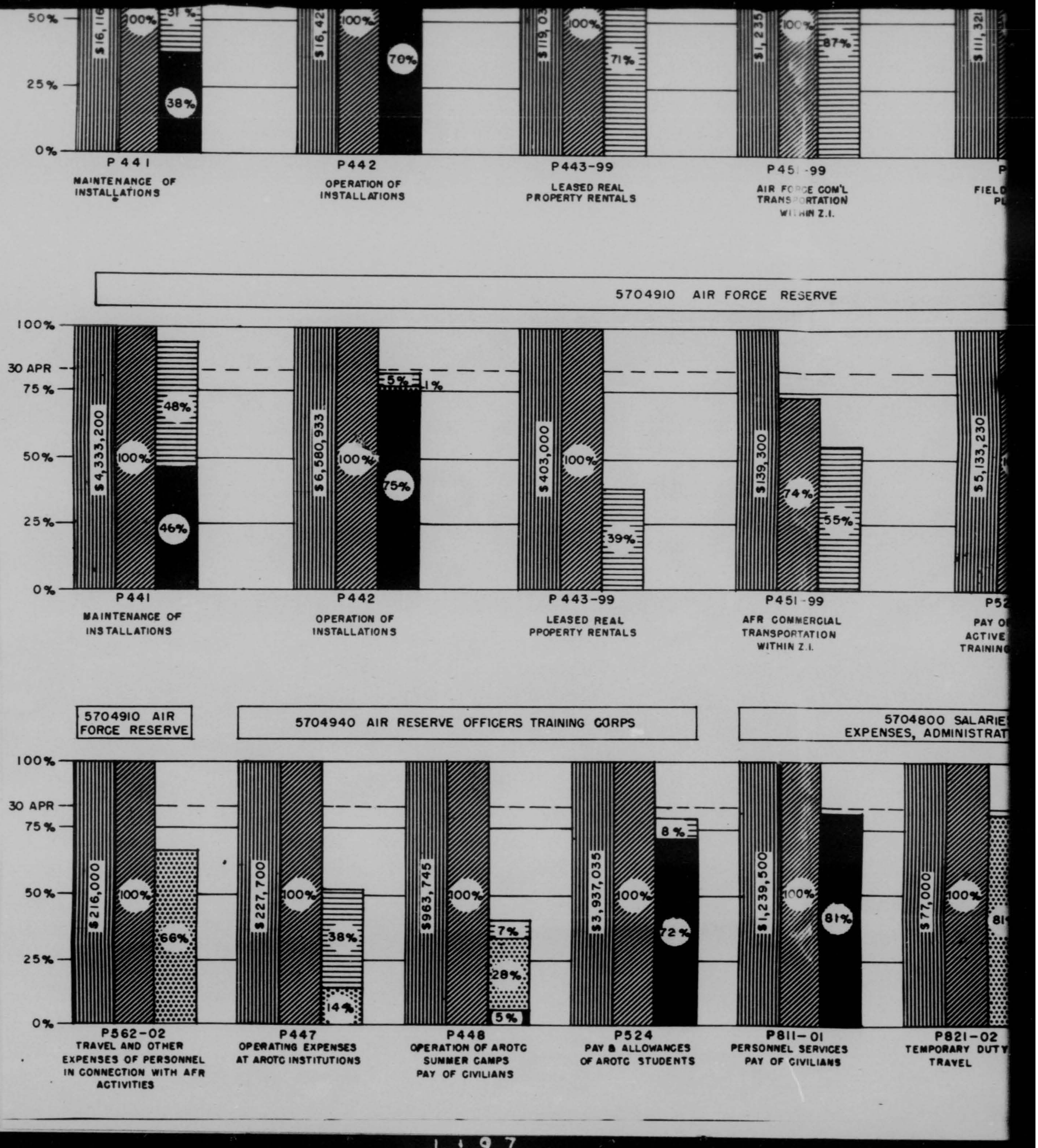
AS OF 30 APRIL 19

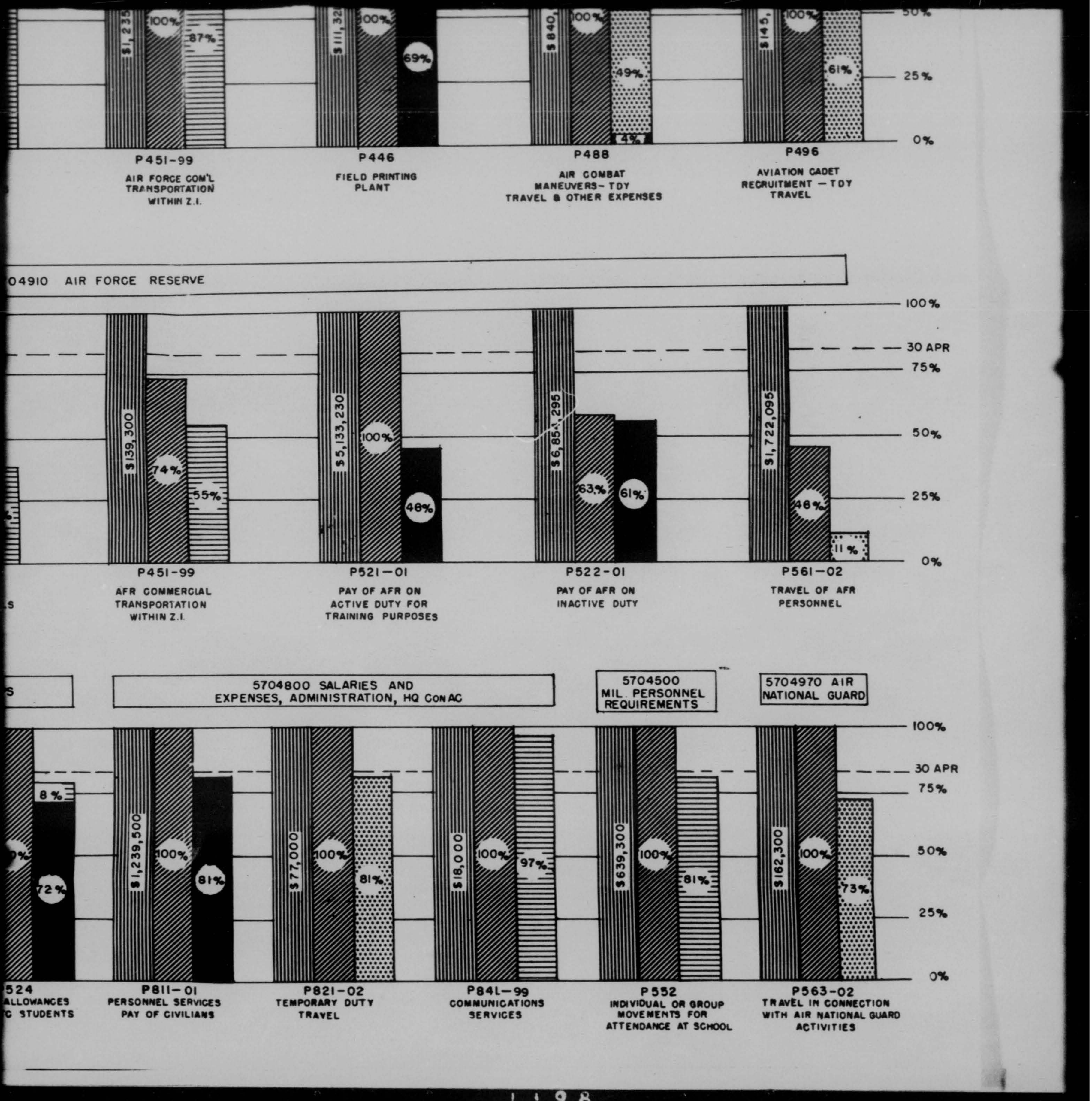
IR COMMAND FUNDING PROGRAM FISCAL YEAR 1950

AS OF 30 APRIL 1950

CON AC COMPTROLLER CHART IA
PREPARED BY:
BUDGET DIRECTORATE
OFFICE OF COMPTROLLER
HQ. CONTINENTAL AIR COMMAND
22 MAY 1950




50%
25%
0%
$16,116
100%
31%
38%
P441
MAINTENANCE OF INSTALLATIONS
$16,42
100%
70%
P442
OPERATION OF INSTALLATIONS
$119,03
100%
71%
P443-99
LEASED REAL PROPERTY RENTALS
$1,235
100%
87%
P451-99
AIR FORCE COM'L TRANSPORTATION WITHIN Z.I.
$111,321
P
FIELD
PL
5704910 AIR FORCE RESERVE
100%
30 APR
75%
50%
25%
0%
$4,333,200
100%
48%
46%
P441
MAINTENANCE OF INSTALLATIONS
$6,580,933
100%
5%
1%
75%
P442
OPERATION OF INSTALLATIONS
$403,000
100%
39%
P443-99
LEASED REAL PPOPERTY RENTALS
$139,300
74%
55%
P451-99
AFR COMMERCIAL TRANSPORTATION WITHIN Z.I.
$5,133,230
P52
PAY OF
ACTIVE
TRAINING
5704910 AIR FORCE RESERVE
5704940 AIR RESERVE OFFICERS TRAINING CORPS
5704800 SALARIES
EXPENSES, ADMINISTRAT
100%
30 APR
75%
50%
25%
0%
$216,000
100%
66%
P562-02
TRAVEL AND OTHER EXPENSES OF PERSONNEL IN CONNECTION WITH AFR ACTIVITIES
$227,700
100%
38%
14%
P447
OPERATING EXPENSES AT AROTC INSTITUTIONS
$963,745
100%
7%
28%
5%
P448
OPERATION OF AROTC SUMMER CAMPS PAY OF CIVILIANS
$3,937,035
100%
8%
72%
P524
PAY & ALLOWANCES OF AROTC STUDENTS
$1,239,500
100%
81%
P811-01
PERSONNEL SERVICES PAY OF CIVILIANS
$77,000
100%
81
P821-02
TEMPORARY DUTY TRAVEL


$1,235
100%
87%
P451-99
AIR FORCE COM'L TRANSPORTATION WITHIN Z.I.
$111,32
100%
69%
P446
FIELD PRINTING PLANT
$840
100%
49%
4%
P488
AIR COMBAT MANEUVERS- TDY TRAVEL & OTHER EXPENSES
$145,
100%
61%
P496
AVIATION CADET RECRUITMENT — TDY TRAVEL
50%
25%
0%
04910 AIR FORCE RESERVE
100%
30 APR
75%
50%
25%
0%
$139,300
74%
55%
P451-99
AFR COMMERCIAL TRANSPORTATION WITHIN Z.I.
$5,133,230
100%
48%
P521—01
PAY OF AFR ON ACTIVE DUTY FOR TRAINING PURPOSES
$6,854,295
63%
61%
P522-01
PAY OF AFR ON INACTIVE DUTY
$1,722,095
48%
11%
P561—02
TRAVEL OF AFR PERSONNEL
5704800 SALARIES AND EXPENSES, ADMINISTRATION, HQ ConAC
5704500 MIL. PERSONNEL REQUIREMENTS
5704970 AIR NATIONAL GUARD
100%
30 APR
75%
50%
25%
0%
8%
72%
524
ALLOWANCES
C STUDENTS
$1,239,500
100%
81%
P811—01
PERSONNEL SERVICES PAY OF CIVILIANS
$77,000
100%
81%
P821—02
TEMPORARY DUTY TRAVEL
$18,000
100%
97%
P84L—99
COMMUNICATIONS SERVICES
$639,300
100%
81%
P552
INDIVIDUAL OR GROUP MOVEMENTS FOR ATTENDANCE AT SCHOOL
$162,300
100%
73%
P563-02
TRAVEL IN CONNECTION WITH AIR NATIONAL GUARD ACTIVITIES

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PREFACE

This handbook is a compilation of carefully selected and illustrated lectures on intelligence subjects.

It is designed to enable the intelligence officers of the TO&E units of the reserve forces assigned to this command to achieve the standards of training established by Continental Air Command Training Standard, 45-2; and to assist the training officers of Intelligence Volunteer Air Reserve Training Units in implementing their individual unit training programs. Also, it is considered that this handbook will provide a great measure of assistance to intelligence officers of Regular Air Force TO&E Units in implementing Continental Air Command Training Standard 45-1.

For ease of reference and study, the handbook is divided into three (3) sections, each of which deal with a specific phase of intelligence procedures in their logical sequence. Thus, Chapters I through IX consist of an introduction to intelligence and a discussion of intelligence procedures in higher echelons. Chapters X through XVIII are devoted to the special sources of air intelligence that are employed by the higher echelons in their development of intelligence and information for use by the intelligence sections at wing, group and squadron level. The final chapters, XIX through XXIV outline the intelligence procedures employed by the lower echelons in the performance of their assigned missions. Additional information will be found in the appendices.

While the principles of intelligence remain constant, techniques and procedures are subject to change with technological advances; therefore, alert intelligence officers will adapt this handbook as a flexible guide to changing intelligence requirements.

CHAPTER I

AN INTRODUCTION TO AIR INTELLIGENCE

INTELLIGENCE PRIOR TO WORLD WAR II

Prior to World War II, the United States had no national intelligence structure. The armed forces and the State Department made efforts to obtain intelligence in their own fields, but these efforts were thwarted by lack of authority, sufficient funds, and personnel.

General Marshall summed up the efficiency of War Department Intelligence when testifying before the Senate Military Affairs Committee on the Unification Bill: "Prior to entering the war we had little more than what a military attache could learn at dinner, more or less over the coffee cups."

INTELLIGENCE DURING WORLD WAR II

With the outbreak of war in the Hawaiian Islands and the series of tragic defeats that followed in quick succession, our armed forces made frantic efforts to secure intelligence on their enemies. Intelligence organizations immediately mushroomed in all governmental agencies which had any need for them. Personnel experienced in this field were practically non-existent. The various agencies were not content to cover the field of intelligence within their purview. Waste, duplication and confusion resulted. There was no over-all coordination, and no means of securing composite intelligence for use by the executive level of the government.

In the various theaters of war, our armed forces received and produced intelligence of progressively greater quantity, and better quality as the war progressed, but this was achieved by wasteful means. At the end of the war there were many intelligence organizations almost all over-staffed, competing with each other, and with no coordinating agency at the top.

INTELLIGENCE SINCE WORLD WAR II

Toward the end of the war, President Roosevelt directed the Joint Chiefs of Staff to study the intelligence requirements for the United States and to recommend improvements to remedy the defects in the situation. On January 22, 1946, President Truman issued a letter based on these recommendations which is the basis for the present national structure.

The following year, Public Law 253, the National Security Act of 1947, defined this structure and clarified the responsibilities of the various intelligence agencies of the government. Figure No. 1 shows the organization of this structure which is explained in the succeeding paragraphs.

National Security Council

The National Security Council advises the President with respect to integration of domestic, foreign and military policies relating to the national security so as to enable the armed forces and the other departments of the government to cooperate effectively in matters involving national security. Its membership comprises the Secretaries of State, Defense, Army, Navy, and Air Force, the Chairman of the National Security Resources Board, and others designated by the President.

Central Intelligence Agency

The purpose of the Central Intelligence Agency is to:

a. Advise the National Security Council in matters concerning such intelligence activities of the departments and agencies of the government as relate to national security.

b. Make recommendations to the National Security Council for coordination of such intelligence activities of the departments and agencies of the government as relate to national security.

c. Correlate and evalute intelligence relating to national security, and provide for the appropriate dissemination of such intelligence within the government.

d. Perform, for the benefit of existing intelligence agencies, such additional services of common concern as the National Security Council determines can be more efficiently accomplished centrally.

e. Perform such other functions and duties relating to intelligence affecting the national security as the National Security Council may from time to time direct.

Intelligence Advisory Committee

The Intelligence Advisory Committee serves to coordinate the requirements of the armed forces and the State Department with the Director of Central Intelligence. Its membership comprises an Assistant Director of the Joint Chiefs of Staff for Intelligence and the heads of the intelligence organizations of the Departments of State, Army, Navy, and Air Force.

Joint Intelligence Committee

The Joint Intelligence Committee, which consists of the intelligence chiefs of the three armed services, coordinates intelligence activities of the armed services at the working level. It also reviews papers prepared by the Joint Intelligence Group.

Joint Intelligence Group

The Joint Intelligence Group is the permanent intelligence working body for the Joint Staff. It is responsible for preparing intelligence estimates for the Joint Chiefs of Staff. It draws its basic information from the intelligence echelons of the three armed services. The State Department has a liaison officer with the Joint Intelligence Group.

Intelligence Division, General Staff, Headquarters, U. S. Army

The mission of the Intelligence Division, General Staff, United States Army, is to collect and evaluate information, to disseminate intelligence pertaining to foreign countries, their war potential and military forces, in so far as it affects the mission of the United States Army.

Office of Naval Intelligence, U. S. Navy

The mission of the Office of Naval Intelligence is to administer, operate and maintain the intelligence service of the Navy in order to inform the top naval authority of all potentials and capabilities of foreign nations and of situations or trends threatening the security of the naval establishment.

Special Assistant, Research and Intelligence, Department of State

The mission of the Special Assistant, Research and Intelligence, is to advise and assist the Secretary of State in the field of foreign intelligence, and to formulate and execute a departmental program for providing the foreign intelligence required in the conduct of foreign affairs and the safeguarding of the national security.

Directorate of Intelligence, United States Air Force

The mission of the Directorate of Intelligence, United States Air Force, is to:

a. Insure the prevention of strategic, tactical, or technological surprise from any source.

b. Provide air intelligence required for command decisions and counsel upon air preparedness and air operations.

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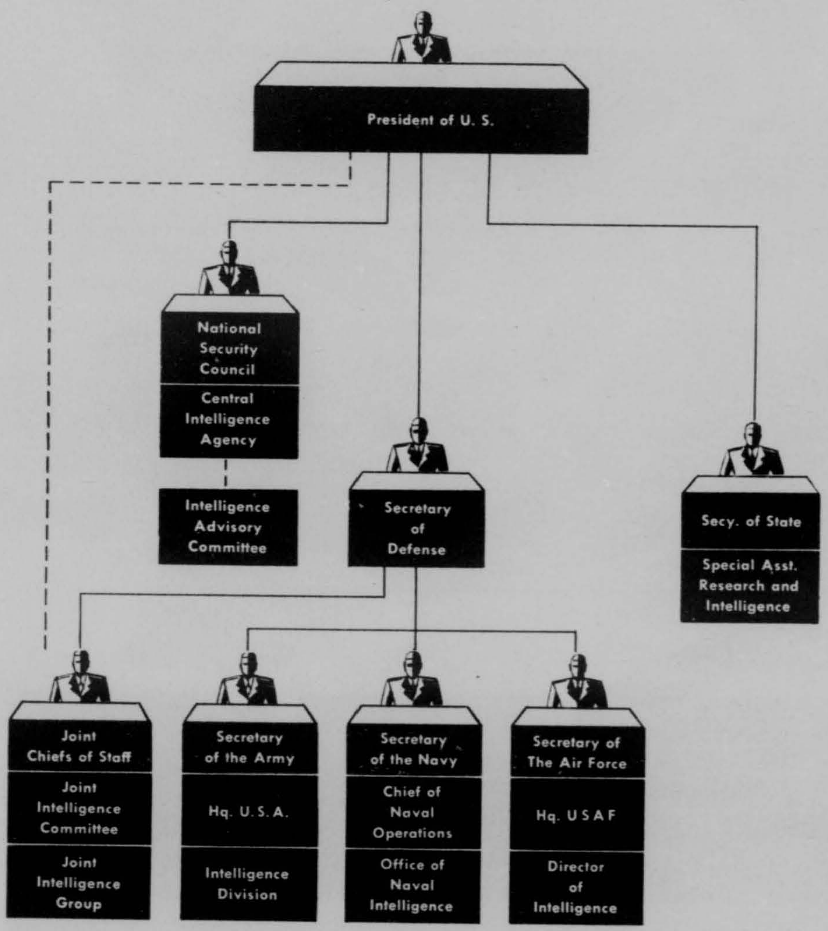
NATIONAL INTELLIGENCE STRUCTURE


President of U. S.
National Security Council
Central Intelligence Agency
Intelligence Advisory Committee
Secretary of Defense
Secy. of State
Special Asst. Research and Intelligence
Joint Chiefs of Staff
Joint Intelligence Committee
Joint Intelligence Group
Secretary of the Army
Hq. U. S. A.
Intelligence Division
Secretary of the Navy
Chief of Naval Operations
Office of Naval Intelligence
Secretary of The Air Force
Hq. USAF
Director of Intelligence

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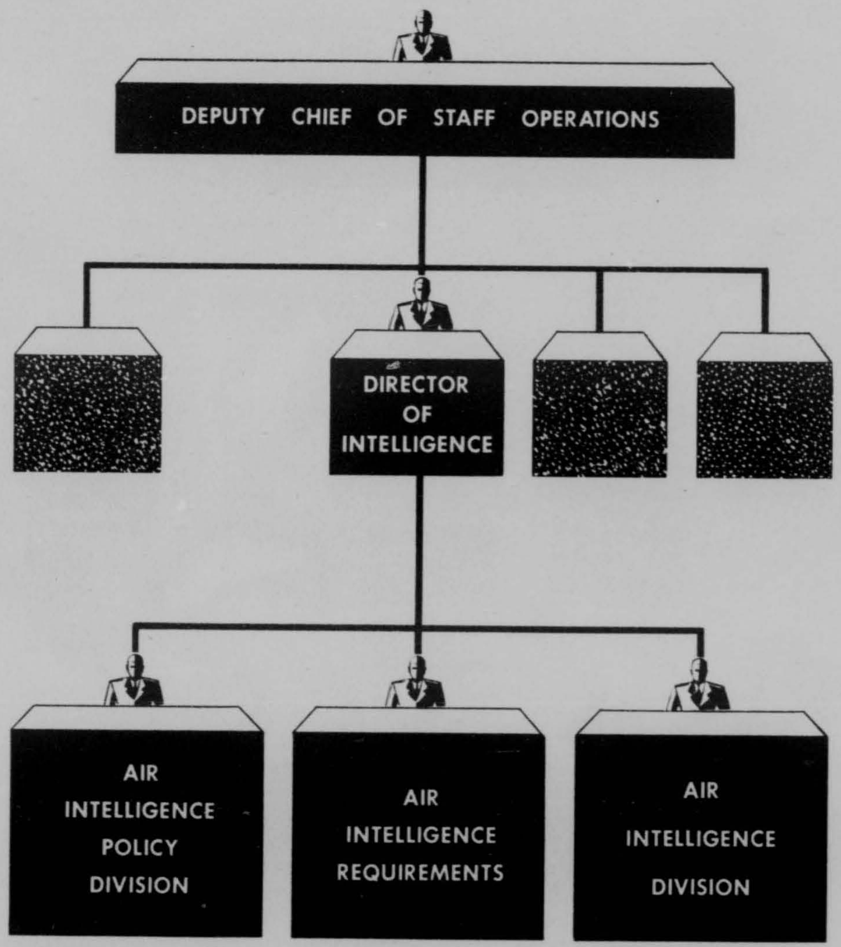
DEPUTY CHIEF OF STAFF OPERATIONS
DIRECTOR OF INTELLIGENCE
AIR INTELLIGENCE POLICY DIVISION
AIR INTELLIGENCE REQUIREMENTS
AIR INTELLIGENCE DIVISION

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UNITED STATES AIR FORCE INTELLIGENCE STRUCTURE

The limited stress on air intelligence organizations, plans, policies, and programs prior to World War II resulted in intelligence deficiencies which were keenly felt throughout the war. As World War II progressed many improvements resulted from lessons learned, but air intelligence never was able to provide an adequate intelligence corollary to the concept of strategic air warfare. Aware of these deficiencies, the United States Air Force has based the reorganization of air intelligence on the fundamental doctrine that intelligence must be responsive to varied command missions. Further, there has been recognition of the necessity for stressing quality of intelligence and the need for air intelligence on a world-wide scale.

Within Headquarters, United States Air Force, the Director of Intelligence functions under the Deputy Chief of Staff, Operations, with an organization consisting of three main divisions as shown on the chart.

ORGANIZATION DIRECTORATE OF INTELLIGENCE

The mission assigned to the Director of Intelligence states:

That he is instrumentally responsible for the collection of information pertaining to foreign countries, their war potential and their military forces, for the production of intelligence from this information, and for the dissemination of such material not only within the Air Force but to the Joint Chiefs of Staff, the Central Intelligence Agency and other agencies as appropriate.

That he directs and controls all Department of the Air Force activities concerning Air Attaches, Signal Intelligence and Communications security, and such other intelligence activities as are now or may in the future be employed.

That he establishes the air intelligence requirements for USAF photo reconnaissance, mapping and charting, and geodetic surveying programs.

That he is responsible for meeting the intelligence requirements of the continental and overseas air commands and the air administrative and technical services.

That he is responsible for representing the Department of the Air Force on Intelligence matters with other departments of the government and with foreign governments.

Air Intelligence Policy Division

The Air Intelligence Policy Division of the Directorate of Intelligence is organized into a Plans and Policy branch and a Foreign Liaison branch. The mission assigned to this division states that it:

Provides executive services in support of the Director of Intelligence in his supervision and management of the activities under his jurisdiction.

Develops plans, policies, and suitable directives on Air Force intelligence functions and procedures, including security of military information.

Provides Air Force representation in combined, joint, and inter-departmental intelligence activities such as the Joint Intelligence Committee and the Central Intelligence Agency.

Participates to the extent necessary in Headquarters action on personnel, training inspection, logistics, and planning matters.

Discharges the foreign liaison responsibilities of the Director of Intelligence.

Exercises administrative management of the Intelligence Directorate to include preparation of all requirements for an action on personnel and office supplies for assigned activities and the maintenance of administrative records and files.

Air Intelligence Requirements Division

The Air Intelligence Requirements Division of the Directorate of Intelligence is organized into the following branches: Collection, Documents and Dissemination, Reconnaissance, Air Attache, and Communications. The mission assigned to this division states that it:

Ascertains Air Force requirements for and obtains intelligence information from established collection agencies, including subordinate Air Force echelons.

Establishes a two-way flow of intelligence information and air intelligence necessary to the production of adequate intelligence at all echelons of Air Force commands; determines what air intelligence will be disseminated to activities of the Headquarters, USAF, Joint Intelligence Committee, Central Intelligence Agency and other government agencies, and accomplishes this dissemination.

Arranges for the publication of intelligence information and air intelligence estimates, reports, and other similar data.

Maintains the Air Force Intelligence Library.

Recommends intelligence requirements and techniques for aerial photographic reconnaissance, com-

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munications intelligence, communications security, technical intelligence and other special sources of information.

Recommends the tenor of Air Force representation to the photographic mapping and charting activities of the Army and Navy Departments.

Recommends air officer requirements for the attache system and nominates and indoctrinates the candidates for this and similar duty.

Air Intelligence Division

The Air Intelligence Division of the Directorate of Intelligence is organized into the following branches:

Offensive Air, Defensive Air, Air Facilities, Strategic Vulnerability, Air Estimates. The mission assigned to this division states that:

It shall produce air intelligence necessary to Headquarters, USAF, for command decisions and counsel upon air preparedness and air operations, the latter to consist primarily of continuing estimates of the following:

Alien forces, including air weapons and counter-air weapons, their offensive capabilities and their defensive capabilities against offensive operations.

Economic and physical vulnerability of the various segments of the war-making capabilities of all countries, including the United States, to air operations, and recommended specific strategic and general tactical objectives for air attack.

Conditions and installations in alien areas of particular concern to possible air operations, notably airfields, and generally weather, terrain, and transportation as influencing factors to airfield potentialities.

In addition, this division provides the air intelligence required by the Joint Intelligence Committee, the Central Intelligence Agency, and other such interdepartmental intelligence agencies.

Air Intelligence in Major Commands

Within major air commands air intelligence functions and organizations are established so as to provide the information and intelligence required by these commands in carrying out their assigned missions. *(See Chapter II)*

PRIMARY FUNCTION, THE AIR INTELLIGENCE OFFICER:

In the Field Commands of the USAF, the Air Intelligence Officer and his staff will keep the commanders and all others concerned informed of the enemy or potential enemy situation and his capabilities. The commander must have information on the strength, disposition and effectiveness of hostile combat aircraft, aircraft warning services, anti-aircraft artillery, rockets, guided missiles, searchlights, passive defenses, and other types of enemy capabilities. The activities of the Air Intelligence Officer and his staff must be geared to accomplish these functions. For the Air Intelligence Officer to understand and assess the enemy's capabilities it is necessary for him to become so steeped in the enemy's type of warfare that he thinks like the enemy and is in effect working with the enemy. Initiating the search for information, coordinating the search, and processing the information into intelligence is a basic function of command.

STRATEGIC AND TACTICAL INTELLIGENCE INFORMATION

Intelligence information may be divided into two broad categories, strategic and tactical.

Strategic intelligence information may be defined as information pertaining to the capabilities of nations in war and peace. This compilation of these studies is a continuous process and they form, in largest part, the basis on which the Joint Chiefs of Staff will formulate their over-all strategy in the initial phase of any future war.

Tactical intelligence information may be divided into two phases:

a. That which is available prior to entry into actual combat.

b. That which is produced in the field, derived from combat with, and reconnaissance of, the enemy.

The first phase, which may be termed the training or preparatory phase, is perhaps the most important in the over-all sense. The number of units in World War II that were committed to combat without sufficient preliminary intelligence information was large. The reasons for this situation were legion, but probably the two outstanding reasons were:

a. The lack of knowledge and appreciation by commanders, especially at the group level, of what to expect from intelligence officers.

b. The inability of the intelligence officer to sell his ideas to his commander, primarily due to the lack of adequate information disseminated by higher headquarters while the unit was training for combat.

It is agreed that this condition must not occur again. The bulk of the information with which the

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intelligence officer will be armed will come from the strategic and tactical studies made in peacetime and will be disseminated in the form of intelligence summaries, USAF Letters and Regulations, Intelligence Pamphlets and Field Manuals.

A word of caution here; over-all dissemination, for the agency concerned, is a difficult task and subject to human error. It is not perfect; thus, it is quite possible for one to join a new organization as an intelligence officer and find practically nothing in the intelligence files. Should a new intelligence officer find himself in this position, he should analyze his needs, go after the required material, thru channels, or by personal contact, get it, and go to work.

The second phase may be termed the combat phase, the collection of combat intelligence information from interrogation of crews who have had combat contact, photo and visual reconnaissance, radio and radar intercept, capture of personnel, equipment and material, or from any other source available.

A commander planning tactical operations either offensive or defensive will require certain intelligence information for planning purposes. This intelligence information will be drawn from any source available, such as dissemination from higher headquarters, from adjacent air force units, from ground force units operating in the same area, and from information processed by his own intelligence staff gained from combat contact with the enemy. When all this intelligence information is finally analyzed and integrated into the plan, it is then Air Intelligence of a Tactical Nature. That portion of intelligence information produced by his own staff is also disseminated through normal distribution to higher and lower headquarters for whatever use they deem necessary. In the normal course of events this intelligence information or pertinent portions thereof will be delivered into the hands of the Joint Intelligence Committee and be used by the Joint or Combined Chiefs of Staff for strategic planning in the conduct of war.

INTELLIGENCE TERMS AND DEFINITIONS

The following definitions of terms commonly used in air intelligence are based on current available interpretation:

Air Intelligence

Military intelligence required for the employment of air power.

Air Technical Intelligence

Military intelligence pertaining to foreign air equipment and material.

Capabilities

A product of the Napoleonic school. A precise and analytical process whereby every possible line of action open to the enemy is considered. In an ideal solution all courses of action are eliminated but one. This method is employed by all U. S. military forces.

Capture Intelligence

Military intelligence obtained from examination and analysis of captured enemy equipment and documents, and from the interrogation of captured enemy personnel *(prisoners of war)*.

Combat Intelligence

Military intelligence gained through combat.

Electronic Intelligence

Evaluated and interpreted information obtained by intercepting electronic emanations.

Essential Elements of Information

That information about the enemy, or territory not under our control, which is vital and essential to the commander for planning and executing his mission.

Flak Analysis

The examination and study of Flak Intelligence to obtain data for use in air operations.

Flak Intelligence

Military intelligence concerning the enemy's antiaircraft artillery, including ground-to-air missiles.

Information

Any unevaluated data.

Intelligence Annex

Details and instructions pertaining to the intelligence portion of an operations order, when they are too extensive for inclusion in the body of the order.

Intelligence Information

Information specifically collected for intelligence purposes, and information suitable for processing into intelligence.

Intelligence Net

A communication network provided for use of intelligence officers and their intelligence collection agencies.

Intelligence Plan

An outline to guide the intelligence officer in the organized collection of required intelligence information. It includes the essential elements of information; an analysis of the required information; a list of the agencies that are to collect the information, and the orders and reporting time of each of the collecting agencies.

Intelligence Sources

Individuals, organizations, material, objects, electronic radiations, etc., which if exploited, can furnish intelligence information of an enemy or potential enemy. (Example: radio traffic, prisoners of war, etc.)

Intentions

Originated in the Prussian military system under Von Moltke. This system endeavors to determine what the enemy *intends* to do. Unless intelligence has indisputable data on the enemy's dispositions and his intentions, in other words, his field orders, this method becomes dangerous because it can lead to entirely false conclusions.

Internal Security

The measure taken within a unit or command to safeguard the security of classified matter (documents and material).

Military Intelligence

Evaluated and interpreted information of military significance.

Objective Folder

A compilation of detailed information regarding a specific target including maps and charts, identification data, structural analyses, evaluation of its importance in a system, vulnerability data, etc.

Photo Intelligence

Military intelligence secured through the interpretation and evaluation of information obtained from air photographs.

Security

The measures taken to prevent disclosure of military information and its compromise in the hands of unfriendly forces (See AR 380-5).

Target Analysis

The investigation of potential targets to determine their relative importance as military objectives, their vulnerability to available weapons and the assignment of a priority for military attack.

Target Folder

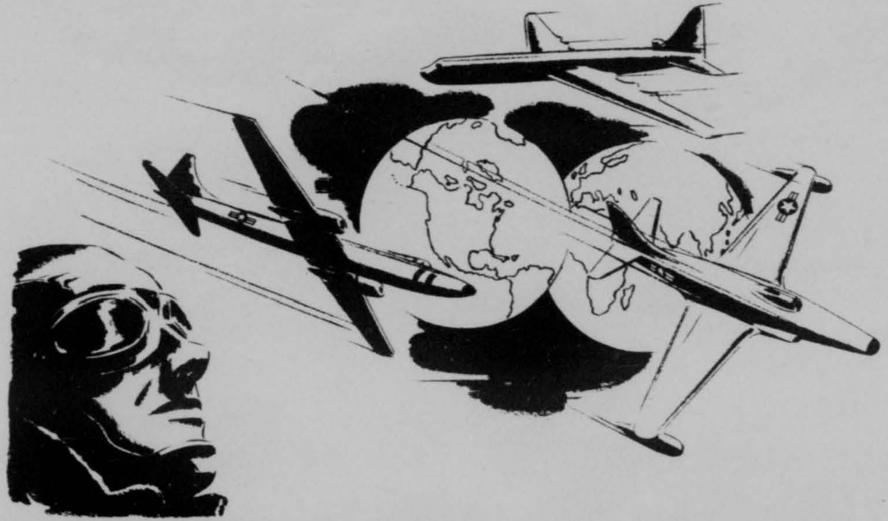
A compilation of information furnished combat personnel for the attack of a specific target. Such a folder contains approach charts, material for use in identification of target and assigned aiming points, etc.

Target System

A group of similar targets of the same function, or a group of interrelated, or interdependent, targets which are components of a single function or product. (Example: Electric power is a target system composed of a number of plants performing the same function; aircraft industry is a target system composed of a number of factories producing different parts or assembling the complete airplane.)

Questions and Leads for Classroom Discussion

1. What was the status of our intelligence organization prior to World War II?
2. Why?
3. How was intelligence organized during World War II?
4. What is Public Law 253?
5. What are the functions of: (a) The National Security Council? (b) The Central Intelligence Agency? (c) The Intelligence Advisory Committee?
6. What is the mission of the Directorate of Intelligence, USAF?
7. What is the primary function of the air intelligence officer in the field commands of USAF?
8. What are the differences between strategic and tactical intelligence information?



CHAPTER II

ORGANIZATION AND MISSIONS OF THE MAJOR COMMANDS, UNITED STATES AIR FORCE

The field Organization of the United States Air Force consists of eight major commands. There are the Continental Air Command, Strategic Air Command, Air Materiel Command, Proving Ground Command, Air Training Command, Air University, Military Air Transport Service and Headquarters Command, USAF.

CONTINENTAL AIR COMMAND

The Continental Air Command with Headquarters at Mitchel Air Force Base, N. Y. is organized primarily to accomplish the following missions:

a. Provide for the active air defense of the United States and operational training therefor.

b. Provide for Air Force cooperation with land and/or amphibious forces in the United States and operational training therefor.

c. Organize, administer, equip, train, and prepare for combat in accordance with directives, policies, and schedules issued by Headquarters USAF, such units and combat crews of the Air Force as may be designated, assigned, or attached to the Continental Air Command.

d. Discharge, within the Continental United States, the field responsibilities of the Chief of Staff, USAF, with respect to Air Force Reserve forces.

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Organization

In order to carry out its mission, the Continental Air Command is provided a headquarters (Continental Air Command); numbered air forces, to which all units, installations, and facilities of the Continental Air Command will be assigned; an Air Defense Command; and a Tactical Air Command. The Headquarters, Air Defense Command, and the Headquarters, Tactical Air Command, will act as operational command headquarters for their respective tactical functions, within the framework of the Continental Air Command, and will also act as the staff of the Commanding General, Continental Air Command, for their respective tactical functions. The numbered air forces will discharge such administrative, training, and logistic support functions as may be directed for units of the National Guard and Organized Reserve Corps and for such Air Force units as may be assigned or attached.

Responsibilities

a. The Commanding General, Continental Air Command, will exercise command jurisdiction over all units assigned or attached to the Continental Air Command. He will be directly responsible to the Chief of Staff, USAF, for the following specific functions:

1. Active air defense of the United States. *(See b below)*

2. Air Force cooperation with land and/or amphibious forces in the Continental United States. *(See c below)*

3. Discharge of the field responsibilities of the Chief of Staff, USAF, within the Continental United States, with respect to the following functions:

(a) Supervise training and make required inspections of all units of the Air National Guard.

(b) Activate, organize, maintain, administer, and train such units and individuals of the Air Force Reserve as may be assigned or attached to the Continental Air Command, and such units and individuals of the Organized Reserve Corps as may be assigned or attached to the Air Force for these purposes and are further assigned or attached to the Continental Air Command, and the administration of unassigned personnel of the Air Force Reserve.

(c) Function as a center for compilation of vital statistics of Air Force Reserve activities conducted by all major air commands, including oversea air commands; and in addition, provide a pool of Reserve personnel upon which requisitions and transfers by all other major air commands may be made in order to meet their Reserve personnel requirements.

(d) Activate, organize, maintain, administer, and train units and individuals of the Air Force Reserve Officers' Training Corps.

(e) Conduct Air Force participation in the Air Scout program.

(f) Act as the field agency of the Air Force for the mobilization, preparation for movement, and disposition of all units of the Air National Guard in the Federal service and units and individuals of the Air Force Reserve that are not assigned to other Air Force commands in accordance with directives, policies, and plans issued by Headquarters, USAF.

(g) Prepare for oversea movement such units as may be directed, including those of the Air National Guard in the Federal Service.

(h) Formulate plans for and coordinate the efforts of all Air Force commands and activities in domestic emergencies (including disaster relief) and direct Air Force operations in connection with such emergencies. (Each Air Force unit, irrespective of the major air command to which assigned, will participate in the planning for and conduct of emergency and disaster relief operations, at the request of a Continental Air Command air force commander.)

(i) Constitute a single Air Force contact to provide information and liaison with Army commanders, Naval district commandants, sea frontier commanders, and heads of civilian agencies. (This will not be construed as prohibiting direct contacts required by the specific functional responsibilities of other major air commands.)

(j) Be prepared to train replacement units and combat crews required for mobilization in accordance with directives, plans, and schedules issued by Headquarters, USAF.

(k) Conduct such Continental administrative functions as may be directed from time to time. These include:

(1) General Air Force liaison and other prescribed functions at water ports of embarkation, in accordance with AFR 75-9.

(2) Apprehension of Air Force absentees and their prompt delivery to the nearest Air Force prisoner receiving station or other Air Force installation capable of receiving them for future disposition. (This will include cross service with the Department of the Army, Department of the Navy, and the U. S. Coast Guard in the apprehension of absentees.)

(3) Acceptance of custody of Air Force prisoners from oversea theaters pending final disposition.

(4) Operation of Air Force special aviation cadet and officer candidate school procurement program.

(5) Administration of the various procurement programs for commissions and warrants in the Air Force.

(6) Administration of the Air Force extension course program.

(7) Administration of the Air Force program for return of World War II dead.

(8) Providing Air Force representation in local Armed Forces Disciplinary Control Boards.

(9) Coordination of local defense planning with Civil Air Patrol units and be prepared to furnish all reasonable and appropriate local assistance to the Civil Air Patrol.

4. Determination of the proper apportionment of the effort of assigned or attached units between the several missions of the command.

5. Timely allocation of a proper portion of the effort of units assigned or attached, or otherwise made available, to the Continental Air Command, to the operational command of the Air Defense Command, to the operational command of the Air Defense Command and the Tactical Air Command, respectively.

6. Peacetime deployment of elements of the active air defense system of the United States in preparation for the conduct of immediate active air defense against surprise attack.

7. Coordination of the activities of the Air Defense Command, Tactical Air Command, and numbered air forces for the most effective accomplishment of the missions assigned the Continental Air Command.

8. Performance of such other functions as may be directed by the Chief of Staff, USAF from time to time.

b. The Commanding General, Air Defense Command, is responsible to the Commanding General, Continental Air Command, for the following specific functions:

1. Continue to plan in preparation for the conduct of active air defense of the United States.

2. Conduct the active air defense of the Continental United States with the means made available by the Commanding General, Continental Air Command.

3. Prepare for the employment of such units of the Army and Navy as may be made available for direct defense of the United States against air attack.

4. Prepare and conduct Air Force operational participation in civilian defense in connection with an air attack of the Continental United States.

5. Recommend policies, plans, doctrine, organization, systems, materiel, tactics, techniques, and procedures, applicable to the air defense of the United States.

6. Conduct systematic training of available forces in active air defense.

7. Carry out joint air defense training and joint air defense exercises and maneuvers in accordance with approved plans, utilizing such units of other components of the National Military Establishment as may be available.

8. Recommend to the Commanding General, Continental Air Command, the allocation and deployment of available force in preparation for and the conduct of the active air defense of the United States.

9. Establish and maintain liaison with Naval sea frontier commanders and numbered army commanders in joint matters pertaining to the air defense of the Continental United States.

10. Recommend to the Commanding General, Continental Air Command, the proficiency standards and desired capabilities of units to be employed in air defense operations.

c. The Commanding General, Tactical Air Command, is responsible to the Commanding General, Continental Air Command for the following specific functions:

1. Continue to plan and to prepare for the conduct of tactical air operations in conjunction with field forces of the Department of the Army and/or amphibious forces of the Department of the Navy in the defense of the United States.

2. In conjunction with designated elements of the Army, Navy, and the Air Force, train and indoctrinate personnel of the three services in joint operations by planning and participating in field exercises and maneuvers.

3. Plan, supervise, and conduct tactical air operations in the Continental United States with the means specifically allocated by the Commanding General, Continental Air Command.

4. Maintain continuous liaison with the Army Field Forces and designated Naval headquarters for the development of Air Force policies, plans, doc-

trine, organization, systems, materiel, tactics, techniques, and procedures applicable to the utilization and employment of tactical air power when acting in concert with land and/or amphibious forces and the timely submission of recommendations with respect to those matters.

5. Maintain liaison with the Army Field Forces in order to determine the requirements for the Army and Air Force units and personnel in joint air-ground operations and submit recommendations to the Commanding General, Continental Air Command, for the allocation of the necessary forces to fulfill this requirement.

6. In accordance with approved plans, participate in joint exercises and maneuvers by utilizing and employing designated personnel and units from other components of the National Military Establishment as may be made available.

7. Conduct systematic training of forces allocated by the Commanding General, Continental Air Command, in tactical air operations.

8. Be prepared to provide cadres of personnel trained and indoctrinated in the employment of tactical air power for the timely formation of Tactical Air Command and/or air force headquarters for oversea deployment, as required.

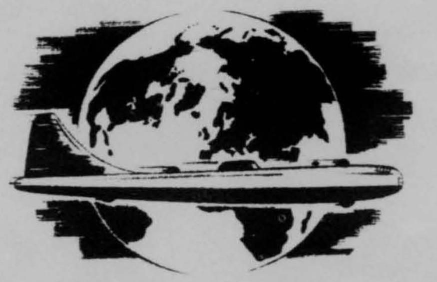
9. Recommend to the Commanding General, Continental Air Command, the allocation and deployment of available forces in preparation for and the conduct of tactical air operations in conjunction with land and/or amphibious forces.

10. Recommend to the Commanding General, Continental Air Command, the proficiency standards and desired capabilities of units to be employed in tactical air operations.

d. Each commanding general of a numbered air force assigned to the Continental Air Command will perform such command, administrative, training, and logistic support functions, within his assigned geographic area, as may be directed from time to time by the Commanding General, Continental Air Command. Initially, those responsibilities will include the functions enumerated in *a.* (3) above, as well as the logistic support of the Headquarters, Continental Air Command, and elements of the Air Defense Command and the Tactical Air Command not assigned to a numbered air force.

STRATEGIC AIR COMMAND

The Strategic Air Command has its headquarters at Offutt Air Force Base, Nebraska. This command includes very heavy bombers, medium bombers, very long-range reconnaissance, transports, and very long-range jet fighters.



The Strategic Air Command is charged with providing and operating that portion of the U. S. Air Force which is maintained in the United States, and in such other areas as may be designated from time to time, for employment against objectives of air attack in any location on the globe; with conducting long-range reconnaissance over land or sea, either independently or in cooperation with other components of the Armed Forces; and with other missions as assigned by the Chief of Staff, USAF.

In order to fulfill the above mission, the Strategic Air Command is charged with the following specific responsibilities:

a. Maintain assigned units in a state of readiness to permit immediate operation, either alone or jointly with other forces, against enemies of the United States.

b. Prepare plans for the performance of combat air operations on a global scale and be prepared to execute these plans when directed by the Chief of Staff, U. S. Air Force.

c. Prepare plans for strategic reconnaissance, to meet the requirements of the armed forces, on a global scale and be prepared to execute these plans when directed by the Chief of Staff, U. S. Air Force.

d. Prepare plans for the performance of sea search and anti-submarine operations on a global scale, and be prepared to execute these plans when directed by the Chief of Staff, U. S. Air Force.

e. Organize, train, and stage as directed, appropriate combat, service, and supporting units for theater or other oversea deployment.

f. Develop, test, and improve the organization, equipment, training, tactics, and techniques of strategic bombardment crews and units for the performance of global bombardment operations.

g. Train very-long-range reconnaissance and photographic and mapping crews and units for the performance of global reconnaissance operations.

h. Train long-range fighter crews and units for the performance of fighter, fighter escort, and joint Army and Navy operations.

i. Organize, train, and stage, as directed, combat and service supporting units for theater or other overseas activities.

j. Conduct such universal military training as may be appropriate and directed by the Chief of Staff, U. S. Air Force.

The Headquarters, Strategic Air Command, is organized as a conventional general staff type of staff organization with personnel and coordinating staff groupings.

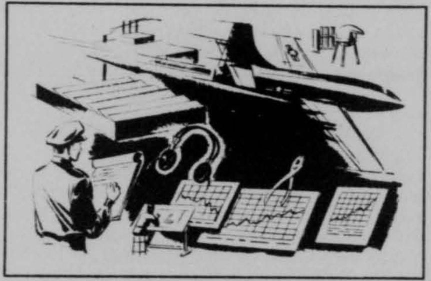
Two Air Forces, two Air divisions, twelve active separate wings and four record strength wings are assigned to the Strategic Air Command. The two Air Forces are the Eighth Air Force with headquarters at Forth Worth, Texas, and the Fifteenth Air Force with headquarters at Colorado Springs, Colorado. The Striking Force Task Headquarters of the 58th Air Division, Bombardment, is carried at record strength with personnel available for immediate augmentation to T/O strength. The remaining VHB elements of the proposed 70 group program are carried at record strength in Headquarters, Strategic Air Command (8 VHB Groups). The Strategic Air Command has requested authorization to activate another Air Force headquarters for the five separate wings.

AIR MATERIEL COMMAND

Headquarters, Air Materiel Command is located at Wright-Patterson Air Force Base, Dayton, Ohio. The mission of the Command is to provide the logistic support for the United States Air Force, i.e., to provide all elements of the Air Force with the most effective materiel that can be developed and produced; provide trained service units for air depot functions; and provide technical instructions and information as required. Specific functions performed in fulfillment of this mission are:

a. A detailed and realistic industrial program for preparedness planning to provide for rapid expansion of air units in case of future national emergency.

b. A technical intelligence program as an aid to industrial research and development planning as well as to maintain technical supremacy over all foreign powers.



c. A strong research and development program in cooperation with industry and scientific institutions to insure that the U. S. Air Force is technologically the most advanced in the world.

d. A procurement program to provide for all operating functions relative to initiating, monitoring, terminating, and settlement of industrial contracts to include careful supervision over production resources, scheduling allocation and control of production.

e. A supply program for the determination of requirements and performance of the operating functions of receipt, shipment, storage, preservation, issue, stock control, salvage and disposal of air force material.

f. A maintenance program to insure that Air Force equipment is constantly in excellent condition. The maintenance program includes the overhaul and modification of all aircraft, aircraft equipment, aircraft accessories, vehicles, and field communications systems, and the storage of complete aircraft and vehicles. Technical supervision of all echelons of maintenance is exercised through instruction such as technical orders and M & S directives.

g. A program to provide the Air Force with officer and enlisted personnel equipped with the necessary technical knowledge to accomplish the AF logistical mission. This program includes the training of service units to provide the nucleus of Air Force personnel trained in air depot techniques. The Air Force Institute of Technology is a part of the Air Material Command, and is directly responsible to the Commanding General, AMC. Its mission is to provide the technical and scientific phases of the Air Force educational program.

Headquarters, Air Materiel Command has a coordinating staff of three Directors. The Director of

Supply and Maintenance supervises the current phases of the Command mission while the Director of Research and Development, and the Director of Procurement and Industrial Mobilization Planning are more concerned with the phases of future planning. The current organizational structure indicates that the personal staff includes the Chief of Personnel and Administration, the Chief of Intelligence, the Comptroller, the Air Inspector, the Public Information Officer, and the Commandant, Air Force Institute of Technology. While this personal staff grouping departs from conventional procedure it must be realized that the basic function of this command is logistical in nature; and the coordinating staff is established for the accomplishment of the logistical function.

The field organization of the Air Materiel Command is composed of Air Materiel Areas, exempted stations, field procurement offices and plant representatives. Although this part of the AMC organization is presently undergoing a reorganization, no great deviation from the current arrangement is expected.

The Air Materiel Areas, which are primarily established to implement the AMC supply and maintenance program, serve all Air Force installations within the USAF. Air Materiel Area Headquarters are located at Sacramento, California; Ogden, Utah; San Antonio, Texas; Oklahoma City, Oklahoma; Mobile, Alabama; Warner Robins, Georgia, and Middletown, Pennsylvania.

There are eight exempted stations physically located within the Air Materiel Areas which report directly to Headquarters, Air Materiel Command. They are primarily concerned with the AMC Research and Development program. These stations, with their missions, are as follows:

a. The Wright-Patterson Air Force Base, Dayton, Ohio, performs the functions of an air base on which the major portion of engineering research, development and test functions of the Air Force is performed.

b. Clinton County Air Force Base, Wilmington, Ohio, conducts research and tests of USAF aircraft and related equipment in conjunction with the Air Forces effort to overcome weather flying obstacles.

c. Watson Laboratories, Red Bank, New Jersey, are primarily concerned with the development of proto-type and service test models of ground electronic equipment peculiar to the USAF.

d. Cambridge Field Station, Cambridge, Massachusetts, conducts basic and applied electronic and atmospheric research.

e. Muroc Air Force Base, Muroc, California, conducts engineering research, development and flight testing of experimental aircraft and allied equipment.

f. Holloman Air Force Base, Alamogordo, New Mexico, conducts tests on pilotless aircraft, guided missiles and allied equipment.

g. Kirkland Air Force Base, Albuquerque, New Mexico, provides field contact for the USAF with the Atomic Energy Commission and the Armed Forces Special Weapons Project and conducts necessary flight tests for these activities.

h. Griffiss Air Force Base, Rome, New York, conducts research and development in electronic, atmospheric and geophysical fields and performs currently assigned storage, training, and supply and maintenance functions.

Air Force-Procurement Field Offices and AF Plant Representatives are located at the main nerve center of industry and serve to implement the AMC procurement and mobilization planning program.

a. Procurement Field Offices are located at Boston, Chicago, Ft. Worth, Dayton, Detroit, Los Angeles, and New York.

b. Plant representatives are assigned to Allison Division (General Motors Corporation), Bell Aircraft Corporation, Boeing Aircraft Company, Fairchild Engine and Airplane Corporation, Republic Corporation and Wright Aeronautical Corporation.

AIR PROVING GROUND

Organized in May 1941, the Proving Ground Command was based on a wartime need, but its record of achievement and its value have dictated its continuance throughout the military future, at peace or at war. Under the control of the Command Headquarters, located at Eglin Field, Florida, Jimmy

Doolittle planned his famed Tokyo raid. There, too, the problems surrounding the destruction of underwater obstacles on the Normandy beachhead were solved. In Ladd Field, Alaska, cold-weather tests of men, clothing and machines have proved or disproved the theories of Air Force visionaries.

At Muroc Field, California, tests approximating tropical and desert conditions have been conducted to find the answer to problems of equatorial operations. The B-29 was tested at Eglin Field, before it set out on its Pacific mission. At the Proving Ground, have been tested all types of aircraft, particularly fighters and fighter-bombers used in the invasion and subsequent operations in Europe as well as in the Pacific. Recently, the P-80 has been the subject of many service tests, designed to determine its range, its lethal capacity, and its acceptability as a first-class high speed addition to the list of USAF planes. Ordnance equipment too has been under examination and guns of all descriptions have received their final check from the expert staff of the Proving Ground. Napalm, the flame-bomb, was developed at Eglin Field, and it was there that it first exhibited its power and presaged its successful use in combat. Radio and radar equipment, photographic equipment, navigation devices, personnel equipment, air-sea rescue equipment and technique, vehicles, tools of every conceivable appliance or device which would aid in winning the war have all been to the Proving Ground for consideration.

Mission

a. The mission of the Proving Ground Command is largely implied in the title and has been partially explained by the foregoing general statement. Defined in more formal terms, its mission is the development of improved operational techniques, and to conduct tests of materiel under simulated combat conditions to determine its operational suitability. Recommendations are submitted to the Chief of Staff, U. S. Air Force, relative to the establishment of military characteristics and requirements for operation systems and materiel. The Proving Ground Command has the further mission of furnishing such services, facilities and assistance to the Air Materiel Command and other agencies designated by higher authority as are not readily available elsewhere and which will not interfere with the above stated mission.

b. The Commanding General, U. S. Air Force Proving Ground Command, is responsible for:

1. Establishing such installations as are required and are approved by higher authority.

2. Operating in accordance with policies established by the Chief of Staff, U. S. Air Force.

Composition

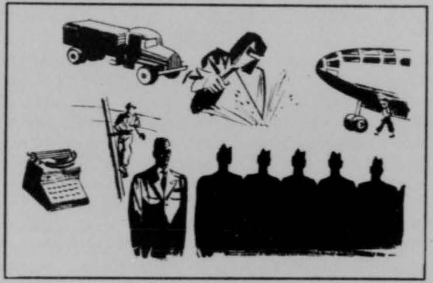
The Air Proving Ground Command consists of two divisions, the U. S. Air Force Board, which is concerned chiefly with review, evaluation, and recommendations in connection with materiel, doctrines, techniques, and training; and the U. S. Air Force Proving Ground, which deals with tactical testing.

The Current Program of the Proving Ground Command

The work of this command resolves itself into a continuous series of widely varying experiments with new aircraft, radar, photographic equipment, navigation devices, ordnance, and all other materiel essential to the air superiority of the United States. Since the expeditious completion of projects under the direction of the Proving Ground Command is highly desirable, certain priorities have been established relative to obtaining personnel and equipment. Test equipment and supplies such as Signal, Quartermaster, Ordnance, and Chemical are on a 1-A priority. This is in accordance with Priority List published for Service Boards, of which the Proving Ground Command is considered to be one.

AIR TRAINING COMMAND

The Air Training Command with its headquarters at Barksdale Air Force Base, Louisiana, has the following mission: Provide individual and unit training for officers and enlisted men in accordance with Air Force training standards and such directives as may be issued by the Chief of Staff, U. S. Air Force; be prepared to conduct Universal Military Training; conduct training research leading toward measurement and improvement of individual proficiencies, methods of personal selection and classifica-



tion, and achievement of high academic standards; plan, review, prescribe, and establish qualitative requirements (including objective characteristics) for Air Force training materiel and recommended basis of issue to Chief of Staff, United States Air Force; and perform such other missions as may be directed by the Chief of Staff, U. S. Air Force.

In addition, the Division of the Air Training Command have the following primary functions:

a. Provide formal basic military training for all Air Force enlistees not having sufficient previous military training.

b. Provide all training leading to initial aircrew ratings.

c. Conduct certain graduate and special flying courses.

d. Provide formal training leading to original military occupational specialties for officers and enlisted personnel, to include the operation of an Officers Candidate School.

e. Provide formal training leading to qualification of trainees in basic technical specialties.

f. Conduct advanced courses in technical training for enlisted personnel of the Air Force.

g. Provide certain advanced administrative and technical training courses for officers. This includes basic training in the intelligence techniques necessary to combat reporting, photographic intelligence, prisoner of war interrogation, briefing and interrogation of combat crews, and such other techniques as are peculiar to or pertinent to the operation of intelligence activities in the field.

h. Provide formal training for foreign nationals.

i. Maintain standards of proficiency in all phases of training and conduct training research leading toward improvement of individual training and methods of selection.

j. Activate, man and conduct unit training for designated Aviation Engineer units.

The organizational structure of the Air Training Command consists of Headquarters, Air Training Command, and three field divisions. These divisions are the Flying Division, Technical Division, and the Indoctrination Division. Headquarters, Air Training Command, is organized with a conventional general staff type of staff organization. The headquarters of each division is organized similar to the Headquarters, Air Training Command.

The Flying Division, with Headquarters at Randolph Air Force Base, San Antonio, Texas, operates the following flying schools: Basic, Fighter, Multi-engine, Liaison-Helicopter, Instrument, Bombardment-Navigation, and Fighter Gunnery.

The Technical Division, Air Training Command, with headquarters at Scott Air Force Base, Belleville, Illinois, is responsible for the operation of technical training schools and includes courses as follows: Airplane mechanic, armament, clerical, communications, photography, radar, weather and intelligence.

The Indoctrination Division located at Lackland Air Force Base, San Antonio, Texas, consists of the Basic Military School and the Officers Candidate School.

AIR UNIVERSITY

The Air University has its headquarters at Maxwell Air Force Base, Alabama. The mission and functions of this command are:

a. Conduct the schools established under the Air University and maintain its responsibilities to the U. S. Air Force School of Aviation Medicine and the U. S. Air Force Institute of Technology.

b. Recommend the selection of graduate and undergraduate courses of instruction to those institutions not under the control of the U. S. Air Force to which Air Force officers may be detailed.

c. Insure that Air Force officers who are required as instructors in other Service schools are trained properly to perform their mission; insure that the material presented by these instructors conforms with the approved doctrine of the U. S. Air Force; and administer and control these officers.

d. Recommend student eligibility requirements for attendance at all schools.

e. Be responsible for graduate and undergraduate training of Air Force officers in civilian institutions to include the receiving and screening of all applications; monitoring the individual student; liaison with civilian institutions; and arrangements with the Commanding General, Air Materiel Command, to effect educational contracts.

f. Maintain a continuous study of the Air Force educational and training systems.

g. Review, revise, and prepare publications pertaining to Air Force basic doctrine and conduct staff studies as required by the Chief of Staff, U. S. Air Force.

h. Review and evaluate tactics and techniques in use or proposed.

i. Submit recommendations on matters included in the responsibilities of the Chief of Staff, U. S. Air Force, as pertain to anti-aircraft artillery.

j. Maintain liaison with educational boards of the other Services.

The staff organization of Headquarters, Air University, is the double deputy type. The Deputy Commanding General, Administration, is responsible for the operation of the stations assigned to the Command. He employs a general staff type of staff organization. The Deputy Commanding General, Education, is responsible for the operation of the various schools established to discharge the educational responsibilities of the Command. He employs a departmental type of staff organization.

Under the Air University has been established the Air War College, the Air Command and Staff School, the Air Tactical School, and the U. S. Air Force Special Staff School. The Commanding General, Air University, is also responsible for the supervision and operation of the U. S. Air Force School of Aviation Medicine at Randolph Air Force Base, Texas, and for exercising broad supervision over the curricula of the U. S. Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio.

MILITARY AIR TRANSPORT SERVICE

Effective 1 June 1948, and in accordance with directives from the Secretary of Defense, the Military Air Transport Service (MATS) was established with headquarters located in the vicinity of Washington, D. C., and under the command and direction of the Chief of Staff, U. S. Air Force.

With the establishment of MATS the Air Transport Command of the U. S. Air Force and the Air Transport Service of the U. S. Navy were discontinued.

On the same date, 1 June 1948, all elements of the Air Transport Command were transferred to MATS without change of station or function. Thus, the Air Weather Service, the Airways and Air Communications Service, the Air Rescue Service, and the Flight Service, formerly components of ATC, now perform the same functions and have the same mission under MATS. Certain personnel, aircraft, equipment and facilities of the Navy were also transferred to MATS. Thus, MATS is unique in that officers of both the U. S. Air Force and the U. S. Navy occupy positions of authority within the Command.

The Commander, MATS, has a personal staff including the offices of a Comptroller, an Inspector General and Public Information. These personal staff sections perform functions normal to their designations. The Coordinating Staff includes a Director of Personnel and Administration, a Director of Plans and Operation, and a Director of Base Services and Supply. The assignment of the Coordinating Staff functions among these three staff divisions is normal.

The Commander of MATS exercises his command functions through two Deputy Commanders; one for Air Transport and one for Services. The Deputy Commander, Air Transport, exercises command over air transport functions of MATS through three divisions, the Atlantic, the Continental and the Pacific. The Deputy Commander, Services, commands the service elements which are the Air Weather Service, the Airways and Air Communications Service, the Air Rescue Service and the Flight Service; and commands the Newfoundland Base Command and other National Interest Bases. It would appear from the organization chart (verification is not available at present), that the Coordinating Staff of MATS also functions as the staff for the Deputy Commander, Services.

The Deputy Commander, Air Transport, is responsible for the transportation by air of personnel (including the evacuation of sick and wounded), materiel, mail, strategic materials and other cargoes for all agencies of the national military establishment and as authorized for other government agencies of the United States. This does not include responsibility for tactical air transportation of airborne troops and their equipment; initial supply and resupply of units in forward combat areas; nor as required by the Department of the Navy for internal administration, the fulfillment of the mission of the Navy, or for air transport on routes of sole naval interest where the requirements cannot be met by MATS.

The Deputy Commander, Services, in order to assure safety of flight, will provide weather service, communications service, rescue service and flight service.

Certain other specific functions assigned the Commander of MATS other than those listed above are:

a. The establishment, control, operation and maintenance of facilities assigned to MATS within the United States and on air routes outside the United States.

b. In areas outside the continental limits of the United States where there is no other U. S. Military authority the Commander of MATS will exercise all normal responsibilities and prerogatives of commanders of theaters of operation, area or base commands.

c. Conduct ferrying operations within the United States and to and from points outside the United States as directed.

d. The control, operation and maintenance of ports of aerial embarkation as may be necessary to the performance of the MATS mission.

e. Administration of priorities for air transportation.

f. Coordination with agencies of the National Military Establishment and civilian agencies responsible for the design of transport type aircraft.

g. Liaison with civilian air carriers.

h. Preparation for submission to the Secretary of Defense of plans for the employment and expansion of MATS in times of national emergency.

The Department of the Army, the Department of the Navy and the Department of the Air Force and theater and fleet commands and other commands will take all necessary action to facilitate the efficiency and economic operation of MATS including the assignment of personnel, and the furnishing of facilities, services and equipment.

The Military Air Transport Board consisting of three members, one each to be appointed by the Secretary of the Army, Secretary of the Navy and the Secretary of the Air Force, has been established. The Board will recommend to the Secretary of Defense the policies to be followed by MATS with respect to the categories of passengers and cargo to be transported by air. The Board will also act in an advisory capacity to the Commander of MATS for the purpose of making recommendations.

HEADQUARTERS COMMAND, USAF

Headquarters Command, USAF, Washington, D. C. (formerly Bolling Field Command), was established to serve the Washington area, thereby releasing the other commands from the administrative details inherent to a base serving the activities of Headquarters, USAF. Specifically, it is charged with providing aircraft for Air Force and government personnel; controlling and administering assigned administrative and technical units; and providing base service, air transport, photographic, photogrammetric, reproduction, administrative, and other miscellaneous services for Headquarters, United States Air Force.

HQ
COMMAND

Questions and Leads for Classroom Discussion

1. How many major commands, USAF, are in the Z.I.?
2. What is the function of each command?
3. Who is responsible for the Air Defense of the U. S.?
4. What command is responsible for the activities of the Reserve Forces of the USAF?
5. What is the mission of the Strategic Air Command?
6. What command is charged with processing technical intelligence?
7. Discuss briefly the mission of each of the major commands, USAF?

CHAPTER III

INTELLIGENCE PROCEDURES IN THE HIGHER ECHELONS

This chapter is a general discussion of the procedures involved in the production and use of intelligence in higher echelons. These procedures are discussed in greater detail in Chapters IV to IX.

At any echelon of command, high or low, the intelligence officer must be familiar with all branches of intelligence and their activities. He must anticipate the commander's intelligence requirements; he must know the collecting agencies and the means employed to procure information from them. He must know the procedures involved in converting raw information into usable intelligence and he must understand the imperative need for the delivery of such intelligence to the using agency in time to be of use.

In order to expedite these intelligence procedures, it is essential that all intelligence agencies within a command be closely coordinated. Coordination is accomplished by standard operating procedures (SOP's), the free use of staff channels and special provisions and directives in combat orders.

STRATEGIC AND OPERATIONAL PLANNING

At top level, over-all strategic planning is ordinarily performed by the Joint Chiefs of Staff, who consider the related intelligence problems. Such planning includes: Feasibility of employing air power in a particular area, employment of atomic or other special weapons, desirability of independent operations as opposed to joint operations, requirements for trained personnel, procurement of equipment, logistics, and defensive requirements.

In a theater of operations the air commander, through his staff intelligence officer, outlines a comprehensive plan for collecting and processing information. In planning for intelligence, the mission of the command initially determines the intelligence requirements. Information to satisfy these requirements falls, quite logically, into three classifications:

a. Information already on hand, and available for immediate use.

b. Information available from other headquarters or agencies, with varying time elements necessary for its procurement.

c. Information which *must* be obtained from the enemy either by the unit itself or by other agencies. (Essential Elements of Information.)

It is obviously advisable to initially exhaust the first two classifications, inasmuch as these requirements can be filled without risk of personnel and equipment.

ESSENTIAL ELEMENTS OF INFORMATION

The essential elements of information, or EEI's, are those items of enemy information concerning forces, objectives, capabilities, terrain, and weather, which the air commander considers vital or essential in order to make a sound decision, formulate plans, and conduct operations in the performance of his assigned mission. Knowledge of these items would remove elements of surprise, or assist in the accomplishment of the mission and are thus formulated as questions or directives and are called EEI.

The amount of detail requested in the EEI increases with the echelon of command. EEI given verbally to combat aircrews preparing to go on a combat mission must be limited in detail and number. The requests to the trained technicians of the higher commands and agencies are more detailed and are submitted in writing. The more detailed the questions, the more completely the answers will satisfy the requirements.

When an operation is in the planning stage or when time permits, the air commander may announce the EEI after he has considered what is known or unknown about the enemy. In determining the EEI, he is guided by his staff, particularly his intelligence officer, and by requests for special information from higher, adjacent, or cooperating units. If the commander does not designate the EEI, the intelligence officer should recommend them. Because of the speed with which most air force operations must be planned, the intelligence officer should anticipate EEI and be prepared to provide the necessary information.

EEI may be expressed as directives or as questions about the strength of the enemy, his location, his equipment, his installations, and objectives, terrain, and weather conditions within his territory. EEI may also be stated formally in writing or be discussed informally in staff conferences. EEI are the basis of the Intelligence Collection Plan.

THE INTELLIGENCE COLLECTION PLAN

a. This plan is formulated to plan the collection of information required to answer the EEI. The specific subjects on which information is required are listed with the means and instructions for obtaining it.

b. The primary reason for the plan is to determine how information can be secured to estimate the enemy's capabilities. An enemy's ability to interfere with a mission or to accomplish his own mission depends upon the location, strength, and equipment of both forces on air, land, and sea, and the conditions of terrain and weather. The enemy's offensive and defensive capabilities will change with the accretion or the attrition of his forces and their deployment and supply. To keep constantly abreast of these changes, the intelligence plan must be flexible.

c. The scope of the plan depends upon the commander's sphere of action. It is modified to conform to his new decisions but it is necessary that definite instructions for obtaining information be given to the collecting agencies. To avoid omission or overlapping, the intelligence officer carefully analyzes the EEI, allots missions, and designates the time and method of reporting. He thus directs the collection of information and sparks the cycle of the operation of intelligence. To accomplish his purpose, the intelligence officer sets up a plan in detail as discussed in Chapter VI.

Information Collection

Upon receipt of the intelligence officers' orders or requests, the information collection agencies systematically exploit their individual sources of information and deliver information collected in the manner specified by the plan.

Processing

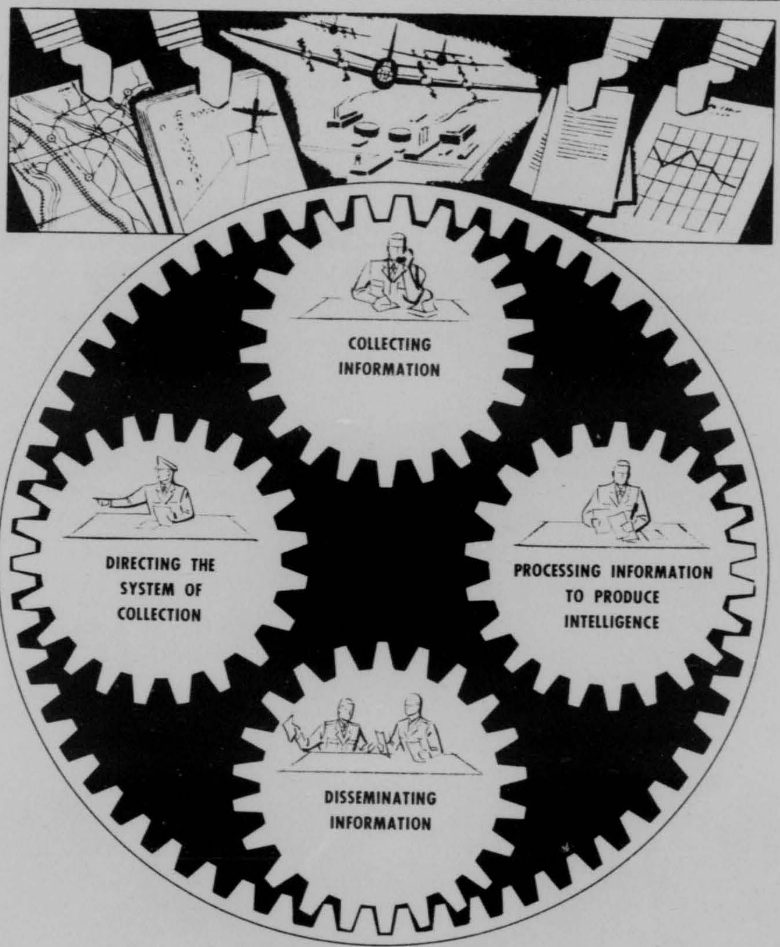
The information received from these collecting agencies is systematically recorded, collated evaluated and interpreted to produce applicable intelligence which will furnish the answers to the questions raised by the EEI.

Use and Dissemination

Each significant item of newly produced intelligence is integrated into the intelligence estimate to keep it up to date; other items are distributed to individuals and other units concerned in time to be of use.

AIR INTELLIGENCE ESTIMATE OF THE SITUATION

To present a clear and concise summary of the information he has obtained, the intelligence officer prepares an Air Estimate of the Situation, for use by the commander and his staff to arrive at the Commander's Estimate of the Situation.


COLLECTING INFORMATION
DIRECTING THE SYSTEM OF COLLECTION
PROCESSING INFORMATION TO PRODUCE INTELLIGENCE
DISSEMINATING INFORMATION

FUNDAMENTAL STEPS IN THE CONTINUOUS CYCLE OF OPERATION OF INTELLIGENCE

The Air Estimate is prepared by the air intelligence officer upon his own initiative when warranted by the developments in the situation or when required by the commander. The estimate may be written or oral. It contains an evaluation of the enemy situation and possible lines of action that he is capable of taking. The amount of detail to be included is determined by the scope of operations.

The five-paragraph, or formal, Air Intelligence Estimate of the Situation should be used whenever time permits. A short form, or two-paragraph, Air Intelligence Estimate of the Situation is used when there is not time for the complete form.

Verbal estimates usually follow the latter short form, especially for successive air missions when a formal estimate has been prepared for the first mission, the general situation is materially unchanged, and quick decisions are required. *(For details see Chapter V.)*

ESTIMATE OF ENEMY AIR REACTION

A valuable supplement to the air intelligence estimate is the Estimate of Enemy Air Reaction. Where there are two or more methods of accomplishing the air mission, an estimate of enemy reaction to each method helps the commander to arrive at a decision. A knowledge of how the enemy reacted in the past is helpful in deciding which would be better: Day vs. night attack, high altitude vs. low or medium altitude, and concentrated attack vs. main attack, etc. When the mission may be accomplished by attacks against more than one objective, analysis is made of the estimated enemy reaction to each plan so that his weakest point or points may be discovered. All other things being equal, a careful analysis will reveal wide differences in the enemy's ability to provide air defense at the different points of attack or to launch counter attacks.

Questions and Leads for Classroom Discussion

1. At what echelon of command must the intelligence officer be completely familiar with all intelligence procedures?
2. How is coordination achieved between intelligence agencies?
3. Why is an intelligence estimate required?
4. What is meant by "processing" information?
5. What four phases constitute the cycle of operations of intelligence?
6. When is the cycle of intelligence closed?

CHAPTER IV

AIR INTELLIGENCE ESTIMATE OF THE SITUATION

As stated in Chapter I, the primary function of the air intelligence officer and his staff is to keep the commander and all others concerned, informed of the enemy situation and the enemy capabilities.

The purpose of the Air Intelligence Estimate of the Situation is to present a clear concise summary of the enemy situation as it may affect the mission. Estimates are prepared on the initiative of the intelligence officer or when requested by the air commander. The commander utilizes the Intelligence Estimate together with the other staff estimates in arriving at his own Commander's Estimate of the Situation.

STAFF ESTIMATES

a. All staff[4] estimates are prepared with one objective, to "*assist the commander in arriving at a sound decision.*" Personnel, intelligence, operations and logistics estimates are usually required by the commander with each new mission. Only the intelligence estimate deals with the enemy; other staff estimates concern the commander's own unit.

1. The Personnel Estimate of the Situation is prepared by the Chief of Personnel and is an estimate concerning the personnel situation of the unit with conclusions drawn therefrom.

2. The Intelligence Estimate of the Situation is prepared by the Chief of Intelligence and is an estimate concerning the enemy situation and capabilities with conclusions drawn therefrom.

3. The Operations Estimate of the Situation is prepared by the Chief of Operations and is an estimate concerning the operations capabilities of the unit with conclusions drawn therefrom.

4. The Logistics Estimate of the Situation is prepared by the Chief of Supply and is an estimate concerning the logistic capabilities drawn therefrom.

5. Special Staff Estimates of the unit with conclusions are prepared by the responsible special staff sections as directed by the commander and are concerned with the capabilities of the unit as pertains to ordnance, chemical, signal, etc.

b. As a general rule, an estimate of a broad strategic situation will be written out in some length. Estimates of tactical situations may, and should, be written out when time permits. There will be a large percentage of tactical decisions made mentally and in many cases made almost instantaneously. Even mental, quickly made decisions should result from thinking which follows a systematic and logical approach. The best tactical minds are those who are able to mentally size up the situation quickly and clearly, taking into account all features bearing on the situation.

c. Capabilities. "The method of capabilities," as defined in Chapter I, for the analysis of possible enemy action is a product of the Napoleonic school. This method is a precise and analytical process whereby every possible line of action open to the enemy is considered. By process of elimination, in an ideal solution, only one course of action remains. Since this procedure exhausts all possible hostile reactions, it materially reduces the possibility of the enemy achieving surprise. This method of studying enemy capabilities is used by all United States military forces.

THE AIR INTELLIGENCE ESTIMATE

a. In order to prepare an accurate Air Intelligence Estimate of the Situation and to make certain that important points are not overlooked, a five (5) paragraph (formal estimate) form has become standard, which deals progressively with:

Par. 1. The mission of the command.
Par. 2. The enemy situation.
Par. 3. Possible lines of action (capabilities), open to the enemy.
Par. 4. Comparison and merits of each enemy capability.
Par. 5. Conclusions: Summary of the enemy capabilities.

b. The intelligence officer prepares the Air Intelligence Estimate from current, factual and evaluated knowledge of the enemy. This knowledge is gained by constantly collecting, evaluating, and interpreting information of the enemy's air, ground, and naval situation and order of battle.

Formal Form

The five paragraph or formal Air Intelligence Estimate of the Situation should be used by air intelligence officers whenever time is available. Continuous practice in maintaining the necessary data and preparing successive formal estimates is highly beneficial to the individual in training his mind to an habitual and orderly analysis of all available information; correct conclusions can be drawn quickly and logically. Constant practice with the formal estimate will insure logical reasoning when a rapidly changing situation requires the intelligence officer to give verbal estimates on short notice.

a. The Mission.

The Mission of the unit is usually assigned by higher headquarters, either specifically by time, place, and numbers of aircraft, or generally, giving only general boundaries for action, and a general over-all picture of the desired objective. Sometimes the mission will appear as a multiple mission, and then the priority of the specific missions must be determined, either by the air command or through delegated authority by the intelligence officer. A clear determination of the mission is the essential basis for the estimate. Each new mission will normally require a new estimate. The statement of the mission must be given clearly and concisely, so that there is no possibility for a misunderstanding.

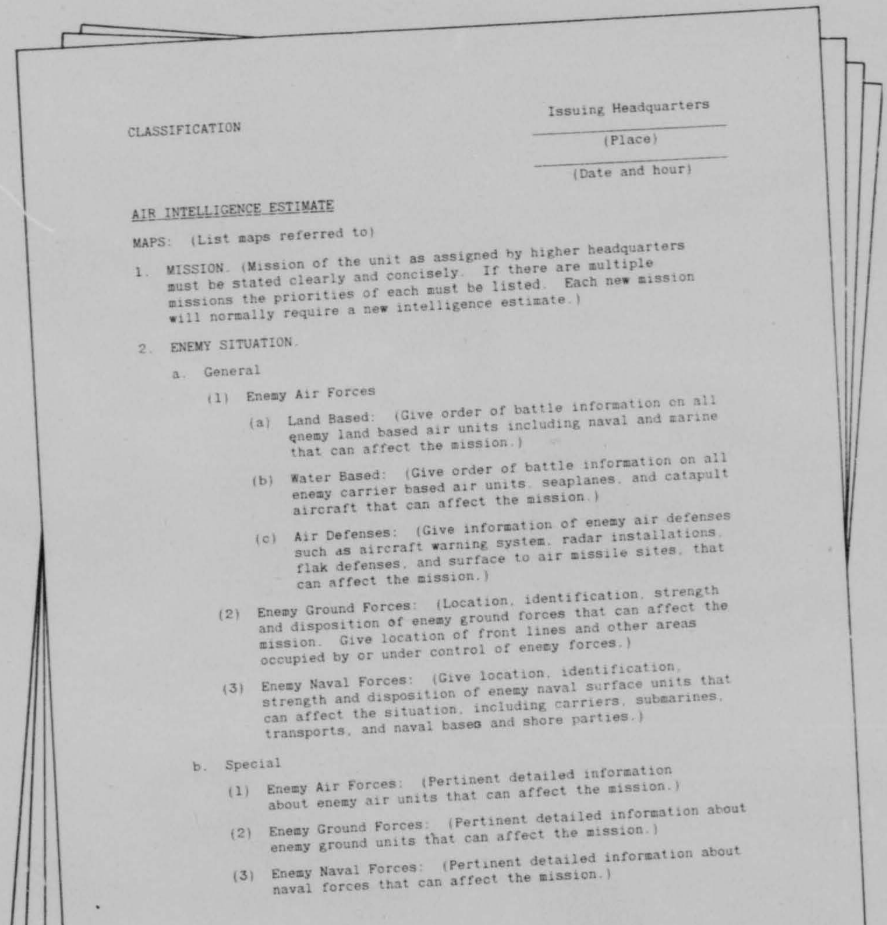
b. The Enemy Situation.

It is made up of six parts:

1. The general enemy situation, including the Enemy Air Order of Battle. This must cover all land based and, where applicable, water based planes. It should list all air units which are within effective radius of action. It should give the operational strength, serviceability rate, types of aircraft, combat efficiency, and known details of fighter control system. Included also would be all information that is available on the air defenses of the enemy, such as the locations, efficiency, and types of enemy aircraft warning systems and radar installations, flak defenses, ground-to-air missile sites and searchlights.

2. The general situation as regards the enemy ground forces, with the location, identification, strength, and disposition of enemy ground forces that might affect the mission. The location of front lines must be given as well as the location of islands and other areas occupied or under control of enemy forces.

3. The general situation as regards the enemy naval forces, with the location, identification, strength, and disposition of enemy naval surface units and submarines, including carriers and merchant vessels of all types that might affect the mission.



CLASSIFICATION

Issuing Headquarters

(Place)

(Date and hour)

AIR INTELLIGENCE ESTIMATE

MAPS: (List maps referred to)

1. MISSION. (Mission of the unit as assigned by higher headquarters must be stated clearly and concisely. If there are multiple missions the priorities of each must be listed. Each new mission will normally require a new intelligence estimate.)

2. ENEMY SITUATION.

a. General

(1) Enemy Air Forces

(a) Land Based: (Give order of battle information on all enemy land based air units including naval and marine that can affect the mission.)

(b) Water Based: (Give order of battle information on all enemy carrier based air units, seaplanes, and catapult aircraft that can affect the mission.)

(c) Air Defenses: (Give information of enemy air defenses such as aircraft warning system, radar installations, flak defenses, and surface to air missile sites, that can affect the mission.)

(2) Enemy Ground Forces: (Location, identification, strength and disposition of enemy ground forces that can affect the mission. Give location of front lines and other areas occupied by or under control of enemy forces.)

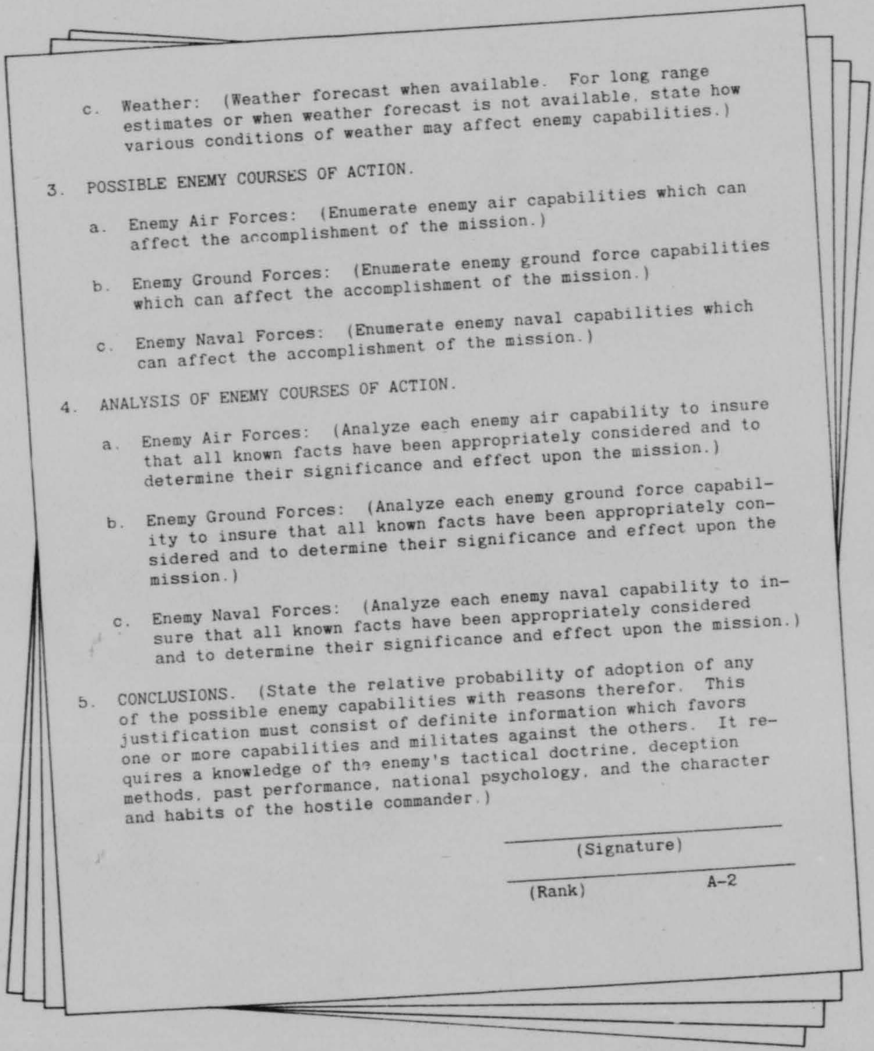
(3) Enemy Naval Forces: (Give location, identification, strength and disposition of enemy naval surface units that can affect the situation, including carriers, submarines, transports, and naval bases and shore parties.)

b. Special

(1) Enemy Air Forces: (Pertinent detailed information about enemy air units that can affect the mission.)

(2) Enemy Ground Forces: (Pertinent detailed information about enemy ground units that can affect the mission.)

(3) Enemy Naval Forces: (Pertinent detailed information about naval forces that can affect the mission.)



c. Weather: (Weather forecast when available. For long range estimates or when weather forecast is not available, state how various conditions of weather may affect enemy capabilities.)

3. POSSIBLE ENEMY COURSES OF ACTION.

a. Enemy Air Forces: (Enumerate enemy air capabilities which can affect the accomplishment of the mission.)

b. Enemy Ground Forces: (Enumerate enemy ground force capabilities which can affect the accomplishment of the mission.)

c. Enemy Naval Forces: (Enumerate enemy naval capabilities which can affect the accomplishment of the mission.)

4. ANALYSIS OF ENEMY COURSES OF ACTION.

a. Enemy Air Forces: (Analyze each enemy air capability to insure that all known facts have been appropriately considered and to determine their significance and effect upon the mission.)

b. Enemy Ground Forces: (Analyze each enemy ground force capability to insure that all known facts have been appropriately considered and to determine their significance and effect upon the mission.)

c. Enemy Naval Forces: (Analyze each enemy naval capability to insure that all known facts have been appropriately considered and to determine their significance and effect upon the mission.)

5. CONCLUSIONS. (State the relative probability of adoption of any of the possible enemy capabilities with reasons therefor. This justification must consist of definite information which favors one or more capabilities and militates against the others. It requires a knowledge of the enemy's tactical doctrine, deception methods, past performance, national psychology, and the character and habits of the hostile commander.)

____
(Signature)

____
(Rank)

A-2

4. Under the special sub-paragraph of the situation paragraph will be found the Enemy Air, giving in detail information about enemy air units normally operating in the area of the mission. Included will be any other particular information of the enemy air having a special bearing on the mission, such as defensive operational practices, tactics and techniques. Also included will be details of air defenses along the route of the mission and at the objective.

5. The enemy ground forces also come in for consideration under this special sub-paragraph, with details of composition, disposition, and movements of particular forces in the area of the mission. For low altitude missions, airborne operations, etc., there will be details with maps of drop zones, flak towers, infantry and armored concentrations, and other details of defensive capabilities of ground units and installations.

6. In this same sub-paragraph will be detailed consideration of the enemy naval forces, treated in the same manner as the ground forces, with all types of information that will affect the mission.

c. Possible Lines of Action.

Capabilities: This paragraph is divided into three (3) parts.

1. The first section deals with enemy air. In it should be listed each line of action which the enemy is physically capable of following, and which if adopted will affect the accomplishment of the mission of our own forces. Also to be considered is the capability of the enemy mass or sporadic bombing or airborne attacks on our bases prior to our own take-offs.

2. The second section deals with the enemy ground forces. Here are considered the capabilities of the enemy ground attacks, especially on our bases or line of communications.

3. The third section deals with the enemy naval forces. Here are considered the capabilities of enemy naval units disrupting our lines of communications, shelling our installations and affecting amphibious landings.

d. Comparison and Merits of Each Enemy Capability.

Again this paragraph is divided into three (3) parts, which are air, ground, and naval. The first item, that of air, is devoted to the analysis and discussion of the effect upon the mission of each of the enemy's air capabilities, including possible implementations through staging aircraft at advance fields. The merits of each of the capabilities are discussed, past records of the enemy's actions are gone into which might merit his adopting of a certain capability. The factors of weather conditions, enemy operational capabilities, percentages and normal sortie rates, state of training, location and disposition of units, all merit consideration in comparing each capability. The second and third sections of this paragraph cover the enemy ground forces and enemy naval forces respectively. Where analysis reveals that the capabilities of the ground forces and naval forces will not affect the mission, the reason or reasons should be given.

e. Conclusions—Summary of the Enemy Capabilities.

In this paragraph the relative probabilities of adoption of any of the possible enemy capabilities with the reasons for the choice would be enumerated. This justification must consist of definite information, which favors one or more capabilities, and militates against the others. A thorough knowledge of the enemy's tactical doctrine, deception methods, past performance, national psychology, and the character and habits of the hostile commander might indicate the enemy's adoption of a certain capability.

Short Form

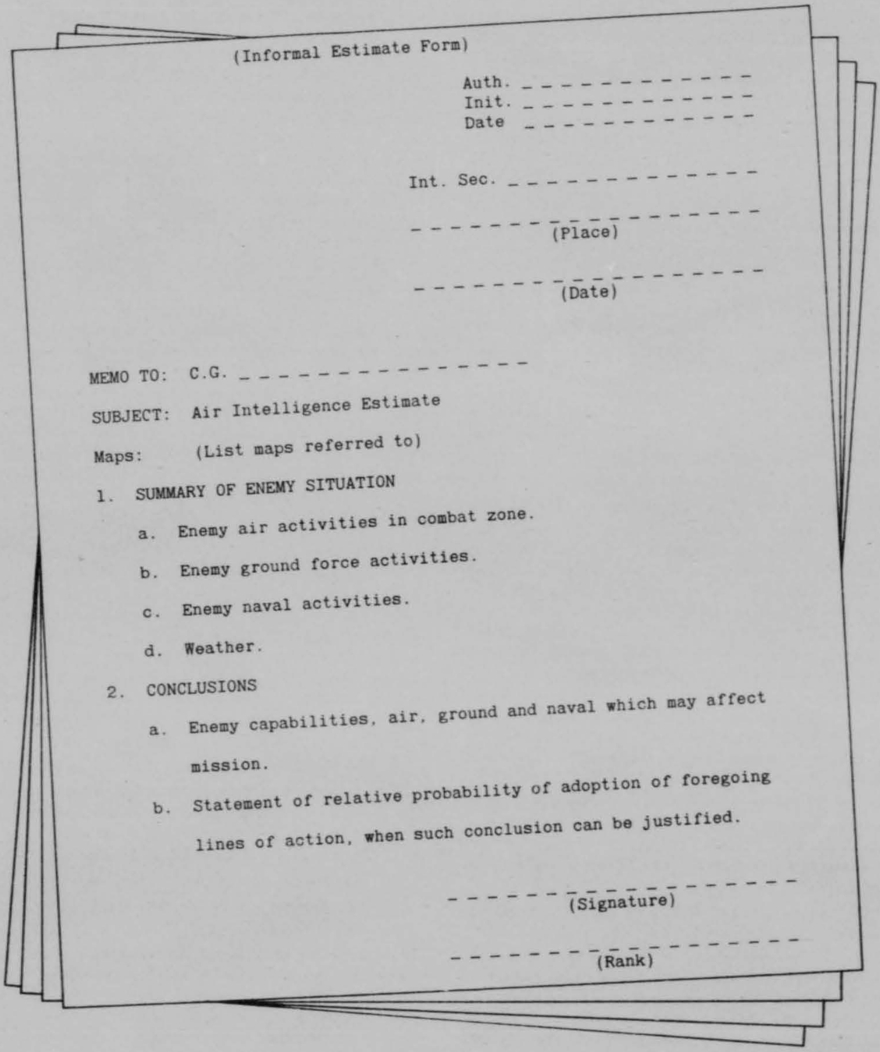
a. The short form or two paragraph Air Intelligence Estimate of the Situation is used when time does not permit the use of the complete form. Verbal estimates usually follow this form. The short form is especially useful in conjunction with the formal estimate form for successive air missions where the general situation is materially unchanged and where quick decisions are required to meet the different special situations of new missions.

b. The two parts of the short form are as follows:

1. Summary of Enemy Situation. This is made up of four (4) sub-heads, and covers in order the following:

(*a*) Enemy air activities in combat zone,
(*b*) Enemy ground force activities,
(*c*) Enemy naval activities, and
(*d*) Weather.

It must be borne in mind that this short form or informal Estimate Form is not for use when there is ample time for a more complete study and a fuller report. It is a form that should be used mentally when the time does not warrant the more full and complete five-paragraph form.



(Informal Estimate Form)

Auth. _ _ _ _ _ _ _ _ _ _ _ _
Init. _ _ _ _ _ _ _ _ _ _ _ _
Date _ _ _ _ _ _ _ _ _ _ _ _

Int. Sec. _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
(Place)

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
(Date)

MEMO TO: C.G. _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

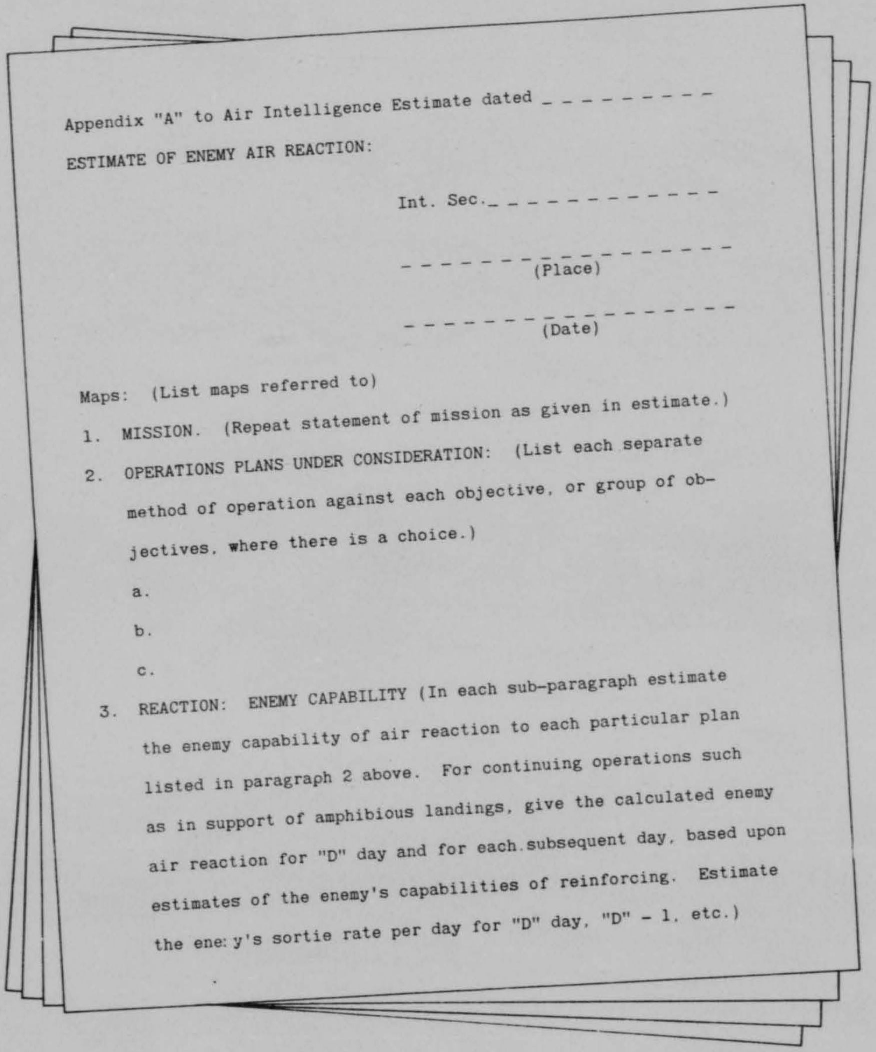
SUBJECT: Air Intelligence Estimate

Maps: (List maps referred to)

1. SUMMARY OF ENEMY SITUATION
   a. Enemy air activities in combat zone.
   b. Enemy ground force activities.
   c. Enemy naval activities.
   d. Weather.
2. CONCLUSIONS
   a. Enemy capabilities, air, ground and naval which may affect mission.
   b. Statement of relative probability of adoption of foregoing lines of action, when such conclusion can be justified.

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
(Signature)

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
(Rank)



Appendix "A" to Air Intelligence Estimate dated _ _ _ _ _ _ _ _ _

ESTIMATE OF ENEMY AIR REACTION:

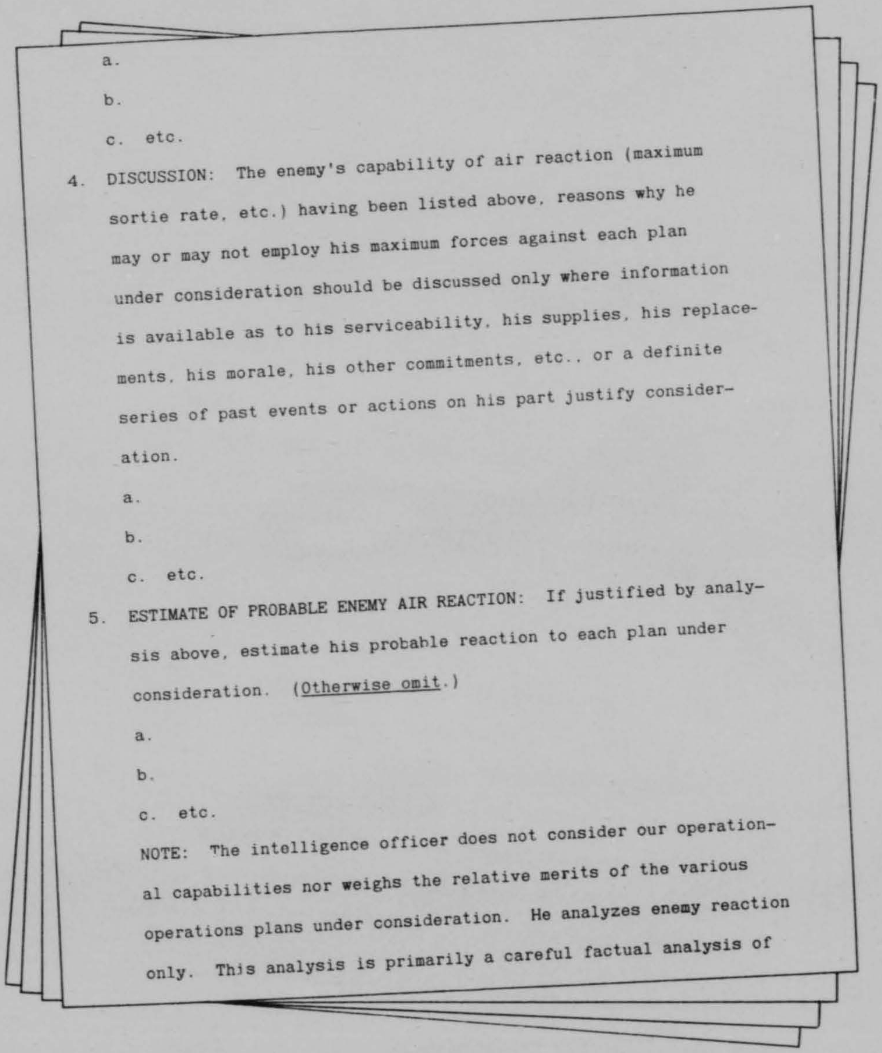
Int. Sec._ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
(Place)

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
(Date)

Maps: (List maps referred to)

1. MISSION. (Repeat statement of mission as given in estimate.)
2. OPERATIONS PLANS UNDER CONSIDERATION: (List each separate method of operation against each objective, or group of objectives, where there is a choice.)
   a.
   b.
   c.
3. REACTION: ENEMY CAPABILITY (In each sub-paragraph estimate the enemy capability of air reaction to each particular plan listed in paragraph 2 above. For continuing operations such as in support of amphibious landings, give the calculated enemy air reaction for "D" day and for each subsequent day, based upon estimates of the enemy's capabilities of reinforcing. Estimate the enemy's sortie rate per day for "D" day, "D" - 1, etc.)



a.

b.

c. etc.

4. DISCUSSION: The enemy's capability of air reaction (maximum sortie rate, etc.) having been listed above, reasons why he may or may not employ his maximum forces against each plan under consideration should be discussed only where information is available as to his serviceability, his supplies, his replacements, his morale, his other commitments, etc., or a definite series of past events or actions on his part justify consideration.

a.

b.

c. etc.

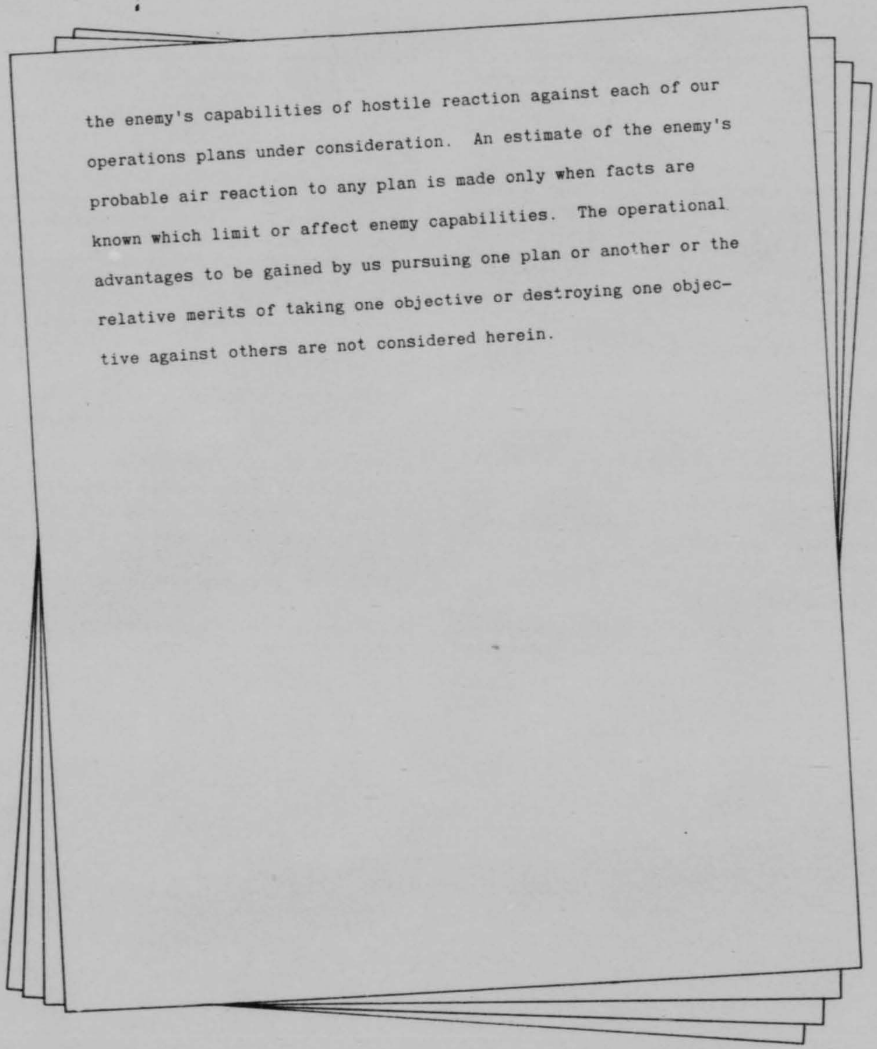
5. ESTIMATE OF PROBABLE ENEMY AIR REACTION: If justified by analysis above, estimate his probable reaction to each plan under consideration. (Otherwise omit.)

a.

b.

c. etc.

NOTE: The intelligence officer does not consider our operational capabilities nor weighs the relative merits of the various operations plans under consideration. He analyzes enemy reaction only. This analysis is primarily a careful factual analysis of



the enemy's capabilities of hostile reaction against each of our operations plans under consideration. An estimate of the enemy's probable air reaction to any plan is made only when facts are known which limit or affect enemy capabilities. The operational advantages to be gained by us pursuing one plan or another or the relative merits of taking one objective or destroying one objective against others are not considered herein.

2. Conclusions. This paragraph deals with conclusions just as does the fifth paragraph of the formal form. Again are listed the enemy capabilities as applied to the air, ground, and naval forces as they may affect the mission. The final sub-head that is covered is the statement of the relative probabilities of adoption of the foregoing lines of action when such conclusions can be justified.

c. Each new friendly air mission will normally be directed toward some specific enemy objective or area. In listing and evaluating enemy factors bearing on each new situation, more detailed analysis and consideration will be given to those enemy factors which normally may be expected to affect the mission directly than is given to the general situation.

Estimate of Enemy Air Reaction

This estimate, when needed, supplements the Air Intelligence Estimate. It offers to the Commander an analysis of the enemy's possible reaction to attack. This analysis is based on the enemy's past reactions to various methods employed against him as well as his immediate capabilities.

When carefully prepared, the estimate of enemy air reaction aids greatly in exposing the enemy's vulnerability and is of great aid in assisting the Commander to arrive at a decision.

CONCLUSION

The Air Intelligence Estimate of the Situation is accomplished so as to present a clear and concise summary of the enemy situation as it may affect the mission. It is obvious that the Air Intelligence Estimate is an invaluable contribution to accuracy and completeness of the Commander's own estimate, and it is further apparent that close coordination between Chief of Operations and Chief of Intelligence is necessary to assure a strong and direct focus of attention upon the most important possible lines of action open to both the enemy and ourselves. The most important job of the Intelligence Officer is to keep his Commander and other members of the staff informed as to enemy capabilities and the enemy situation. Through this logical, orderly process the Intelligence Officer accomplishes his mission. Further, through proper dissemination of Air Intelligence Estimates of the Situation, Intelligence officers in subordinate and lateral units will be assisted in carrying out this same assignment with more accuracy and completeness.

Questions and Leads for Classroom Discussion

1. What is the purpose of the intelligence estimate of the situation?
2. When are they prepared?
3. What is the objective of a staff estimate?
4. What is the "method of capabilities"?
5. What subjects are dealt with in the formal estimate and in what order?
6. What is the short form estimate and when is it used?
7. What information is contained in the estimate of enemy air reaction?

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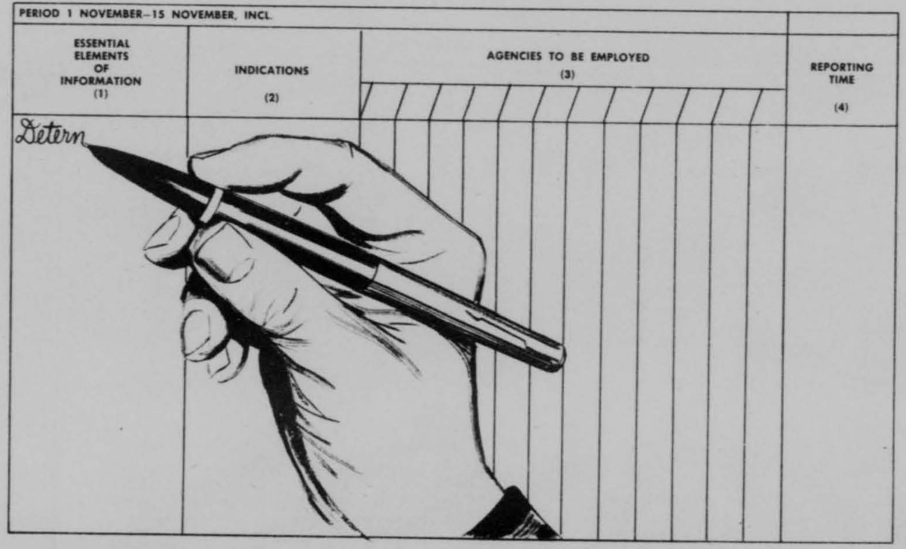

PERIOD 1 NOVEMBER–15 NOVEMBER, INCL.
ESSENTIAL ELEMENTS OF INFORMATION (1)
INDICATIONS (2)
AGENCIES TO BE EMPLOYED (3)
REPORTING TIME (4)
Detern

CHAPTER V

THE INTELLIGENCE PLAN

PURPOSE AND DEFINITION

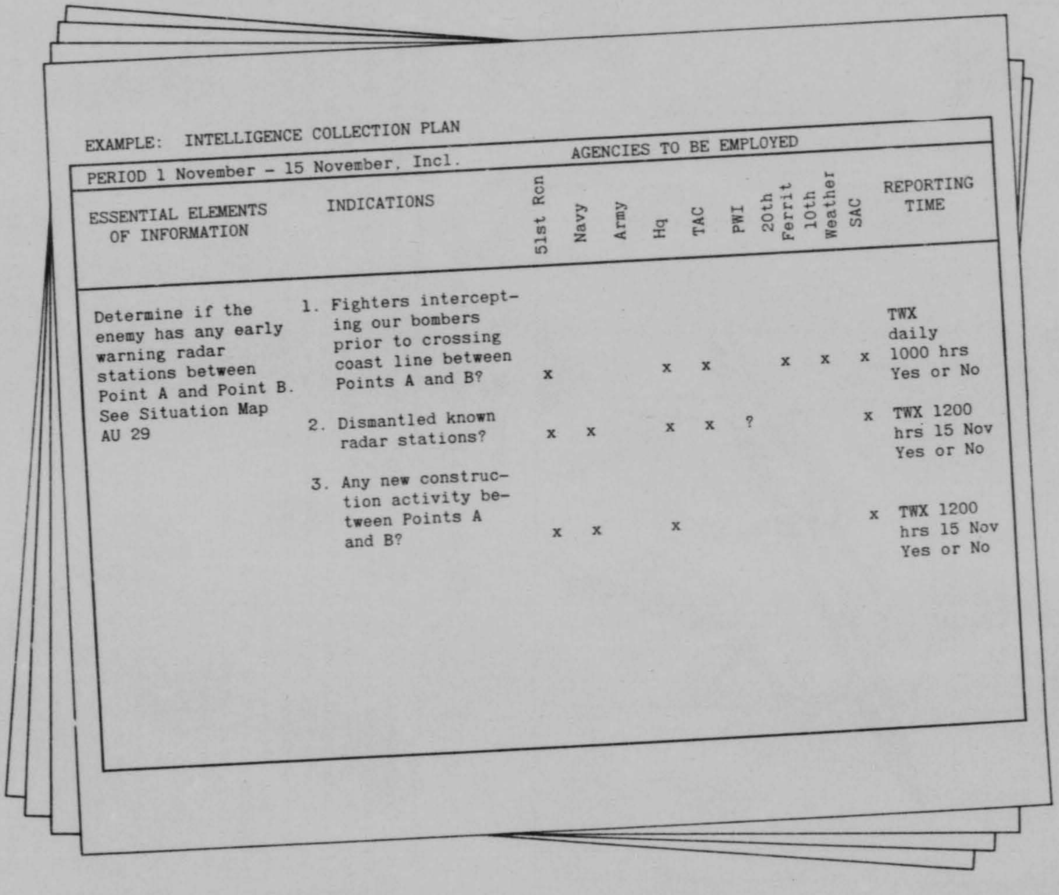
The Intelligence Plan is a convenient method of tabulating the important questions that have been asked (The Essential Elements of Information); the indications or signs that tend to answer these questions; the source from which the information will come, and the methods in which these sources will report their information to the headquarters concerned. It is a guide to the intelligence necessary to the planning of an operation and a convenience in solving questions posed by the EEI.

The Intelligence Plan is designed to eliminate conflict, omission, duplication and confusion in analyzing and transforming the Essential Elements of Information into missions, in allotting the missions to collecting agencies, and in designating the time and method of reporting the information to the Intelligence officer.

The formal Intelligence Plan is a very necessary piece of work in higher headquarters, and is applicable in groups and squadrons. In lower units the most successful intelligence officers will follow some such orderly process in collecting information.

The scope of the Intelligence Plan depends upon the sphere of action of the Commander for whom it is drawn. It will be subsequently modified to conform to new decisions made by the Commander during the development of the situation. If new intelligence missions are continually being given it is clear that they must replace, supplement, or modify those previously assigned. The Intelligence Plan, unlike most other plans, is not a set piece that is started and played out like a tactical operation such as an assault on a hostile shore or an air attack on an enemy airdrome.

The Intelligence Plan results in instruction to various agencies to do specific things. These are sometimes physically independent of each other. Some are completed quickly, others take considerable time. Hence, as the operation progresses, certain of these missions are no longer possible, certain others are fully accomplished. At the same time new



EXAMPLE: INTELLIGENCE COLLECTION PLAN

PERIOD 1 November - 15 November, Incl.		AGENCIES TO BE EMPLOYED									
ESSENTIAL ELEMENTS OF INFORMATION	INDICATIONS	51st Rcn	Navy	Army	Hq	TAC	PWI	20th Ferrit	10th Weather	SAC	REPORTING TIME
Determine if the enemy has any early warning radar stations between Point A and Point B. See Situation Map AU 29	1. Fighters intercepting our bombers prior to crossing coast line between Points A and B?	x			x	x		x	x	x	TWX daily 1000 hrs Yes or No
	2. Dismantled known radar stations?	x	x		x	x	?			x	TWX 1200 hrs 15 Nov Yes or No
	3. Any new construction activity between Points A and B?	x	x		x					x	TWX 1200 hrs 15 Nov Yes or No

missions are necessary because new enemy capabilities have arisen.

The intelligence picture develops continuously to meet the need of new phases of the operation. There is seldom the need for preparing a complete new plan at any particular time because of the fact that intelligence presents a moving picture. The Intelligence Plan outlines a logical process through which one must go if he wishes to insure the greatest chance that all possible indications of prospective enemy action will be sought. It is also the best insurance against issuing conflicting or duplicating instructions which will create confusion among the collecting agencies. This process of analyzing intelligence requirements to produce logical missions should be followed whether a single EEI or a dozen are under consideration. Again, like the designating of the EEI, the plan does not have to take place on paper. Although that is naturally desirable, a skillful and experienced intelligence officer can do the process mentally and put only the results on paper under certain circumstances.

The situation will regulate the use of the plan. The formal announcement of the EEI and the resulting composition of a detailed Intelligence Plan is the safest procedure when a complete change in nature or scene of action takes place. This occurs when, for example, a unit moves from one theater to another, or from one scene of action to another. A fighter wing might be moved from one command where its mission had been escort to another where its job might be that of air-ground coordination. Passing from a static defense to the offensive or assignment to special operations are other examples.

COMPOSITION

The Intelligence Plan follows a set form or pattern and involves six (6) distinct steps. They are:

a. Phases or periods of Operation.

b. Essential Elements of Information.

c. Analysis of Essential Elements of Information into Indications.

d. Collecting Agencies.

e. Time and Method of Reporting.

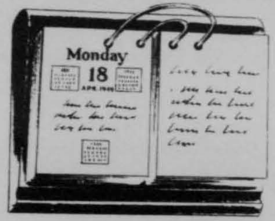
f. Specific Orders or Requests.

The first five (5) steps appear on the formal written Intelligence Plan in the sequence outline, and the last, "Specific Orders or Requests," represents the action which follows the composition of the plan.

12
1
2
3
4
5
6
8
9
11

First Step: Phases or Periods of Operation

The phase of the operation or the time period which it is intended the plan will embrace must be determined. The period should not be so long that drastic changes in the Essential Elements of Information are likely to be necessary, nor so short that numerous missions must be reassigned. The period might cover only a few hours or encompass an indefinite period. The situation will dictate the length of the period. When the situation renders the plan no longer practicable, the plan will be either superseded or modified. If a particular headquarters has a special target to be bombed tomorrow, the plan will cover a few hours, while if the mission is of a general nature over a large territory, the phase of the operation will be of longer duration.



Second Step: Essential Elements of Information

This is the factor which prompted the organization of the Intelligence Plan, and is the heart of the plan. The Essential Elements of Information constitute those items of enemy information concerning forces, objectives, capabilities, as well as terrain, weather conditions, lines of communications and other pertinent factors which the commander must have in order to make a sound decision, conduct an air operation, or to formulate the details of a plan of operation. These EEI are questions which must be answered, following the assignment of a mission from higher headquarters, before final plans for execution of the mission can be made. The air commander is responsible for designating the EEI, but in determining them he is assisted by his staff, in particular his intelligence officer.

Types of Information Required

By analysis, each essential element will break down into specific items of information required by the intelligence officer. These items, if obtained, will answer the questions involved in the EEI to which they relate. Typical items are listed as follows:

a. Target Information

1. Location.

2. Character: Factories, freight yards, docks, power plants, troop concentrations, bridges, air fields, supply dumps.

3. Size and extent.

4. Activity, capacity, and importance.

5. Type and construction; sufficient information to identify the target accurately and to assist in determining the appropriate air weapon to be used against it. The amount of detail needed depends on how similar other targets are, how close they are, and how distinct the landmarks are.

6. Landmarks and identification features.

7. Vulnerability to air attack: Natural obstacles (terrain and weather), active defenses (strength and location of anti-aircraft artillery batteries and missile sites, fighter aircraft), passable defenses (dummies, decoys, smoke screens, camouflage, and balloon barrages).

b. Information of Enemy Air Forces

1. Strength, disposition, and movement.

(a) Units in operation at or near the target; designation and type of units encontered or known to be operating at given points; location and estimated serviceability of operating airdromes and aircraft; physical condition and morale of crews as indicated by air combat and interrogation of prisoners.

(b) Possible enemy reinforcements (hostile units not operating in the area but located within striking distance); designation and type of unit, location, estimated strength, and serviceability; earliest possible time units can intervene in that area.

(c) Changes in above units, including units brought into or taken from the area, movement within the area, airfields built or abandoned, alterations in defensive measures.

(d) Reaction to recent air operations.

2. Supply and equipment.

(a) Supply: Information on hostile supply arrangement, kinds and amounts available; location of supply and repair depots; location of aircraft factories and methods of delivering aircraft to combat units.

(b) Equipment: Characteristics and performance of hostile aircraft; availability of aircraft and equipment; airdrome and aircraft carrier facilities.

3. Air operations—Fighter

(a) Types and unit markings of aircraft.

(b) Operations—aggressive or cautious.

(c) Time and place of maximum concentration.

(d) Size, type, and altitude of formations.

(e) Methods of control.

(f) Methods of attack.

(g) Methods of supporting bombardment or reconnaissance.

(h) Possible missions.

4. Air operations—Bombardment

(a) Types and unit markings of aircraft.

(b) Operations—aggressive or cautious.

(c) Time and maximum concentration or attack.

(d) Size and type of formation.

(e) Methods of attack.

(f) Altitude before, during and after attack.

(g) Navigation methods.

(h) Fighter support.

(i) Sizes and types of bombs.

(j) Missions and objective.

(k) Results of attacks.

5. Air operations—Reconnaissance

(a) Types of aircraft.

(b) Operations—aggressive or cautious.

(c) Area covered, operating altitude and time.

(d) Navigation methods.

(e) Nature of missions: Close or distant, visual or photographic.

(f) Information probable obtained.

(g) Fighter support.

6. Aircraft warning service: Location, equipment methods, capabilities.

7. Anti-aircraft weapons, surface-to-air missiles, searchlights, and barrage balloons: Their location, types, methods, and capabilities.

8. Camouflage, smoke screens, decoys, dummies, and other passive defenses: Their location, types, employment, and capabilities.

9. Enemy casualties, including aircraft losses and prisoners.

10. Enemy's probable knowledge of our air situation, gained from:

(*a*) Operations.

(*b*) Reconnaissance activity.

(*c*) Prisoners, captured documents, and materiel.

11. Methods of communication and indentification.

12. Navigational aids: Types, location, and methods of operation.

13. Weather.

(*a*) Weather conditions in enemy territory and en route.

(*b*) Equipment and methods of operation of enemy weather service.

c. Information of Enemy Ground Forces

1. Strength, disposition, and movement of ground forces which may affect the air mission. (For air units engaged in strategic operations, only the general ground dispositions may be required. Air units engaged in ground support operations will require detailed information of front lines, location and identity of each unit, friendly and enemy, etc.)

2. Location of front lines; identification of friendly, neutral, and occupied areas.

3. Supply and equipment.

(*a*) Supply: Information on communication and supply lines, location of supply and repair depots.

(*b*) Equipment: Characteristics and identifications of ground equipment, especially transport vehicles and tanks.

4. Estimate of the Ground Situation. (As it may affect the air mission.)

d. Information of Enemy Naval Forces.

1. Strength, disposition, identity, and movement (location) of enemy naval and merchant vessels as they may affect the air mission. (Water and carrier based aircraft are reported with enemy air forces. Aircraft carriers are again reported as naval vessels.)

2. Location of enemy shipping lanes, port and dock installations, and other naval information which might affect the air missions.

Third Step: Analysis of EEI into Indications

Certain essential elements will require very little analysis by the intelligence officer in order to transform them into suitable requests for information. If the information retained gives a direct answer to the inquiry, analysis is unnecessary. Others must be subjected to careful analysis in order to determine what indications must be sought to answer the inquiries contained therein. For example, EEI relating to the existence of large permanent defense installations usually require no analysis other than a map study, supplemented by information from other sources, to determine whether or not the installation exists. But an EEI involving the capabilities of an enemy task force must be subjected to careful analysis in order to determine what indications must be sought to answer the inquiries. This analysis will be placed in the second column of the regular form opposite to the EEI to which it refers.

Fourth Step: Collecting Agencies

The intelligence officer must next determine the agency or agencies to be assigned the mission of reporting on each item of analysis. When practicable, more than one agency should be assigned missions relating to the same analysis. Thus, the intelligence officer is assured verification of reports and positive information in cases where, due to weather conditions or enemy action, one of the agencies is unable to obtain the information desired. Each agency may be assigned more than one item of analysis upon which to collect information.

To utilize properly the available collecting agencies, it is necessary that the intelligence officer be thoroughly conversant with their powers and limitations. He must coordinate closely with the operations section in planning the use of combat units as collecting agencies while on tactical assignments. The agencies at the disposal of intelligence officers will be varied and usually numerous. Utilizing the ones which are capable of performing the missions and at the same time available to perform them is a problem with which the intelligence officer is usually faced. One of the reasons for composing an Intelligence Plan now become apparent. Through this method of orderly planning, the intelligence officer knows his sources of information thoroughly.

Information collecting will already have become standard operating procedure through the planning at higher headquarters and the efforts of subordinate units. Most collecting is routine and new or modified Intelligence Plans merely require a different focus for action of a specific nature. The selection and assignment of agencies will be placed in the third column opposite each item to which they refer.

Fifth Step: Time and Method of Reporting

The Intelligence Officer must now determine the time he desires to receive the information he has requested and the method or channels by or through which it is to be transmitted. Information, to be of any value at all must be timely. Therefore, if the mission itself does not impose a time limit automatically, one is decided upon. Information might be reported in any number of different ways. It might be processed through established routine channels. It may be sent by radio, teletype or telephone. The situation and the time element will dictate the ways and means and will sometimes promote inconsistencies in methods to be employed. The fourth column of the form gives places for the method and time of reporting.

Sixth Step: Specific Orders or Requests

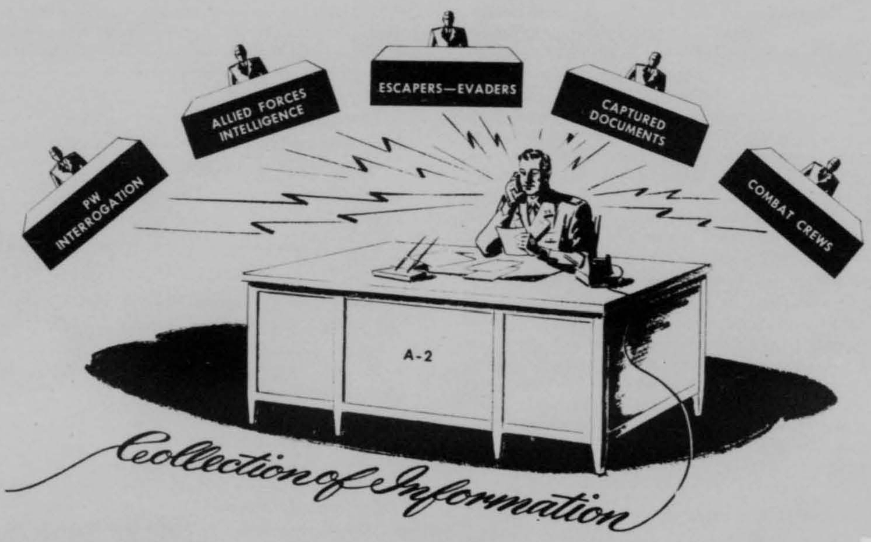
It is now necessary to formulate and assign specific and definite missions for each agency with respect to each item upon which that agency is to report. The orders must never be vague or distorted; they must be clear, concise and complete and never long or filled with repetitious and confusing details. They should be direct and to the point. These instructions will be drawn up in the form of orders for those agencies under the command of the Air Commander. They will be drawn in the form of requests to such agencies, civil and military, which are not under the command of the Air Commander. Generally, information required from other branches of the service and other commands will clear with a reasonable degree of speed through liaison officers whose duty is to effect the flow of information between their branches of service and that of which they are assigned for duty.

CONCLUSION

The Intelligence Plan will always be composed with simplicity and practicability as the cardinal characteristics. By its very nature it should avoid unnecessary work and duplication. It is necessary, whether the Intelligence Plan is a document written in great detail or merely organized in the mind of the intelligence officer, that the process be thorough and complete. Some items to be reported on are already standard operating procedure and require no written orders to collecting agencies. However, it is frequently a good idea to include them in the Intelligence Plan as a reminder to the intelligence officer, a guard against omission and a memorandum to the responsible party for appropriate action if the need may arise. The Intelligence Plan is designed to produce information and intelligence to be used in keeping abreast of current enemy capabilities, the current enemy situation, and for arriving at an Air Intelligence Estimate of the Situation as the need for such arises.

Questions and Leads for Classroom Discussion

1. What is the purpose of the intelligence plan?
2. When is it composed?
3. What are the six distinct steps in the preparation of the plan?
4. What do they embrace?
5. Who analyzes EEI into indications?
6. Should more than one agency be assigned missions relating to the same analysis?
7. How is information transmitted?



CHAPTER VI

COLLECTION OF INFORMATION

An air command must continuously collect intelligence information, utilizing all agencies within the Air Force and in other branches and services. Collection agencies available to the air commander vary with the size and composition of his command and the intelligence officer must vigorously employ all channels to expedite the vertical and lateral flow of information.

In the squadron and group, the intelligence officers serve as collecting agencies for Wing and Air Force Intelligence *(See Chapter XX)*. In turn, they receive information disseminated to them by higher headquarters.

The gathering of information must have direction in order to satisfy the requirements of the commander. Collecting agencies are kept informed and concentrate their search on information specified in orders, information which has a direct bearing on the essential elements of information (EEI), and additional information necessary to carry out their mission.

It must always be borne in mind that the specific aim of combat intelligence is to provide the air commander with essential intelligence on enemy capabilities at the time he needs it.

Other military information will be transmitted in periodic reports in the manner prescribed by higher headquarters.

THE COLLECTION PLAN

The Collection or special intelligence plan, as discussed in Chapter V, is a method by which the intelligence officer sets down on a chart or form, the EEI, the possible indications, and the collecting agencies to be employed.

In higher headquarters of an air command or an air force level, the intelligence officer initiates a standing operating procedure for collecting information within his own unit, as well as for reporting, processing, dissemination, and filing information. His sources of information are many and varied and are discussed in detail in Chapters X thru XVIII.

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In lower echelons, items are actually collected by group and squadron intelligence officers, based on an approved collection plan instituted by higher headquarters. Such a plan is coordinated at higher headquarters with the rest of the staff, especially the operations officer, as he will know what units are available for use in the collection program. Before the plan will be put into effect, the commander will approve it. Squadrons and Groups are on the receiving end of the orders directing collection of information, either in paragraph 3X of the Operations Order or contained in the Intelligence Annex to the Operations Order. They are usually rephrased from question to directive form.

EEI can often be answered by information on hand or that already in process of collection from reconnaissance, interrogation of combat crews, or other sources available to the intelligence officer. However, the specifications of the EEI do not preclude a unit intelligence section from forwarding any and all information of the enemy which is collected. The EEI merely focuses attention on certain items that are greatly desired by the higher commander.

COLLECTION AGENCIES IN LOWER ECHELONS

Interrogation of Combat Crews

The observations that an air combat crew makes while it is on a combat mission are valuable sources of information. The intelligence sections in these combat units can focus the attention of the crews upon certain things to look for. However, attention must be directed to the EEI in a manner calculated not to detract from the importance of the mission itself.

The intelligence section establishes procedures for interrogating these crews immediately upon the completion of a mission. Procedure varies according to the aircraft, the mission, the type of unit, its location, and facilities available for questioning. Actual interrogation is done at squadron or group level, but intelligence officers of higher command should frequently visit these echelons to see that correct procedures are being followed. The importance of these visits cannot be overstressed.

Mission Reports

The reports that squadrons and groups compile on information obtained from questioning combat crews should be accurate and complete and it is important that no time be lost in preparing and forwarding them to higher echelons. In order to secure maximum information on each mission, higher echelons will outline the reporting procedure to be followed in lower echelons. Reports from lower echelons may be consolidated before being sent on to the next higher echelon. Reports normally fall within the following categories:

a. Flash reports.

b. Preliminary mission reports ("Hot News").

c. Consolidated missions reports.

d. Encounter reports and combat claims.

e. Photo and bomb damage reports.

(For a full discussion of these reports, see Chapter XXIII)

COLLECTION AGENCIES IN HIGHER ECHELONS

An Air Force or Command Intelligence Officer will have a great number of collecting agencies at his disposal. They may include any or all of the following agencies:

a. Air Force Organizations

1. Reconnaissance units.

One of the most important collectors of information is reconnaissance aviation. Those units engaged in collecting information for air, ground, and naval forces in action. Collection is accomplished by the human eye or by the camera lens. Recording is done in the human mind or on films. Analyzing is done by the photo interpreters or by intelligence officers. Dissemination is accomplished by the most expeditious means available to all interested headquarters and units simultaneously.

Reconnaissance aviation is divided operationally into strategic and tactical reconnaissance, by which division the type of information obtained is indicated. Aerial reconnaissance (strategical and tactical) is accomplished by wings or groups made up of several different types of units. The gathering units are:

(a) Photo Reconnaissance Squadrons.

(b) Tactical Reconnaissance Squadrons.

(c) Combat Mapping Squadrons.

(d) VLR (very long range) Photo Squadrons.

(e) Night Photo Squadrons.

(f) Weather Reconnaissance Squadrons.

The processing units are:

(a) Photo Intelligence Detachments.

(b) Photo Technical Units.

(c) Engineer Topograpical Units. (aviation)

It is well to remember that all collecting cannot be accomplished by reconnaissance aviation; it must be supplemented from other sources. There are usually many more requests for air reconnaissance coverage than the reconnaissance units can possibly comply with. A high degree of selectivity must be maintained. Other air force units frequently employed are:

2. Bomber units.
3. Fighter units.
4. Prisoner of war interrogation.
5. Technical Intelligence.
6. Aircraft Warning Service.
7. Signal Intelligence.

b. Ground Force Organization

Army G-2 will be able to provide reports from:

1. Ground observation posts.
2. Reconnaissance patrols.
3. P. W. I. units.
4. Reports from liaison and artillery aircraft.

c. Naval Forces

1. Office of Naval Intelligence
2. Intelligence sections of fleets, task forces and amphibious forces.
3. Air combat intelligence sections of carrier and shore based units.

In addition, the Intelligence Officer has access to reports from guerilla and underground sources, escapers and evaders, local liaison with civilians, mail censor units and the foreign press.

In the collection of data from available sources, the difference between air intelligence and air intelligence information should be clearly understood. It must always be remembered that completely processed intelligence information, ready for application to a given situation, would be classified as air intelligence. On the other hand, reports from prisoner of war interrogation units, deserters, etc., are more or less raw information, and would be classified as such until properly evaluated and interpreted.

Questions and Leads for Classroom Discussion

1. When must an air command collect information?
2. What is the specific aim of combat intelligence?
3. Who institutes the collection plan?
4. How is information collected at group and squadron level?
5. What collection agencies are available to higher headquarters?
6. What is the difference between raw information and air intelligence?

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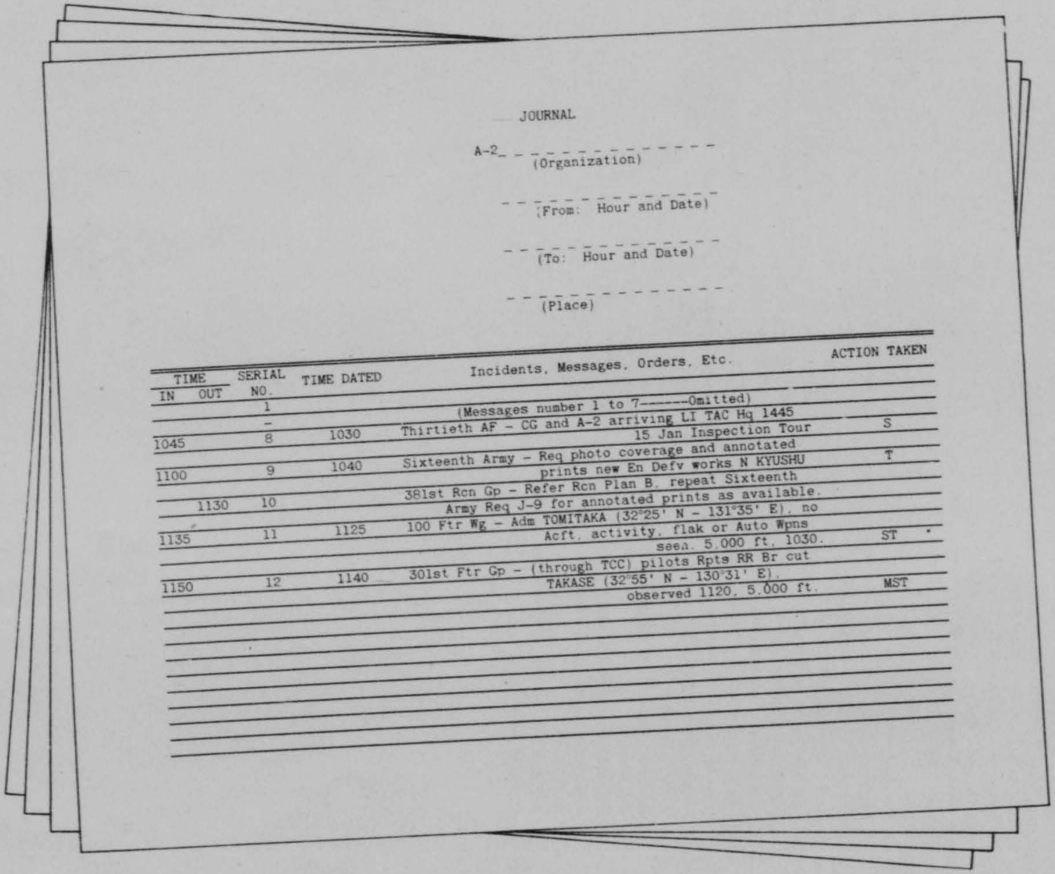

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(Organization)

(From: Hour and Date)

(To: Hour and Date)

(Place)

TIME IN	TIME OUT	SERIAL NO.	TIME DATED	Incidents, Messages, Orders, Etc.	ACTION TAKEN
		1 –		(Messages number 1 to 7------Omitted)	
1045		8	1030	Thirtieth AF – CG and A-2 arriving LI TAC Hq 1445 15 Jan Inspection Tour	S
1100		9	1040	Sixteenth Army – Req photo coverage and annotated prints new En Defv works N KYUSHU	T
	1130	10		381st Rcn Gp – Refer Rcn Plan B, repeat Sixteenth Army Req J-9 for annotated prints as available.	
1135		11	1125	100 Ftr Wg – Adm TOMITAKA (32°25' N – 131°35' E), no Acft. activity, flak or Auto Wpns seen, 5,000 ft, 1030.	ST
1150		12	1140	301st Ftr Gp – (through TCC) pilots Rpts RR Br cut TAKASE (32°55' N – 130°31' E), observed 1120, 5,000 ft.	MST

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CHAPTER VII

COLLATING, RECORDING, AND FILING INFORMATION, OFFICE ORGANIZATION

Collation is the arrangement of information in a systematic manner in order to facilitate its use by an intelligence agency. This process involves the sorting and grouping of information by type in order that types of information of like kind may be conveniently grouped together for later evaluation and interpretation into usable intelligence information.

INTELLIGENCE JOURNAL AND WORKSHEET

The journal is a chronological record of the activities of the intelligence section. It is kept by the intelligence sections of wings or equivalent task forces and higher air commands. In groups and squadrons the Intelligence Journal is normally combined with those of other staff sections and the whole is bound to a unit journal.

The Intelligence Journal will contain briefs of important written and oral messages received and sent. It will also contain notations of periodic reports, orders and similar matters that pertain directly to the Intelligence Section. If the item is received or issued in oral form; entry in the journal is detailed. If it is in documentary form the entry may consist of a reference and a brief synopsis of the contents.

The journal is maintained as a permanent record and is the primary record of the operations of the intelligence section of the staff. For this essential reason, entries in the journal are made immediately upon the receipt or dispatch of reports etc. The original entries must not be altered but may be supplemented by subsequent notations.

The maintenance of the journal is comparatively simple. It is closed daily or at the end of a predetermined phase or period. One copy is normally turned into a specified office for consolidation with other journals of the headquarters. It is supported by a file of original orders, reports, special reports, studies and maps pertinent to the operations of the Intelligence section.

The intelligence worksheet is, as its name implies, an informal method of collation and is used in conjunction with the Intelligence Journal and the various situation and Order of Battle maps. Its purpose is to facilitate the arrangement of kindred types of information. It is a working aid and has no prescribed form since it is, in substance, a desk sorter or memorandum pad. While the worksheet is not a permanent record it is, at all times, kept up to date lest it lose its value. Worksheets are usually disposed of after collated information has been posted in the Journal or the situation maps.

ENEMY AIR FORCE ORDER OF BATTLE

Enemy Air Order of Battle is a list of enemy air combat units, their identification, type, equipment, location, strength, serviceability and operations. This basic knowledge of the enemy is of the utmost value to all echelons of command. From it, conclusions with respect to enemy capabilities can be derived. While Air Order of Battle usually is compiled by Air Force Headquarters, the Intelligence Division should maintain the Air Order of Battle of at least all known enemy units within striking range of the aircraft of his own organization.

A complete Enemy Air Order of Battle will include the following information about enemy air forces:

a. Identification of specific units (down as far as squadron where possible) which will be based on various items of information such as aircraft markings, unit insignia, etc.

b. Type of unit (bomber, single engine fighter, etc.).

c. Type of equipment (with respect to aircraft whether bombers, twin engine fighters etc., their performance, armament and tactics, items of air equipment).

d. Location of units (detailed disposition of all units).

e. Strength and serviceability (Initial Equipment, I. E.; Immediate Reserve, I. R.; as well as actual strength and serviceability).

f. Operations (type of operations engaged in, names and qualifications of commanding officers, combat efficiency of pilots and crews).

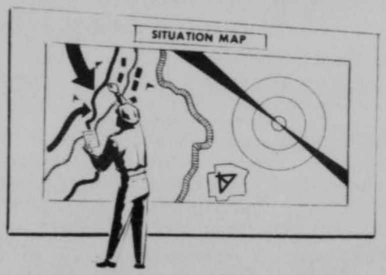
Enemy Air Order of Battle comes from information gathered and processed into intelligence from varied sources, the chief of which are:

Prisoner of War, wireless interception, photographic reconnaissance and interpretation, friendly combat crews, ground agents, crashed enemy aircraft, enemy press and radio, and captured documents.

Enemy Air Order of Battle is most effectively represented in map form. This is usually accomplished by using pins of various colors to denote exact location of various units with actual numbers and types written in. It is usually best to keep a file index of each unit containing all available information on the unit. In advance field conditions, data is best marked by grease pencil on an overlay. The overlay may consist of a sheet of acetate or, as a field expedient cleared X-ray films or aerial photo film may be used.

The complete Air Order of Battle will contain all the information available on the following subjects:

a. Organization, Strength & Disposition
b. Aircraft
c. Weapons & Equipment
d. Who's Who
e. Manpower
f. Fortification & Defense
g. Uniforms and Insignia
h. Tactics & Training
i. Logistics & Administration
j. Location of Installations



THE WAR ROOM AND SITUATION ROOMS

War rooms are centers for disseminating information, usually of the current situation in one or all theaters of operation. War rooms—sometimes called Air Rooms—are found at Air Force and Command headquarters, occasionally at Wings. Below Wings, the counterpart of the war room is the situation room.

General Procedure

Oral presentations should be:

Concise, accurate, and packed with information.

Carefully and thoroughly organized (a written outline will help clarify and emphasize points to be discussed).

Given in third person and without expressing personal opinions.

Delivered without the use of extensive notes and with the major points emphasized to provide variety and color, but never over-dramatized.

When capabilities permit the briefings should be graphically illustrated by simplified, and sometimes animated maps, and charts.

Indoctrination in Theater Geography

During training at domestic stations and in the foreign theater, it is the intelligence officer's obligation to familiarize unit personnel with the geography of the prospective combat areas. War Room lectures on theater geography should include discussions on the following points:

a. General and economic geography.

b. Historical and political background.

c. Peoples and languages.

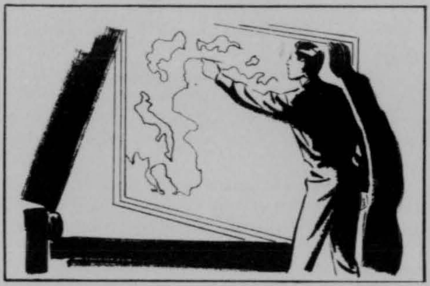
d. Customs and general living conditions.

e. Military significance of the areas with the strategic and tactical importance of each.

f. Communications.

INTELLIGENCE SITUATION MAPS

Most published maps, no matter what their scale or type, do not constitute a satisfactory background for the visual presentation of a situation as desired in a war room. The map used for such presentation should contain only information pertinent to the situation as it exists at the moment.



Situation maps for war room presentations can be made by projecting any small map—newsmap, road map, or section of a map from a balopticon onto a sheet of paper tacked to a wall. As much of the image can be traced as is required, and the map can be made as detailed as required. By this method a map in complete topographic relief can be prepared to a scale of 1:1,000,000 from a small contour map, whose scale may be 1:15,000,000.

If no balopticon is available, draw a grid of small rectangles on the map to be enlarged. A grid is then drawn proportionally on a large sheet of paper—if the second map is to be twice the size of the original, the rectangles on the second will be twice the size of those of the first. The detail appearing in each rectangle is then drawn in freehand.

Suggestions for preparing maps

Pastels or colored chalks, sprayed with fixative to prevent rubbing, are the easiest mediums with which to work. Colors are easily mixed and mistakes easily corrected. Large areas of a solid color can be done in tempera or showcard color, applied with a brush. Colored papers may be used.

Keep the background color weak in order that the colors used in posting the situation will have added strength. Dark water areas will throw the land masses into relief.

Do not clutter a map. Use location symbols for all places other than key cities. When other names are needed, they can be lettered on a strip of paper and stapled to the map.

INTELLIGENCE OFFICE ORGANIZATION

General

The office of the Intelligence officer may range from dugouts through tents to comfortable villas. His combat assignment may range from a squadron of fighter pilots to a group or groups of heavy bombers. Because of this divergence, it is impossible to prescribe the most desirable procedure for organizing and administering an intelligence office. Regardless of its location or type of unit, the office must, however, be organized for the basic functions of briefing and interrogation, maintaining the intelligence situation and providing information about the enemy.

Personnel

Ideally, the staff, in any intelligence office would have a flexible composition of officers and enlisted men who are specialists, yet capable of taking over any work of the section if called upon to do so.

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While this ideal can seldom be attained, there are certain minimum personnel requirements for every intelligence office:

At least two men capable of carrying on each duty and function of the section.

All officers able to brief and interrogate; prepare flash, mission, periodic and summary reports; post friendly and enemy air-ground situation maps; maintain enemy air order of battle.

All enlisted men able to maintain intelligence journal, post friendly and enemy air-ground situation maps; keep records and files.

In selecting personnel, intelligence should be on the alert for competent enlisted men. Those with college training and typing ability are desirable. Those with special skill in mapping, drafting, editing, or with knowledge of the foreign language of Allied units in the area should prove particularly valuable.

Equipment

Professional equipment is normally drawn through group or squadron supply officers, and ordinarily is furnished the unit during its operational training.

Additional necessary equipment includes desks, tables, filing cabinets, typewriters, chairs, lockers, easels or screens, duplicating equipment (preferably mimeograph).

Training

Training and display material is desirable: Photographs, posters, silhouettes, models of airplanes, ships, armored vehicles, etc. Reference publications are invariably in demand and a dictionary of enemy languages, including air terms, is most useful. Intelligence should have as complete a collection of field and technical manuals as possible, and all pertinent intelligence bulletins and publications.

Since limitations of travel sometimes prevent the intelligence officer from carrying all he wants, he must select what is essential. The following are suggestions deserving first priority:

a. Photo interpreter's kit.

b. Note pads and typing paper, map overlay paper, and a supply of forms used in reporting, interrogation and intelligence procedure. Grease pencils and plasticele or cellulose acetate for overlays are ever in demand, and usually difficult to obtain. (Intelligence should acquire an adequate supply, one way or another.)

c. Mission, target and theater maps. (Best carried in a tubular case. Cylindrical containers for antiaircraft searchlight carbons or for parachute flares make handy cases.)

d. Portable map board. Thumb tacks with different colored heads. Red, blue, green, yellow cord. Portable blackboard and chalk. Hammer, screwdriver, pliers and stapler.

Only slightly less necessary than the items listed above is a field desk or a small locker which can serve as a desk or table and which should contain folders, files, reference material, extra mapping and overlay paper.

This basic equipment must be with the intelligence officer at all times. It comprises the tools of his trade and without it he cannot do his job.

Office

Ideally, the intelligence section would have several rooms. Most important is the situation room with postings of friendly and enemy air-ground situation, enemy order of battle, special defense and theater maps, reports, photographs, reading matter, displays and training materials. The situation room is the center of intelligence operations and deserves most careful planning, equipping, and constant revision to keep it current and attractive. It must provide access to information about the enemy and enemy air combat. Reading tables and easy chairs should be provided. There should be clear, attractive and interesting displays: Maps, target photographs, pictures of equipment, reports, diagrams, latest information on the enemy, and, especially, pictures of target damage done by the unit on its recent operations, and the air combat box score of the unit's flying personnel.

Briefing room, large enough for briefing all crews at one time, with facilities for map display and balopticon projection.

Individual interrogation rooms, each large enough for a single crew.

Office for intelligence personnel, their files and equipment.

In certain situations it may be preferable or necessary, because of limited space, to combine the situation room with the briefing room, briefing directly from the situation map and other maps specially prepared.

Whether an intelligence officer has a number of comfortable rooms or only a hutment, he should do his utmost to maintain intelligence displays and reading matter for his crews. The following is a check list.

Detailed situation map of the immediate theater.

Situation maps of various fronts.

Naval maps.

Intelligence teletype reports.

Latest news reports and daily news bulletin.

Pertinent reports, bulletins and special studies from higher and Allied headquarters.

Enemy radar map.

Enemy flak map.

Diagrams of enemy aircraft attacks.

Box score of enemy aircraft destroyed; leading pilots, gunners, etc.

Home defense map; free bombing areas, beacons, etc.

Photographs of enemy decoys and dummies.

Stereo views and stereoscope.

Bomb impact plots.

Security posters.

First aid display.

Training posters.

Display of escape aids.

Escape literature.

Identification training devices; peep-boxes, shadowgraphs, projectors.

Ship, airplane and armored vehicle pictures and models.

Displays of enemy and friendly equipment.

Recognition publications.

Aviation publications, official and unofficial.

Pertinent field and technical manuals.

Scrapbook and photo album of unit activities.

Newspapers, news and fiction magazines, cartoons, sketches.

Since some of the material listed above will be classified, a duty officer or enlisted man should be present whenever the situation room is open for use, making sure that only authorized personnel enter. When not in use, the room must be adequately secured.

Records and Filing System

The records and filing system of an intelligence office will vary with the theater of operations and the type of unit, but the following will serve as a check list.

a. Administrative Files

1. Orders from higher headquarters.
2. Correspondence.
3. Receipts for classified material.
4. Certificates of destruction of classified material.
5. Reports: Mission reports, special periodical reports, etc.
6. Forms.

b. Informational Files

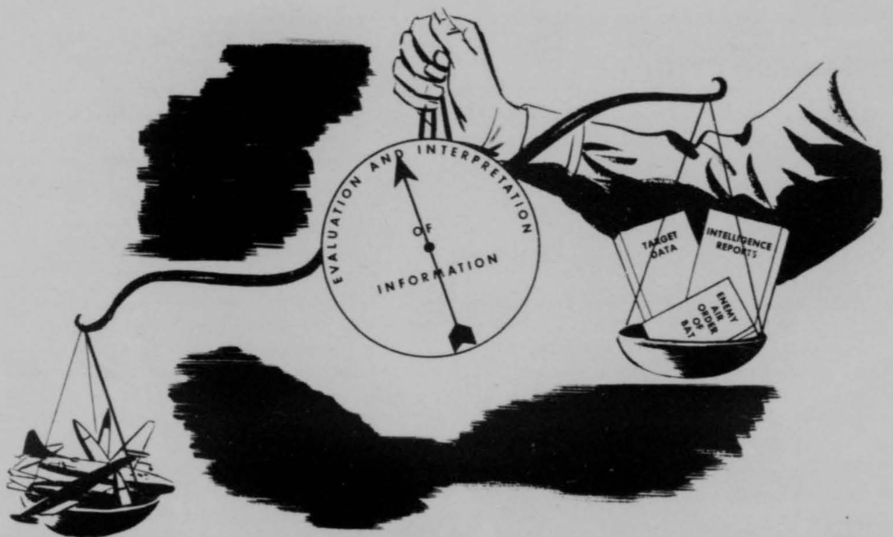
1. Intelligence publications.
2. Aircraft identification material.
3. Training text material.
4. Maps and aeronautical charts.
5. Tactical bulletins, etc.
6. Objective folders, target charts and photographs.
7. Intelligence summaries and reports from higher headquarters.
8. Enemy order of battle.

c. Records

1. Intelligence Journal—chronological record of daily occurrences.
2. Cumulative index of information—subject index to information files.
3. Combat records.
4. Secret operational intelligence records—data on restricted flying zones, etc.
5. Training program records—completed and proposed.

Questions and Leads for Classroom Discussion

1. What is meant by collation and for what purpose is it intended?
2. The Intelligence Journal and Worksheet is kept by what echelon of command?
3. What will the Intelligence Journal contain?
4. A complete Enemy Air Order of Battle will include what information?
5. Why are War and Situation rooms maintained?
6. What is the general procedure for War and Situation rooms?
7. Name some of the most essential equipment needed in an intelligence office?


EVALUATION AND INTERPRETATION OF INFORMATION
TARGET DATA
INTELLIGENCE REPORTS
ENEMY AIR ORDER OF BAT

CHAPTER VIII

EVALUATION AND INTERPRETATION OF INFORMATION

Evaluation and interpretation of information consists of the close, critical and informed scrutiny of items of information. This systematic analysis includes evaluation of the credibility, accuracy and importance of the item and interpretation of its military significance.

These phases of processing are essential to the conversion of raw information into intelligence which is concise, free from irrelevancies and ready for immediate application by the using agency. Such intelligence must be complete. It must convey not only facts, but their significance and the deductions drawn from considering them in connection with previous intelligence.

While accuracy is paramount, speed in processing is vital and the intelligence officer is assisted in evaluation and interpretation by members of his organic intelligence section, specialists such as Photo Interpreters, Radar Scope Photo Interpreters, Technical Intelligence Officers, etc., and other members of the staff.

Reports may run the gamut from surprise enemy offensive action to deterioration of static enemy installations. They may indicate enemy movements of potentially offensive nature or possible withdrawals. They may concern weather directly affecting operations. They may pertain to a single air unit or may concern all air units and associated ground and naval units.

The extent to which information is evaluated and interpreted depends upon its source and the urgency of the situation requiring it. As an instance, flash reports of an enemy air attack would be disseminated immediately, while a P. W. I. report would be carefully evaluated and interpreted prior to dissemination.

In evaluating information, the intelligence officer must first determine its pertinence, credibility, reliability and accuracy. Immediately upon receipt by an intelligence section, information is subjected to a preliminary examination to determine its possible use. Its pertinence is determined by answering the

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THE AUTHORIZED SYMBOLS GIVEN ARE USED FOR THE EVALUATION OF INTELLIGENCE INFORMATION IN THE THREE SERVICES OF THE UNITED STATES ARMED FORCES AND ARE IDENTICAL WITH THOSE USED BY THE BRITISH ARMED FORCES.

EVALUATION OF INFORMATION

SOURCE	TRUTH, CREDIBILITY, OR PROBABILITY
A—COMPLETELY RELIABLE.	1—REPORT COMFIRMED BY OTHER SOURCES.
B—USUALLY RELIABLE.	2—PROBABLY TRUE REPORT.
C—FAIRLY RELIABLE.	3—POSSIBLY TRUE REPORT.
D—NOT USUALLY RELIABLE.	4—DOUBTFULLY TRUE REPORT.
E—UNRELIABLE.	5—IMPROBABLE REPORT.
F—RELIABILITY CANNOT BE JUDGED.	0—TRUTH CANNOT BE JUDGED.

following questions:

a. Is the information of the enemy or of characteristics of the area of operations?

b. Is the information needed immediately and if so, by what agency?

c. Is the information of future value, and as such, is it of value to the immediate collecting unit or higher, lower, or adjacent units?

Once its pertinence is established, information must be weighed for credibility by carefully considering it in the light of the following factors:

a. Determination of the specific sources of the information. (Air, ground or naval sources, clandestine informants, "travelers," deserters, evaders, and escapers, agents, prisoners of war, etc.)

b. A critical scrutiny of the circumstances under which the report originated in order to determine whether the information could actually have been obtained under the existing conditions by the means employed. (In visual air reconnaissance, for instance, consideration would be given to the factors of time, space, visibility and combat conditions affecting the mission.)

c. Evaluating the accuracy and reliability of the source on the basis of past experience. In rating the reliability of the source according to the established code indicated on the chart, the intelligence officer gives careful consideration to the character of the contact. Thus, an "A" rating should be given only under most unusual circumstances; for example, when the informant is an able and experienced intelligence officer. A "B" rating would be allotted to an informant of known integrity. The ratings of "C," "D," and "E" indicate a proportionately decreasing degree of reliability of the informant and an "F" rating is assigned when nothing is known of the informant and judgment is impossible.

Once the evaluation of source has been established, the intelligence officer must consider the degree of truth, credibility, a probability of the information submitted. The numbers 1 through 5 on the chart indicate the relative value of the information. These numbers are completely divorced from the alphabetical index pertaining to the source, for a completely reliable source may submit an improbable report while a usually unreliable source may submit a report confirmed by other sources.

When the item of information has been processed to the point where its pertinence, credibility, reliability and accuracy has been established, its significance must be established.

The intelligence officer must analyze it to determine its meaning, importance and significance with respect to intelligence or information already at hand. He must determine its conformity or nonconformity with existing information and its effect on the existing estimate of the situation. He must consider it in relation to such questions as:

a. What does it mean in connection with what is already known.

b. Does it alter or add significance to previous intelligence or information.

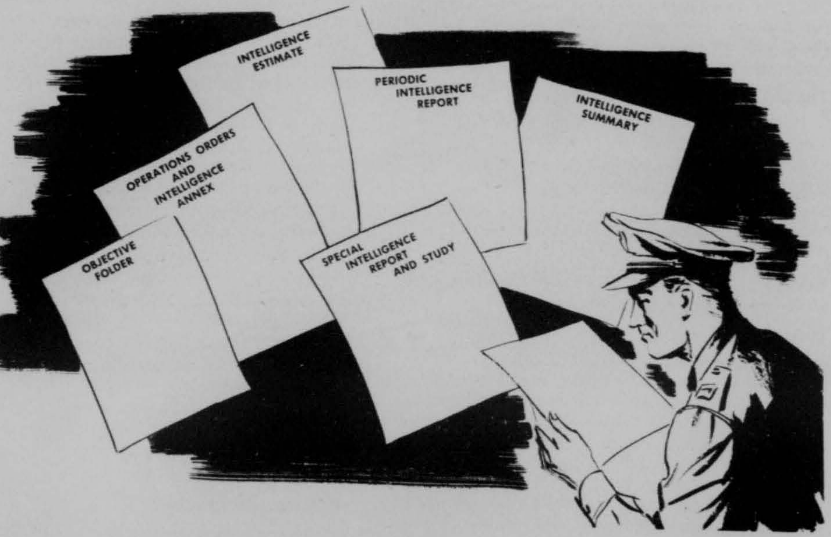
c. Does it tend to confirm or refute existing estimates of the enemy situation.

Correct interpretation leads to accurate conclusions concerning the enemy's capabilities and as each new item of information is processed, the interpretation placed upon it affects in some way the correct intelligence estimate. Conclusions already drawn may be either altered or confirmed, new capabilities discovered, old ones discarded; or the relative probability of the adoption of the enemy capabilities may become more clear.

Once the information has been processed into applicable intelligence, it is disseminated, by whichever means is dictated by its nature, and placed in the hands of the using agencies.

Questions and Leads for Classroom Discussion

1. What constitutes evaluation and interpretation of information?
2. What type of reports are subject to evaluation and interpretation?
3. What governs the extent of evaluation and interpretation prior to dissemination?
4. What factors govern evaluation and interpretation?
5. How is the significance of the information established?


INTELLIGENCE ESTIMATE
PERIODIC INTELLIGENCE REPORT
INTELLIGENCE SUMMARY
OPERATIONS ORDERS AND INTELLIGENCE ANNEX
OBJECTIVE FOLDER
SPECIAL INTELLIGENCE REPORT AND STUDY

CHAPTER IX

DISSEMINATION OF INFORMATION

Nothing is colder than yesterday's news, except yesterday's intelligence. Air Intelligence, to be of value, must be placed in the hands of individuals or units concerned in time to serve their purpose. It is, therefore, of the greatest importance that air intelligence be properly and quickly disseminated in accordance with its urgency.

CLASSIFICATION

In preparing Air Intelligence for dissemination, it is first classified under the following headings:

That which should be placed without delay in the hands of the commander, other sections of the staff, higher, lower or adjacent units.

That which can wait to be included in periodic or other contemplated future reports or summaries.

METHODS

Personal Contact

It is frequently possible for the Intelligence Officer or his assistants, to transmit either in person or by telephone, items of air intelligence of immediate value.

Special Messages

When it is possible for the intelligence officer to transmit important items of air intelligence either in person or by telephone, special messages may be transmitted by teletype, radio, tone telegraph, aircraft, or whatever other means of rapid communication may be available.

Conferences

The exchange of air intelligence between the various intelligence sections of higher, lower, neighboring and cooperating units is facilitated by frequent personal conferences between intelligence personnel concerned. In no other way can a community of interest and adjustment of viewpoint be so quickly and effectively realized.

Air Intelligence Situation Map

The Air Intelligence Situation Map for each unit will be maintained in a conspicuous place, and all personnel concerned with the tactical performance of air missions will be required to keep themselves familiar with the situation as portrayed thereon.

Since the intelligence officer is continually posting the latest air intelligence on the situation map, it constitutes an important and automatic method of dissemination.

Intelligence Documents and Reports

Documents and reports utilized for the dissemination of air intelligence are:

a. Intelligence Estimate of the situation.

b. Periodic Intelligence Reports.

c. Special Intelligence Reports and Studies.

d. Intelligence Summary.

e. Objective Folders.

f. Operations Orders and Intelligence Annexes, if an intelligence Annex is used.

ESTIMATE OF THE SITUATION

An Intelligence Estimate of the Situation will be furnished the commander by the intelligence officer, either upon his own initiative or when required by the commander. The estimate may be written or oral. It will summarize the enemy situation and capabilities. Usually the intelligence officer will be able to anticipate the necessity for such estimates; however, he must be prepared at all times to furnish an estimate to the commander. *(See Chapter IV.)*

PERIODIC INTELLIGENCE REPORTS

A Periodic Intelligence Report is an intelligence document which presents the intelligence produced in a given period of time. It is issued by all higher air units, that is, wing or equivalent task forces, by directive and usually squadron and Group Intelligence Sections at the desire of the commanding officer.

The period of time to be covered by this report is prescribed by higher headquarters or by the unit commander concerned. It is distributed to higher, lower, neighboring and cooperating units, and is a convenient means for keeping these units informed of the enemy situation, as determined by the unit preparing the report. It frequently contains important intelligence which has already been disseminated by means of special messages and in this way serves as confirmation thereof. An overlay of the Intelligence Situation Map, as of the close of the period is normally included as an annex to this report.

SPECIAL INTELLIGENCE REPORTS AND STUDIES

The Commander of an air unit often will desire a special report or a detailed study on some subject affecting the enemy. These may vary from a few words delivered verbally to an elaborate study supported by maps, charts and photographs. Intelligence Officers should be prepared to conduct the study and to submit special reports on such subjects as the following:

a. Enemy air situation including location of air bases; airdromes, occupied and unoccupied, and changes therein; type, amount, characteristics of equipment; tactics; and anti-aircraft defenses, air and ground, passive and active.

b. Enemy air force capabilities and their probable affect upon us.

c. Probable reaction of the enemy to our contemplated air operations against him.

d. Areas, forces, or installations which should be photographed, reconnoitered, or kept under surveillance.

e. Location, description and importance of new potential objectives for air attack.

f. Aircraft warning service of the enemy; its extent and effectiveness; methods of avoiding it wholly or in part; and efficiency of its fighter organizations.

INTELLIGENCE SUMMARY

A brief report summarizing the enemy situation as known at the moment of reporting and as it effects our contemplated air operation is called an Intelligence Summary. The Intelligence Officer should be prepared to give orally such a summary to his commander at any time on call, or when changes in the enemy situation dictate. It is intended that it will be the briefest possible statement of facts, indicating the latest developments of the enemy situation and substantially less extensive as to volume and detail than an Intelligence Estimate of the Situation. It is particularly adapted to teletype transmission, due to its brevity. It will be used normally only from higher to lower units as a means of keeping the subordinate units advised as of the developments of the situation in cases where these units are connected by a teletype circuit to the headquarters making the report, and in lieu of issuing special intelligence messages to each subordinate commander. Intelligence summaries are numbered chronologically, beginning with number one (1) at the start of each twenty-four hour period.

THE OBJECTIVE FOLDER

As transmitted to a subordinate unit for use in planning and executing an air operation, an Objective Folder constitutes principal means of dissemi-

nating intelligence of a particular locality which might be selected as the objective of an air attack. It contains all available information on that particular place and the information is classified by subject to include the vital elements most likely to be classified as targets. *(See Chapter XVIII.)*

Changes in, or additions to, objective folders already distributed, normally will be covered in special intelligence messages and confirmed in the next periodic report.

When completed, an objective folder should include the following items, or as many of them as are needed to supply the necessary intelligence for attack of the various vital elements of the place concerned.

a. A reference for filing. Objective folders are normally filed alphabetically by place, name of the country first, and the name of the place or town within the country second. For example: U.S.A., Chicago, Illinois.

b. A general description of the place concerned including such elements as population, location, climate, food supply, water supply, rail connections and other places, highway connections with other places, signal communication with other places, medical facilities and health conditions, availability of labor, building materials and construction machinery, suitability of terrain for airport construction, local fortifications and military garrisons.

c. Vital features separated and classified according to subject to include such of the following as may be pertinent to the particular place concerned.

1. Electric power plants.
2. Aircraft factories.
3. Local refineries and oil storage facilities.
4. Steel plants.
5. Coal yards.
6. Airports and air bases and transportation thereto, and the facilities and stores at the airport.
7. Munitions factories and their source of power.
8. Rail transportation systems, yards, stations, and bridges.
9. Highway transportation systems, bridges and defiles.
10. Canal transportation systems and locks.
11. Harbor facilities, docks, waterfront warehouses, unloading facilities, etc.
12. Naval bases.
13. Military stores.
14. Harbor defenses.
15. Water supply systems.
16. Other systems by subject.

For each objective folder, the following is desired.

a. A map showing the objectives, together with adjacent terrain within approximately a 15 mile radius of the objective, in order to permit the subsequent determination of an initial point, best approaches to the objective and a rally point. This map should be sufficiently large scale to permit selection of landmarks as well as the above data.

b. An objective overlay whereon are shown the limits of the objective, important landmarks and other items for the purpose of accentuating the objective and certain terrain features to permit the proper interpretation of the unmarked map of the area.

c. An anti-aircraft defense overlay showing the location and range circles of fixed anti-aircraft artillery installations. Not only at the objective but within the 15 mile radius therefrom. Aircraft warning nets and fighter airdromes should be indicated also.

d. An aerial photographic mosaic of the objective to a large scale whereon are shown the vital points within the objective.

e. A target overlay whereon are shown the outlines of several vital points within the objective and whereon these are indicated as separate targets given lettered or numbered identification and described by appropriate legends.

f. Drawings, aerial obliques, picture post cards and commercial or amateur photographs that may be available of the target properly identified to correspond to the target designation made in *e.* above.

g. The target and weapon analysis, which is a

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written analysis of each target identified as in *e* above, explaining the nature, overall dimensions, height, construction, and number and type, bombs and fuses to be employed against each to accomplish the destruction.

OPERATIONS ORDERS AND ANNEXES

A brief summary of air intelligence is disseminated by inclusion of intelligence items such as information of the enemy in paragraph *1a.* of an Operations Order, or in paragraph *1a.* in an annex to an Operations Order. When the amount of enemy information is limited or can be briefly stated, this method for the dissemination of intelligence to lower units is used. It should be noted that the dissemination of intelligence is not a primary purpose of either an operations order or an annex thereto. It is included only to show the existing enemy situation as a setting for the tactical mission ordered in the operations order and for the intelligence missions ordered in the Intelligence Annex.

TRANSMISSION OF INFORMATION

To Higher Headquarters

a. Squadrons. Information collected by operating squadrons should invariably be transmitted to higher headquarters as expeditiously as possible. When squadrons are on the same airdrome or reasonably convenient to the wing or equivalent task force headquarters, intelligence will be delivered by messenger. When squadrons are on widely scattered airdromes it usually will be necessary for each squadron to send to higher headquarters, by teletype, a summary of the information collected on each mission forwarding to higher headquarters the different intelligence reports as required.

b. Group Headquarters. Group headquarters will not normally be concerned with the unprocessed information, collected by its squadrons, except in disseminating within the groups, critical items of enemy information and in checking points to determine the manner in which the squadrons are performing their intelligence functions. The normal methods of transmitting, to higher headquarters, intelligence produced by these units is a periodic intelligence report.

From Higher to Lower Headquarters

The means that may be employed in dissemination of information to lower echelons are those that we have just gone over; namely, the intelligence estimate periodic intelligence report, special intelligence report, etc.

Within the organization, each unit intelligence officer is charged with keeping the personnel informed of the enemy situation. This may be accomplished by means of oral summary, situation maps, and bulletin board information.

Questions and Leads for Classroom Discussion

1. How is intelligence classified for dissemination?
2. What are four methods of dissemination?
3. What is a periodic intelligence report?
3. What is an intelligence summary?
5. Where is intelligence included in the operations order?
6. How is information transmitted?

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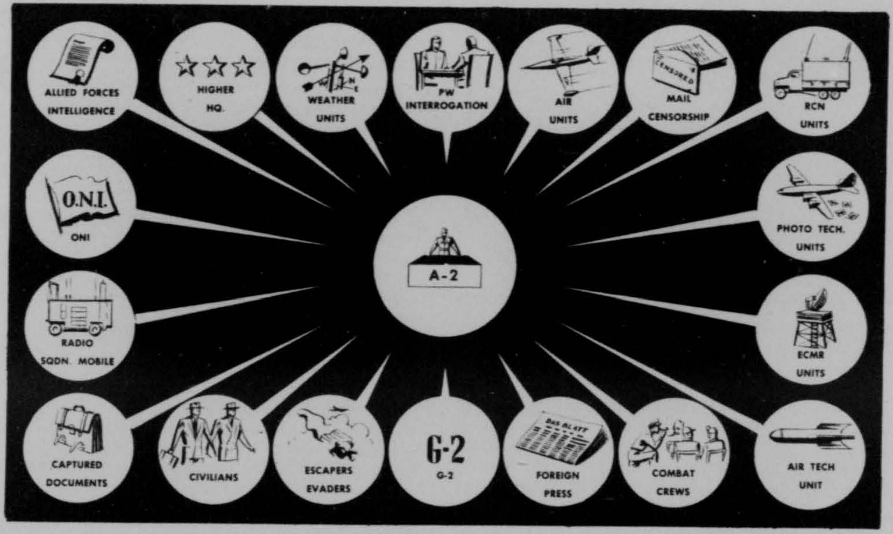

ALLIED FORCES INTELLIGENCE
HIGHER HQ.
WEATHER UNITS
PW INTERROGATION
AIR UNITS
CENSORED
MAIL CENSORSHIP
RCN UNITS
O.N.I.
ONI
PHOTO TECH. UNITS
A-2
RADIO SQDN. MOBILE
ECMR UNITS
CAPTURED DOCUMENTS
CIVILIANS
ESCAPERS EVADERS
G-2
G-2
FOREIGN PRESS
COMBAT CREWS
AIR TECH UNIT

CHAPTER X

SPECIAL SOURCES OF AIR INTELLIGENCE INFORMATION

It has been emphasized that intelligence information is the collected, processed and disseminated information that may give us the capabilities and vulnerabilities of an enemy or a potential enemy. Any source of ordinary information can be a source of intelligence information.

In Chapter VI it is stated that an air commander should continuously collect intelligence information, utilizing all agencies both within the Air Force and in other branches and services. It has also been stated that collection agencies vary with the size and composition of the command, with higher echelons having available to them a larger number of collection agencies.

In squadrons and groups, the intelligence officer is mainly dependent upon information secured from his own combat crews and from higher headquarters.

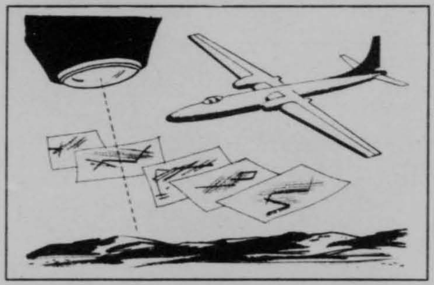
In higher headquarters there are many and varied sources of information, each of which serves a special purpose. Through his collection plan, the intelligence officer designates the collection agencies to be employed to secure the information called for in the EEI. Some of the more important special sources are outlined here as a general introduction to the following chapters.

THE AIR INTELLIGENCE DIVISION, USAF

The Air Intelligence Division, USAF is the primary agency for the collection, evaluation, interpretation and dissemination of air intelligence.

Its manifold functions are performed in order to insure the prevention of strategic, tactical or technological surprise from any source and provide air intelligence required for command decision and counsel upon air preparedness and air operations. The organization and functions of the Air Intelligence Directorate, USAF are fully discussed in Chapter XI.

PHOTOGRAPHIC INTELLIGENCE



Because aerial photography is a primary, factual source of air intelligence information, all commanders and staff officers should understand how it is used. They should be familiar with the capabilities and limitations of photo interpretation. In higher echelons, photographic intelligence provides strategic and tactical information that is processed just as any other kind of information is. A full discussion of photographic intelligence will be found in Chapter XII. For information on handling photographic intelligence in lower echelons, see FM's 1-35, 30-21 and 1-20.

As discussed in Chapter VI, photographic reconnaissance units vary according to the theater and the type of mission they are to perform. The intelligence officer on the staff of the air commander outlines the requirements for photographic missions in his special intelligence plan, and also sets up the SOP for handling photographic intelligence in lower echelons, and in the processing units.

ELECTRONICS INTELLIGENCE

Electronics intelligence is derived from information concerning the following:

a. Enemy radio and wire communication systems.

b. Enemy navigational aids employing radio and radar.

c. Enemy radar detection, fighter-control, and gun-laying system.

d. Any other enemy radiation subject to intercept and analysis.

Because electronics information is technical, communications officers, particularly those specializing in radio countermeasures and radar equipment, cooperate with intelligence in collecting, collating, and evaluating it. The final interpretation of electronics information and the distribution of the resultant intelligence are functions of the intelligence officer. For further details see Chapter XIII.

CAPTURE INTELLIGENCE

Capture intelligence is gained from examining captured aircraft and equipment, analyzing captured documents, and questioning prisoners of war. Additional information is obtained from questioning deserters, our repatriates, travelers, evacuees, and the local population in occupied areas.

Technical experts, interrogators, and interpreter translators, are especially selected and trained to exploit capture intelligence.

The Capture Intelligence Branch (Command or Air Force) is headed by an assistant intelligence officer responsible for coordinating agencies collecting capture intelligence. His branch is divided into three sections:

Air Technical Intelligence (ATI) Section, which is responsible for air technical intelligence, providing vital data on characteristics, performance, vulnerability, field of fire, and recognition of enemy aircraft. Information is derived from examination and analysis of captured, crashed or otherwise acquired articles of enemy equipment. It supplies intelligence for combat operations, economic warfare, and target information, and leads to improvement of domestic designs and to the development of countermeasures against enemy equipment. Examination and tests of captured equipment reveal new design and engineering trends and assist materially in estimating enemy production. *(See Chapter XV.)*

Air Prisoner of War (APW) Section, which is responsible for interrogation of air prisoners and exploitation of capture documents. It coordinates the acquisition of up-to-date details on the enemy air force order of battle, and supplies other intelligence that can be used for combat operations, economic warfare, psychological warfare, and target information. Information obtained from air prisoners of war must be evaluated and checked against other sources before it can be accepted. *(See Chapter XIV.)*

Air Interpreter-Translator (I-T) Section, which is responsible for translation of foreign documents and for supplying the interpreters and translators needed for intelligence.

TECHNICAL INTELLIGENCE DIVISION OF AIR MATERIEL COMMAND

The central Air Force agency responsible for air technical intelligence is the Air Materiel Command (AMC). Among other missions, the Commanding

General of AMC is charged with the operation of the technical intelligence services of the Air Force and with the training of air technical intelligence officers. Within AMC, direct responsibility for technical intelligence is placed with the Technical Intelligence Division, which is staffed with specialized personnel. The laboratories of the Engineering Division of the Command can be used for research and analysis. AMC trains ATI personnel for assignments throughout the Air Force and directs the collection of air technical intelligence throughout the world, using the military attache system, foreign observers, and the intelligence staffs of combat and service units. To carry out its responsibilities, the Technical Intelligence Division distributes ATI information and publishes manuals to guide personnel in the field.

Technical intelligence from the field is channeled into AMC for final analysis and evaluation by technical intelligence. Equipment and documents examined by field units are forwarded to AMC for further exploitation and for tests when necessary.

The Technical Intelligence Division specifically endeavors to maintain up-to-date information on all foreign materiel including:

a. Performance and characteristics.

b. Quality of workmanship and materials.

c. Sources of raw material.

d. Recognition features.

e. Design and construction.

f. Maintenance and supply, including manufacturing facilities.

INTELLIGENCE DIVISION, G. S., U. S. ARMY

Its purpose is to collect and evaluate information and to disseminate intelligence pertaining to foreign countries, their war potential and military forces, in so far as it might affect the mission of the U. S. Army.

Its functions are five-fold:

a. Procure information and intelligence relative to the activities of individuals or agencies potentially or actually dangerous to the preservation of the military establishment within the Zone of Interior.

b. Execute counterintelligence measures.

c. Collect within the Zone of Interior foreign positive intelligence.

d. Meet the intelligence requirements of the U. S. Army, continental and overseas commands, and the administrative and technical services.

e. Represent the Department of Army on intelligence and counter-intelligence matters with other departments of the government and with foreign governments.

It is organized into the following sections and groups:

a. Planning and Coordination Section.

b. Personnel and Administrative Section.

c. Foreign Liaison Section.

d. Security Group.

e. Army Security Group.

f. Counter Intelligence Corps.

g. Training Group.

h. Intelligence Group.

OFFICE OF NAVAL INTELLIGENCE

Its purpose is to administer, operate and maintain the intelligence service of the Navy in order to inform the top naval authority of all potentials and intentions of foreign nations and of situations or trends threatening the security of the Naval establishment.

Its functions are as follows:

a. Exploit all sources in order to collect information.

b. Supply information and intelligence required to protect the naval establishment against espionage, counter-espionage, and sabotage.

c. Supply information and intelligence needed by the policy planning, the operating and logistical offices of the Navy.

d. Coordinate intelligence activities of the Navy Department.

e. Maintain working liaison in matters pertaining to intelligence with Army, Air Force, State Department and other Federal Intelligence Agencies.

f. Conduct or participate in joint intelligence activities.

g. Sponsor and assist in training of naval intelligence personnel.

It is organized into the following branches:

a. Administrative Branch

b. Liaison

c. Plans

d. Domestic Branch

e. Foreign Branch

f. Operational Intelligence Branch

g. Air Branch

DEPARTMENT OF STATE

Special Assistant for Research and Intelligence

Its purpose is to advise and assist the Secretary of State in the field of foreign intelligence, and to formulate and execute a Departmental program for providing the foreign intelligence required by him in the conduct of foreign affairs and the safeguarding of the national security.

The Special Assistant for Research and Intelligence performs the following major functions:

a. Advises and assists the Secretary in the development and implementation of a comprehensive and coordinated foreign intelligence program for the United States.

b. Develops and implements a coordinated program for positive foreign intelligence for the Department, including the procurement of the requisite information and materials and the production of the intelligence studies and spot intelligence pertinent to the formulation and execution of foreign policy.

c. In collaboration with the appropriate geographic functional, and administrative offices, develops such instructions to the field as may be required by the Departmental and national intelligence programs.

d. Determines which of the information and materials flowing into the Department are required for the production of timely intelligence.

e. In consultation with the Assistant Secretary for Administration, adopts such special security measures within the intelligence organization, in addition to Departmental security regulations, as in his judgment may be required by the nature of the work.

f. Serves as chairman of the Advisory Committee on Intelligence.

g. Represents the Secretary on the Intelligence Advisory Committee, which advises the Director of Central Intelligence, National Security Council; on the Joint Intelligence Committee of the Joint Chiefs of staff; and on other inter-agency intelligence committees; and supervises Departmental participation in such groups.

In relationship with other agencies, the Special Assistant to the Secretary has relationship with:

a. The Army, Air Force, and Navy Departments, through the Intelligence Advisory Committee, to advise the Director of Central Intelligence, National Security Council, in the coordination of foreign intelligence affecting the national security, and, through the Joint Intelligence Committee, to advise the Joint Chiefs of Staff on intelligence matters.

b. The Army, Air Force, and Navy Departments, the Central Intelligence Agency, and other appropriate Federal agencies, to coordinate activities in the interests of the research and intelligence program of the Department and to participate in the national intelligence program.

c. Non-Federal organizations and individuals, to supplement the research and intelligence program of the Department.

CENTRAL INTELLIGENCE AGENCY (CIA)

The Director of Central Intelligence Agency has the following duties:

a. Advise the National Security Council (NSC) in matters concerning such intelligence activities of the departments and agencies of the government as relates to national security.

b. Make recommendations to NSC for coordination of such intelligence activities of the departments and agencies of the government as relate to national security.

c. Correlate and evaluate intelligence relating to national security, and provide for the appropriate dissemination of such intelligence within the government.

d. Perform, for the benefit of the existing intelligence agencies, such additional services of common concern as the NSC determines can be more efficiently accomplished centrally.

e. Perform such other functions and duties related to intelligence affecting the national security as the NSC may from time to time direct.

f. Central Intelligence Agency (CIA) produces national security estimates.

JOINT INTELLIGENCE COMMITTEE (JIC)

Its membership consists of the following:

a. Assistant Director of the Joint Staff for Intelligence.

b. Director of Intelligence, U. S. Air Force.

c. Director of Intelligence, G. S., U. S. Army.

d. Chief of Naval Intelligence.

Procedure:

a. Establishes its own methods of procedure.

b. Maintains close liaison with the planning and policy formulating agencies of the Joint Chiefs of Staff (JCS).

c. Coordinate and integrate intelligence received from all sources.

d. If unable to reach agreement promptly, submit appropriate report to JCS for action.

e. Request information, intelligence, and assistance from all member agencies and activities.

f. Utilize CIA in procuring information, intelligence, and assistance from governmental agencies and activities.

g. Establish, with the cooperation of interested governmental agencies and activities, special subcommittees on matters of continuing interest to the JCS.

h. Maintain a permanent joint intelligence group consisting of members detailed from the respective organizations of the members of the JIC and from the CIA, functioning as a committee under the jurisdiction of JCS.

Joint Intelligence Group

Its functions are:

a. Prepare responses to directives and requests addressed to JIC, and to other papers, as directed by JIC, for JIC approval.

b. Make recommendations to JIC, as occasion may require, on its own initiative.

c. Act for JIC in such matters as JIC may delegate to it.

d. Joint Intelligence Committee (JIC) produces military estimates.

OTHER SOURCES OF AIR INTELLIGENCE INFORMATION

a. Foreign Press and Radio

b. Foreign Technical Publications

c. Agents and Fellow Travelers

d. Library of Congress

e. Federal Departments

f. Treasury

g. Justice

h. Interior

i. Labor

j. Commerce

k. Independent government agencies such as the Maritime Commission, Pan American Union, etc.

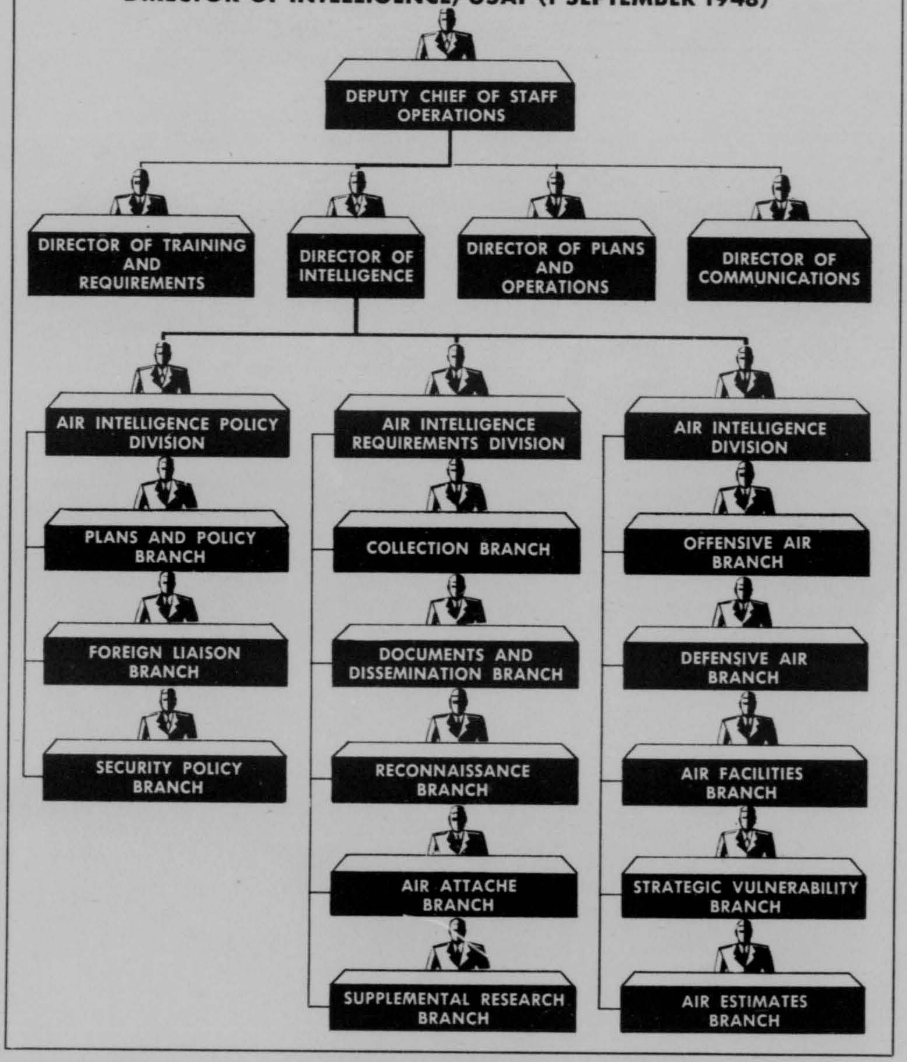
l. Private agencies.

There is no set rule in the search for information of intelligence value. Upon occasion, the most unlikely goose is apt to lay a golden egg.

Questions and Leads for Classroom Discussion

1. Can a source of ordinary information be a source of intelligence information?
2. Who should understand the uses of Photo Intelligence?
3. What is Electronics Intelligence derived from?
4. What is Capture Intelligence?
5. What is Air Technical Intelligence?
6. What are the functions of the Intelligence Division, G. S. U. S. Army?
7. What is the purpose of the ONI?
8. Name three civilian intelligence agencies.

DIRECTOR OF INTELLIGENCE, USAF (1 SEPTEMBER 1948)


DEPUTY CHIEF OF STAFF OPERATIONS
DIRECTOR OF TRAINING AND REQUIREMENTS
DIRECTOR OF INTELLIGENCE
DIRECTOR OF PLANS AND OPERATIONS
DIRECTOR OF COMMUNICATIONS
AIR INTELLIGENCE POLICY DIVISION
PLANS AND POLICY BRANCH
FOREIGN LIAISON BRANCH
SECURITY POLICY BRANCH
AIR INTELLIGENCE REQUIREMENTS DIVISION
COLLECTION BRANCH
DOCUMENTS AND DISSEMINATION BRANCH
RECONNAISSANCE BRANCH
AIR ATTACHE BRANCH
SUPPLEMENTAL RESEARCH BRANCH
AIR INTELLIGENCE DIVISION
OFFENSIVE AIR BRANCH
DEFENSIVE AIR BRANCH
AIR FACILITIES BRANCH
STRATEGIC VULNERABILITY BRANCH
AIR ESTIMATES BRANCH

CHAPTER XI

AIR INTELLIGENCE DIRECTORATE, USAF

The Air Intelligence Division, USAF, is the primary agency for the collection, evaluation, interpretation, and dissemination of air intelligence. Hence, a general working knowledge of the organization and its detailed functions is necessary.

AIR FORCE INTELLIGENCE MISSION

The Air Force Intelligence mission as stated in Air Force Regulations is: "The present and future capabilities, in range and power, of air weapons demand, the accomplishment of an intelligence mission which will: (a) Insure the prevention of strategic, tactical, or technological surprise from any source, (b) provide air intelligence required for command decisions and counsel upon air preparedness and air operations."

Responsibilities

The responsibility for carrying out this Air Force intelligence mission is invested in the Director of Intelligence, who is responsible to the Deputy Chief of Staff for Operations, USAF. The Director of Intelligence directs, supervises, and controls United States Air Force intelligence activities. His responsibility is: (a) to provide air intelligence requirements for the successful accomplishment of the USAF mission, and (b) to provide USAF representatives on the Joint Intelligence Committee of the Central Intelligence Advisory Committee of the Central Intelligence Agency, the U. S. Communications Intelligence Board, and others as may be directed.

Organization and Functions

In studying the functions of the Air Intelligence Directorate, it will first be noted that there is no office directly responsible for the administration of the Air Intelligence Directorate. At the present time, it is considered that the Deputy Chief of Staff for Operations, as the office above that of the Director of Intelligence, will supply the necessary housekeeping and administrative details essential to the work of the Air Intelligence Directorate.

The Chief of the Air Intelligence Policy Division

The Chief of the Air Intelligence Policy Division now acts as the Deputy Director of Intelligence and provides executive services and continuity of effort in the support of the Director of Intelligence in the supervision and management of the Intelligence Directorate activities. He performs functions of the Director of Intelligence pertaining to air intelligence planning and policy matters; foreign liaison activities; and policy matters concerning the safeguarding of military information.

The Plans and Policy Branch

The Plans and Policy Branch formulates overall USAF intelligence policies, (except policy matters concerning the safeguarding of military information), plans, programs, and basic procedures, and issues suitable directives to achieve desired intelligence objectives. This branch provides overall monitoring of combined, joint and inter-departmental intelligence activities which include those within the cognizance of the Joint Intelligence Committee of the Joint Chiefs of Staff and the Intelligence Advisory Committee of the Central Intelligence Agency. It monitors and recommends action relative to the functions, organization and manning of the Directorate. It also monitors activities related to the training of USAF intelligence personnel and recommends training standards and requirements.

The Foreign Liaison Branch

The Foreign Liaison Branch provides the official channel of communication between representatives of the Department of the Air Force and authorized foreign military representatives in this country. It monitors and recommends policy with respect to Air Staff relationship with foreign nationals. It dispatches to authorized foreign military representatives in this country written military information requested consistent with prescribed security policy. It makes arrangements for disclosure of oral military information through the medium of visits by foreign nationals to USAF installations and commercial facilities. This branch supervises arrangements for tours by foreign nationals including the procurement and accounting for necessary funds. It supervises arrangements for accrediting foreign military personnel as may be considered necessary. It extends invitations and processes requests for foreign military personnel to be assigned as students, observers or liaison officers at USAF installations. It advises the Air Staff on military protocol matters and assists in extending appropriate USAF courtesies.

The Security Policy Branch

The Security Policy Branch proposes, promulgates, recommends revision of, and interprets policies and broad procedures related to the safeguarding of military information within the USAF, the release of USAF classified information to foreign governments and to U. S. Federal and State agencies and private individuals and corporations, the security classification and downgrading of USAF information and material, travel control and military, civil and prisoner of war censorship. It monitors USAF representation and participation on policy matters concerning safeguarding of military information with other departments and agencies of the government.

The Chief of the Air Intelligence Requirements Division

The Chief of the Air Intelligence Requirements Division performs the duties of the Director of Intelligence pertaining to the collection of intelligence information, the control of sources of intelligence information, and the dissemination of intelligence.

The Collection Branch

The Collection Branch determines USAF requirements for intelligence information with respect to the air-war potential and the strategic vulnerability of foreign countries; furnishes statements of USAF intelligence requirements to established collection agencies, including subordinate USAF echelons.

It collects intelligence information concerning the physiography, military air and airborne forces, aircraft and air facilities (both military and civilian), and the strategic vulnerability of foreign countries.

It establishes a two-way flow of intelligence information necessary to the production of adequate intelligence at all echelons of USAF commands; determines what intelligence and intelligence information will be disseminated to activities of military and governmental agencies.

Ascertains technical intelligence requirements of USAF in coordination with appropriate commands; recommends intelligence requirements and techniques relating to special sources of information; maintains a control system over all requests for intelligence information and materials.

Operates the USAF program for exploitation of German and Austrian scientists.

Maintains records of intelligence activities of Air Attaches to determine their meeting of required collection responsibilities and operates the intelligence collection portion of the Air Attache system.

Analyzes and evaluates existing and potential sources of information with respect to their intelligence value to USAF; establishes techniques and requirements pertaining to interrogation of captured enemy personnel and an Escape and Evasion program in the event of a future emergency; monitors the exchange of technical information with foreign countries.

Supervises expenditure of funds required by intelligence collection agencies of USAF for purchase of publications, materials and services for intelligence uses; supervises the participation of USAF commands in the inter-services program for collection of foreign and domestic intelligence information within the United States.

Briefs and interrogates selected military personnel on intelligence information requirements before departure for, or upon return from, areas of potential USAF intelligence interest.

The Documents and Dissemination Branch

The Documents and Dissemination Branch receives, receipts for, records and screens all intelligence material made available to the Director of Intelligence; reproduces and disseminates this material through the media of direct allocation or publication of a brief of the document on a daily Accession List from which requests are received and filled; monitors Accession Lists of other agencies and requests documents of value to USAF.

Selects and forwards documents of primary interest to the appropriate USAF command with a request for an intelligence estimate; which estimate is then disseminated throughout the USAF.

Maintains liaison with all governmental intelligence agencies in the Washington area; provides the Director of Intelligence representation on all military and civilian reading panels and document centers in Washington.

Maintains liaison with all Joint and/or Combined Intelligence activities; to obtain reports and publications to fill USAF needs.

Maintains an intelligence library as a repository for all non-technical intelligence information received in Headquarters, USAF; renders standard library service thereon, and operates a reading room for use of this material.

Prepares and maintains standard distribution lists and records; requests intelligence documents procured by agencies other than Director of Intelligence, and establishes proper distribution of these documents, receives and answers all requests from USAF agencies for Army, Navy, CIA, and State Department publications.

Determines what air intelligence and air information will be disseminated to activities from military and governmental agencies; arranges for the publication of Director of Intelligence air intelligence reports, intelligence information and other data to be disseminated in such a manner as to insure economy and reproduction consistent with the nature, content, and quality required.

The Reconnaissance Branch

The Reconnaissance Branch recommends requirements and techniques for aerial photographic reconnaissance.

It provides Director of Intelligence representation on the Joint Map and Photographic Committee; the Joint Topographic Sub-Committee; of Air Photography, Mapping and Charting for Defense of the Canadian-United States Joint Board on Defense, and all such other Joint activities in connection with mapping and charting from photography where there is an air intelligence interest.

Monitors plans and establishes requirements for photography obtained and produced by Air Attache; monitors foreign mapping and photographic agreements.

Coordinates with other services on topographic matters and maintains USAF interest in such topographic subjects as are related to air intelligence.

Performs limited photographic intelligence studies of special nature for Headquarters USAF. Monitors general photographic intelligence projects conducted by subordinate commands in order to coordinate with the overall photographic intelligence effort of USAF.

Reviews, evaluates, processes and causes reproduction of photographic intelligence material and maintains photographic intelligence report files.

Advises interested agencies on the technical aspects of photo interpretation in connection with security and classification of aerial photography.

The Air Attache Branch

The Air Attache Branch directs and supervises the activities of the Air Attache System.

It determines officer requirements, nominates and indoctrinates Air Attaches, Air Observers and Air Technical Liaison Officers in foreign countries; monitors USAF training and indoctrination of Air, Army and Navy Attaches in air matters; acts as coordinating agency for all USAF relations with Army and Navy Attaches; and arranges for the dissemination of educational and other material to Air Attaches.

Selects the types and coordinates the assignment of aircraft to be used by Air Attaches; maintains assignment records and monitors employment and administration of aircraft.

Processes administrative letters and cables to and from Air Attache offices; maintains records of activities of Air Attaches to determine their meeting of prescribed responsibilities; maintains detailed personnel records of all officer and enlisted personnel in the Attache system; prepares letters of commendation and of noted delinquencies for transmission to the Air Attaches.

The Chief of the Air Intelligence Division

The Chief of the Air Intelligence Division performs the duties of the Director of Intelligence pertaining to the production of air intelligence necessary to Headquarters USAF for command decision and counsel upon air preparedness and air operations; recommends the requirements for the production of air intelligence by USAF commands and governmental intelligence agencies in support of the Air Force intelligence mission; maintains close coordination with those intelligence producing agencies in the interest of furthering the fulfillment of air intelligence production requirements recommended.

The Supplemental Research Branch

The Supplemental Research Branch discharges the responsibilities of the Director of Intelligence in connection with supplemental research activities.

The Offensive Air Branch

The Offensive Air Branch produces air intelligence on the offensive capabilities of alien air power; determines and establishes, as the originating agency, air order of battle estimates of all foreign countries.

It maintains complete and current statements, consistent with information available, of the following on all foreign countries; offensive doctrines and tactics; effectiveness of offensive air weapons; that status of training and serviceability of offensive air organizations; and logistical factors, including bases for offensive operations, which may modify offensive air effectiveness.

Analyzes foreign civil air information and integrates same into offensive air potentialities of foreign countries.

The Defensive Air Branch

The Defensive Air Branch produces air intelligence on the defensive capabilities of alien air forces and on the defensive capabilities of all counter-air weapons of foreign nations against offensive air operations, and coordination with the Intelligence Department, Air Materiel Command.

Analyzes the capabilities of surface-to-surface, air-to-surface, and air-to-air guided missiles and their technical features now developed or contemplated by all alien countries.

Analyzes electronics as applied to detection, identification, guidance, control and communications, existing or contemplated in all alien countries.

Analyzes foreign nuclear physics activities as applied to guided missiles and airborne equipment; foreign biological activity as applied to guided missiles and airborne equipment.

Analyzes the capabilities, characteristics and performance of all conventional and non-conventional foreign aircraft and aircraft engines and their technical features existing or contemplated by all alien countries.

Collates, evaluates, and interprets all information on foreign land-based and ship-borne anti-aircraft artillery, and surface-to-air missiles, including technical information on performance characteristics of weapons and fire control instruments, current tactical doctrine, techniques of employment, and order of battle.

Collaborates in development of new and improved methods of analyzing all types of enemy land-based and shipborne anti-aircraft defenses and in preparation of flak computers and other special equipment for facilitating and improving current methods of flak analysis. This includes liaison and collaboration with the Flak Analysis Section of the AA School.

The Air Facilities Branch

The Air Facilities Branch produces air intelligence on conditions and installations outside the continental limits of the United States of particular concern to possible air operations, notably airfields. It provides general description of weather, transportation and terrain as factors affecting airfields and airfield potentials.

The Strategic Vulnerability Branch

The Strategic Vulnerability Branch determines the extent and vulnerability of the various segments of war-making capabilities of all countries, including the United States, to air attack and recommends specific and general tactical objectives for air attack.

Maintains an encyclopedia of detailed information concerning all potential air objectives in foreign countries and the United States.

Assembles and maintains intelligence data on air objectives necessary for the production of air objective folders.

The Air Estimates Branch

The Air Estimates Branch prepares and presents overall estimates of the air capabilities and strategic vulnerability of alien or coalitions of alien powers.

Maintains and operates an Air Intelligence room for the use of the Chief of Staff, USAF, for the purpose of presentations and briefings of top level military, civilian, congressional, and other governmental leaders.

Processes information available on foreign inspired subversion activities for inclusion in the overall estimate of foreign capabilities and vulnerability.

The Information Security Branch

The Information Security Branch proposes, promulgates, recommends revision of, interprets policies and procedures relating to, and coordinates with other governmental agencies where appropriate in connection with safeguarding military information within the USAF classified information; security classification and downgrading of USAF information, including specific items of materiel and technical information.

Reviews and recommends action on the release of classified information to the requesting Federal, State and private agencies or individuals, and to foreign governments, including visits to USAF installations and facilities.

Advises USAF agencies and USAF personnel concerning approved security policies in connection with proposed publications, plans, and procedures; reviews reports of violations of security and the compromise of classified information. Transmits these reports to appropriate USAF or other agencies.

Establishes and supervises a continuing program for indoctrinations of USAF personnel in responsibilities and procedures concerning the safeguarding of military information; surveys USAF organization and facilities to determine the adequacy of USAF policies and directives relating to the safeguarding of military information.

Represents the Director of Intelligence, USAF, on the Headquarters USAF Committee on the release of technical information; furnishes USAF representation on the State-Army-Navy Air Coordinating Committee for Military Information Control.

Operations

Not only does the Air Intelligence Directorate receive direct reports from the air attaches, but all foreign service activities which might indirectly or directly come across information of interest to the Air Force. This information, however, would come back to the headquarters of the particular foreign service activity concerned before being disseminated to the Air Force. Any service having information vital to the Air Force will disseminate it through its normal intelligence channels to the Air Intelligence Directorate. Information from the State Department, as a general rule, is received through the Central Intelligence Agency. The Central Intelligence Agency furnishes the Air Force with intelligence information of interest that has been obtained through the various governmental agencies in our executive and administrative branches of government. Industries and other civilian organizations such as the Press Association, National Association of Manufacturers, etc., furnish a tremendous amount of information of vital air interest.

In general, there are two types of intelligence information that the Air Intelligence Directorate is interested in, and which must be collected, evaluated and interpreted in order to produce intelligence information for the various USAF commands. These are: (1) raw information intelligence, and (2) completed military, economic, social, and political intelligence information estimates.

Raw information intelligence is that data received that has not been evaluated or interpreted from an air viewpoint. Completed military, economic, social, and political estimates may also have been received without being evaluated or interpreted from an air force viewpoint. The military sources from which these completed estimates are obtained are:

a. The Joint Intelligence Committee (Joint Intelligence Group), *b.* various air commands, especially those overseas or in outlying U. S. possessions, *c.* the Intelligence Division of the Army General Staff, and *d.* the Office of Naval Intelligence. All of these intelligence estimates should be interpreted in addition to other information at hand in order to produce an air intelligence estimate of the particular subject or project contained in the original intelligence estimate. The Central Intelligence Agency is not only producing military, but also economic, social, and political intelligence estimates. These estimates are made not only for use within their organization, but also for the State Department and other governmental agencies. In turn, these estimates must be interpreted for air intelligence use.

This intelligence data is disseminated to the various air commands to assist them in accomplishing their particular mission as an example. The intelligence of world-wide air objective targets may interest the Strategic Air Command in particular areas only and all the data now being produced in the Air Intelligence Directorate regarding air objective targets may not necessarily be immediately disseminated to the Strategic Air Command because their mission or interests change from time to time.

SUMMARY

In general, the Director of Intelligence, Headquarters, USAF, has the responsibility for providing air intelligence requirements for the successful accomplishment of the U. S. Air Force mission.

The Air Intelligence Policy Division, in general, performs functions pertaining to air intelligence planning, policies, foreign liaison.

The Air Intelligence Requirements Division performs duties pertaining to the collection of air intelligence information, the control of the sources of air intelligence information, and the dissemination of air intelligence throughout the USAF.

The Air Intelligence Division produces, in general, air intelligence necessary to Headquarters, USAF, for command decisions and counsel upon air preparedness and air operations.

The collection, evaluation, interpretation of data from the various sources may come to the Air Intelligence Directorate as raw information or intelligence, or as completed military, economic, social, and political estimates which must be evaluated and interpreted for air intelligence.

The dissemination of air intelligence to the various air commands is made for the purpose of assisting them in accomplishing their particular mission.

Questions and Leads for Classroom Discussion

1. What is the Air Force Intelligence mission?
2. What office is directly responsible for the administration of the Air Intelligence Directorate?
3. Who formulates overall USAF intelligence policies?
4. What are some of the functions of the Security Policy Branch?
5. Discuss the functions of the Collection Branch.
6. What are the functions of the Reconnaissance Branch?
7. What are the responsibilities of the Offensive, Defensive and Estimates Branches of the Air Intelligence Division?
8. What is the purpose of disseminating Air Intelligence to the various air commands?

CHAPTER XII

PHOTOGRAPHIC INTELLIGENCE

Photo-Intelligence ranks foremost among the special sources of Air Intelligence. Through the highly developed techniques of photo interpretation, photographic intelligence provided from 50% to 90% of the intelligence information available during the war.

As compared to other sources of intelligence, this specialized method has an A-1 classification as to source and dependability. It may usually be obtained in a much shorter time than any other, it can provide a complete coverage of the subject, it produces chronological records of the subject which can be studied for many hours as compared to brief glimpses of visual observation. It is more adequate than visual observation because special filters and equipment may be applied to the problems of enemy camouflage and haze conditions incidental to high altitude positions of observation.

CAPABILITIES AND LIMITATIONS

Many of the capabilities and limitations listed under general military use of aerial photos apply to specific uses also. Those listed under specific headings apply directly to that particular subject. In some cases, capabilities and limitations given under general military use are rephrased or restated under specific uses to emphasize a certain point. In other cases they are omitted to avoid repetition.

a. For General Military use.

Capabilities:

1. Provide the most accurate and extensive source of information relative to the strength, disposition and activities of the enemy in areas not readily accessible to ground observers.

2. Provide extensive and detailed information regarding the enemy's installations and equipment, and general terrain features of areas under his control such as vegetation, soil, beaches, water depths.

3. Provide a means of detecting errors, and data from which recommendations can be made for improvement in operational techniques.

4. Provide highly accurate information for preparation and revision of maps and charts.

5. Provide an indication as in bomb damage clearance and reconstruction studies, of the enemy's evaluation of the importance of damage inflicted on him.

6. Provide target data material for operational use, e.g. annotated plans for bombardiers.

7. Makes possible an evaluation of (friendly) camouflage and passive defenses.

8. Can usually detect and "pierce" camouflage designed to confuse an aerial observer or bombardier.

9. Provide a check on the accuracy of reports from agents, collaborators, and prisoners of war covering visible objects or activities.

10. Provide a means for assessing the physical effectiveness of weapons and air attack.

Limitations:

1. Securing detailed intelligence in many photo interpretation studies requires extensive background experience and training (e.g., construction and production engineering), constant practice and correction of errors (e.g., in identification and height determination), and additional information from other sources.

2. Accurate assessment of the enemy's activities usually cannot be made from photographs alone. Supplementary information from other sources is needed. It should be especially noted that in cases short of complete destruction, photo interpretation of bomb damage to installations such as factories may be very inaccurate if based solely on visible damage.

3. Scale is a function of altitude of camera carrying aircraft and the focal length of the camera; and as a general rule aerial photographs of a scale smaller than approximately 1:10,000 (R.F.) are not adequate for detailed work.

4. Photographs are subject to certain inadequacies inherent in the design of the camera used, flight of the aircraft (tilting, etc.) and faults in processing the negative and prints.

5. Interpreter must have detailed knowledge of the enemy's living habits, customs and military techniques.

6. General knowledge of topographic and geologic features in the enemy country is very important.

7. The photo interpreter is dependent on adequate aerial photographs and these in turn depend directly on favorable light and weather condition, and, in combat areas, often on the performance of reconnaissance aircraft or skill of the pilot.

8. Ground defenses may prevent securing photographs of adequate scale for certain studies.

b. For Air Order of Battle use.

Capabilities:

1. Provide source material for preparing detailed study of enemy aircraft types and numbers at a specific time.

2. Provide general knowledge of enemy capabilities as related to airfields and such equipment as runways, lights, navigational aids, and hangar facilities.

3. Provide information regarding rates of aircraft production at aircraft factories.

4. Provide information regarding changes in aircraft strength and disposition.

Limitations:

1. May be difficult to cover all enemy airfields at approximately the same time and thus secure the overall numerical air strength.

2. Comparative photo coverage is necessary to determine changes in disposition of aircraft.

3. Limited accuracy in determining operational capabilities of aircraft.

4. Inability to accurately identify certain aircraft, particularly fighters, on photographs of a scale of 1:10,000 (approximate) and smaller.

5. Inability to account accurately for numbers of aircraft in camouflaged parking areas, hangars, etc.

6. Technical knowledge of aircraft and related facilities are necessary for accurate evaluation of aircraft, performance, production facilities, and air installations.

c. For Air Target Analysis.

Capabilities:

1. Provide extensive information of enemy installations, their definite location, general extent and construction, and general activity.

2. By use of comparative cover, information as to alterations and new developments of air targets can be obtained.

3. Provide information regarding relative value of various targets which is very essential in target selection.

4. Provide information regarding the most vulnerable parts of a target.

5. May provide means of identifying camouflage and evaluating its effectiveness against the

bombardier or pilot of an attacking aircraft.

Limitations:

1. Certain essential details, e.g., rate of production, usually cannot be positively established through the study of photographs alone.

2. Scale of the photographs may be a definite limitation in certain determinations.

3. Outside information is usually necessary for accurate evaluations.

4. The lack of technical knowledge may limit the analysis of the target.

d. For Air Target briefing.

Capabilities:

1. Provide detailed layout of target and target area, and information as to the relative importance of various parts of the target.

2. Provide information, ranging from general to specific, about the target which may be used in briefing notes.

3. Provide recognition features for use by the bombardier-navigator team, e.g., aiming point, landmarks, etc.

Limitations:

1. Objects are more easily recognized by color than by shades of gray which comprise the conventional black and white photograph or printed picture normally used in briefing.

2. Cannot provide complete briefing information from photo interpretation alone.

3. Often have inadequate photocoverage as both oblique and vertical photographs are usually desirable. (Oblique photographs taken on the heading of attack are especially desirable.)

e. For Air Strike Analysis.

Capabilities:

1. May provide photographs showing condition of the target at the time of attack.

2. When used in conjunction with reconnaissance photographs, are invaluable in assisting in the preparation of bomb damage reports.

3. Provide considerable information regarding the effectiveness of an attack shortly after the combat aircraft return to base.

4. Can determine the exact location of the first bomb strikes in the attack and in a general way the later strikes after the target becomes partially obscured by smoke, dust or debris.

5. Provide a means of analyzing operational problems (e.g. formations flown, bomb release, range and deflection errors, etc.), arising from a study of the attack.

6. Provide information relative to the study of weapon effectiveness.

Limitations:

1. To prepare an analysis of damage and operational bombing efficiency through the interpretation of air attack photographs it is necessary to have supplementary information from navigators logs and ordnance records. (Bomb damage and bombing efficiency refer to different things. High bombing efficiency usually results in large amounts of bomb damage, however a negative correlation can sometimes result.)

2. Strike photographs are not sufficient for making a complete bomb damage assessment. Post strike reconnaissance photographs, ground information and other data are necessary to confirm and amplify estimates.

3. As smoke usually obscures the target shortly after the beginning of an attack, the later bomb strikes and damage cannot be accurately observed.

4. It is extremely difficult to interpret damage assessment from strike photographs. Only interpreters with long experience gained by checking strike photographs and assessments made from them against final evaluations made by using other additional data can do this type of work with any high degree of accuracy.

5. Strike photographs often present an incomplete picture as fires started in an attack may cause additional damage.

f. For Bomb Damage assessment.

Capabilities:

1. Provide information as to the amount of structural and superficial damage done to buildings, etc. in an installation, and, to a limited extent, amount of damage to equipment, etc. (Structural

damage refers to damage which necessitates complete rebuilding or major repair effort; superficial damage refers to damage requiring such repairs as replacement of roof surfaces and minor frame members.)

2. Provide data regarding amount of time necessary to rebuild or repair.

3. Provide a guide for estimating production loss.

4. Provide data for study of weapon effectiveness.

5. Provide means for correcting or amplifying estimates made in strike assessments.

Limitations:

1. Reconnaissance photographs, except in cases of complete destruction, are not sufficient from which to make complete bomb damage assessments. Strike photographs, ordnance data, knowledge of bomb performance, ground information, etc., are necessary sources of supplementary information.

2. In event of bad weather immediately following an attack, the securing of reconnaissance photographs may be delayed which allows the enemy the opportunity to alter the appearance of the damaged areas.

3. Except in cases of complete destruction, photographs do not provide a completely accurate measure of the loss of productive capacity of industrial plants.

4. Damage to equipment as aircraft, motor transport, tanks, guns, etc., is a matter of estimation unless destruction is obvious (e.g., direct hit, fire, etc.).

5. Effect of bombing on the psychology of people, other allied industries or activities, etc., together with hitherto unsuspected results constitute important effects which are difficult to measure.

g. For Industrial and Military Activity studies.

Capabilities:

1. Provide information as to the status, extent, and scope of enemy activities, such as:

(a) Rates of industrial production (e.g., in aircraft steel, and oil).

(b) Methods, and types of construction (e.g., of large gun emplacements, and buildings).

(c) Importance of activity—to the enemy (e.g., expansion of an industry, reconstruction after bomb damage, etc. indicate effort expended and therefore importance).

(d) New developments and production procedures (e.g., new assembly methods for submarines, aircraft, etc.).

(e) Probable future capabilities (e.g., new ground defense line).

(f) True extent of damage in case of certain reconstruction activities.

2. Make possible estimates of time and effort needed in follow-up attacks.

Limitations:

1. Must have a knowledge of the enemy's industrial and structural techniques, capabilities, and resources.

2. Must have repeated comparative photo coverage.

3. Additional information from other sources is usually very necessary.

4. Must understand the psychology of the people under attack.

h. For Flak and Radar studies.

Capabilities:

1. Provide accurate pin-point locations of radar and flak defenses, and sometimes information as to the type of control employed.

2. Provide data for determining the best route of approach to targets to avoid or delay detection and anti-aircraft fire.

Limitations:

1. Detailed knowledge of the enemy's equipment and performance characteristics is necessary for proper evaluation.

i. For Radar Bombing and Navigation.

Capabilities:

1. Assist in recognition of radar returns likely to be encountered during flight to and over the target.

2. May supply considerable information about blind bombing operations.

Limitations:

1. Single photographs of radar scope images do not provide continuity between various check-points for radar navigation studies. (Note: Movies, rather than individual photographs, taken of radar scope images under actual or simulated flight provide better continuity of the radar scope images to be expected during flight.)

2. It is impossible to plot bomb impacts to any high degree of certainty using radar scope photographs, because it is very difficult to pin-point the location of the attacking aircraft at time of bomb

release through use of radar scope photographs alone.

j. For Transportation and Communication studies.

Capabilities:

1. Can obtain a general cross-section of traffic volume from photographic coverage taken at regular intervals over transportation and communication centers, such as ports, marshalling yards, warehouses, depots, etc. This cross-section provides valuable data about the enemy's economic and military status.

2. Provide data as to the capabilities of the enemy's transportation systems.

3. Provide data for logistic planning (where it is planned to occupy an area and use certain facilities at present controlled by the enemy).

Limitations:

1. Types or kinds of supplies being transported are difficult to determine with the exception of a few bulky items as coal, iron ore, oil, timber, etc.

2. Must have continuous comparative cover taken at proper intervals.

k. For Engineer Analysis and Pre-ground Reconnaissance.

Capabilities:

1. Can aid in determining kind and amounts of equipment and materials necessary for construction or repair of airfields, landing strips, dumps, billets, docks, transportation networks, etc. (Note: These may be either those which are expected to be captured from the enemy in the future or those facilities under friendly control in remote or relatively inaccessible areas.)

2. Provide advance information on possible defense sites, communication lines, transportation facilities, etc.

3. Assist greatly in the planning accomplished by the coordinating staff members as briefly indicated above.

Limitations:

1. The amount of technical engineering knowledge available to the photo interpreter will govern the limitations of his analysis.

l. For Landing and Dropping Zone Selection.

Capabilities:

1. Determine suitable areas for operations (general and specific areas.)

2. Assist in determining the best approaches, identifying useful navigational aids, and locating enemy defenses.

Limitations:

1. For the greatest amount of information vigilant observation of an area for installation of new defenses is necessary for some time before an operation. Such continuous photographic observation may destroy the security desirable for the planned operation.

m. For Front Line Cover.

Capabilities:

1. Provide detailed picture of current enemy front lines, including such items as defenses in detail, terrain features, damage to installations, and disposition of forces.

2. Provide data regarding targets of opportunity, mobile targets, enemy movements, etc.

3. Provide extensive flak and gun battery data.

Limitations:

1. Cover is normally requested for use by the ground forces and of immediate interest to them, while possibly of no immediate value or interest to the air force.

2. Area covered is limited in depth and therefore limited in air force photo interpretation interest, except to tactical air forces used for direct ground support.

n. For Navigational Aids, Check Points, and Landfall Strips.

Capabilities:

1. Provide annotated or recognition photographs of various landmarks or check points along a planned route.

2. Provide landfall recognition strips for air force navigators, amphibious assault forces, etc.

3. Annotations can be added to photographs to facilitate coordination with maps.

Limitations:

1. Coverage limited to pre-determined areas.

2. Frequently not possible to have adequate coverage for long range missions.

3. Aids are of no value if off course.

o. For Special Combat Operations.

Capabilities:

1. Possible to determine approximate water depths adjacent to beaches by observing wave characteristics, by stereoscopic study, and by the use of color photography under special conditions.

2. Possible to determine beach characteristics (sand, cobblestone, mud, etc.), and at low tide, underwater obstacles.

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3. Soil conditions may be determined by the geologic, vegetative, and topographical characteristics of an area.

4. Speed of moving ships may be determined by characteristics and spacing of bow waves.

Limitations:

1. Need advanced mathematics and technical knowledge of geology and ecology.

2. Special photographic equipment, special film, and precise flying may be necessary.

3. Photographs for stereographic determination of water depths must be taken when the water is clear enough to allow the bottom to be seen.

p. For Verification of Reports.

Capabilities:

1. Frequently possible to check the reliability of reports made by agents, collaborators, or prisoners of war; hence, able to determine the reliability of the reporting agent himself.

2. Frequently possible to verify or refute specific items of information provided by agents, collaborators, or prisoners of war.

3. Photographs used as reference during an interrogation usually make possible the collection of both a greater amount and more accurate information than when the person being interrogated relies solely on his memory.

Limitations:

1. Photographs used must have been taken at the proper time to show the subject matter in question.

2. Subject matter being checked must be of such a nature that there will be visible evidence on a proper photograph.

PHOTO-INTERPRETATION STUDIES

Photo interpreters study photos in detail and report on all installations and activities seen. This is sometimes known as direct view. In addition, interpreters report not only what they see and identify, but also what they can tell from "indications" and "associated features." For example, they might not be able to see a supply dump, but because of the "associated features" of tracks, roads or trails leading into a forest, the types of trucks occasionally seen on these trails, and by the elimination of their possible areas in the immediate vicinity, the interpreter would still be able to point out the dump location.

The majority of photo intelligence is obtained by a comparative study of photos taken of the same objective at regular intervals. The first look at an airdrome, a defense installation or a harbor may not mean too much, but as the photo interpreter studies the pictures of the same objects at daily, weekly, or even monthly intervals and compares the notes of changes and development, he can begin to come to a conclusion as to what is going on in enemy territory. Comparative study is the most significant tool in the hands of the photo interpreter, and is the very life blood of photo intelligence.

Under comparative study, exploratory work should be included. This method of study can be of two types. By the first type, the photo interpreter, after preparing his report on a particular item (i.e., railroads, bomb damage, rocket sites, etc.) takes the same photographs and proceeds to analyze the photos in their entirety. He will, by comparing previous coverage with the current photographs, note if any changes have taken place in any locality. If so, a reconnaissance mission may be assigned to take pinpoint photographs of the area. The second type is initiated when a report comes in from some source other than photo interpretation, such as combat crew reports, escapees, ground agents, etc. If current coverage does not reveal the enemy's installation as reported, a photo reconnaissance aircraft may be sent to look for the installation, its photos interpreted, and the information verified or refuted.

GLOSSARY OF TERMS USED IN PHOTO INTELLIGENCE

Cameras used in taking photographs for photo interpretation are generally of two types, aerial and recording:

a. Aerial cameras are made with a wide variety of focal lengths, angles of coverage, and types of shutters which directly affect qualities of the resulting photograph and their usefulness in photo interpretation.

b. Recording cameras are those used for photographing from a fixed position the images on the radar scope or television screen.

Types of aerial photographs vary both with the manner in which the photograph is taken, and the means employed:

a. Vertical Photographs are those made with the optical axis of the camera as nearly vertical to the surface of earth as possible.

b. Oblique Photographs are those made with the optical axis of the camera tilted from the vertical.

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c. Strike Photographs are those taken by cameras in combat aircraft at the time a target is attacked; they give some indication of the effectiveness of the operation.

d. Reconnaisance Photographs are used to make maps or charts or to obtain information on the results of bombing or on enemy movements, concentrations, or activities. (They do not include strike photographs.)

STEREO-PAIR.—Two photographs (either verticals or obliques) taken from the same general elevation or location and from adjacent positions. When the overlapping area on the pair is examined stereoscopically the effect is one of actual relief, showing length, breadth, and depth. (This overlapping coverage is called stereoscopic coverage.)

SCALE.—The relationship between a distance on a map or photograph and the actual distance on the ground is called scale. It may be expressed graphically or as a ratio called the representative fraction (RF). The scale of an aerial photograph is established by the focal length of the camera lens used and the altitude of the camera at the time of exposure. Scale affects the degree of interpretation possible because the larger the scale, the greater the visible detail. The scale of a photograph must be determined before the size of any object on it can be measured. The scale of aerial photographs can be determined in the following ways:

a. FOCAL LENGTH AND LENS HEIGHT METHOD.—The RF of a photograph is the focal length in inches divided by the altitude in inches above the ground. For example, if the focal length of the camera is 24 inches and the altitude of the camera above the ground is 30,000 feet, the RF of the photograph is found by the formula:

$$\text{RF} = \frac{\text{Focal length of camera in inches}}{\text{Altitude of camera above the ground in inches}} \text{ or } \frac{F}{H}$$

$$\text{Then RF is } \frac{24}{30{,}000 \times 12} = \frac{1}{15{,}000} \text{ or } 1{:}15{,}000$$

If the focal length were 6 inches, $\text{RF} = \frac{6}{30{,}000 \times 12}$ or 1:60,000..

The altitude indicated on the margin of an aerial photograph is given in feet above mean sea level. Therefore, the elevation of the ground must first be subtracted from the sea level altitude before using this equation.

b. COMPARISON WITH A MAP.—Select two points on the photograph (such as crossroads or road junctions) that can be easily located on a map of the same area. A line between the points should pass as near the center of the photograph as possible, with the points about the same distance from the center of the picture and at approximately the same elevation. By scaling the distances between the identical points on both the map and photograph the RF can be obtained by

$$\text{RF} = \frac{\text{Photo distance}}{\text{Ground distance}}$$

For example, if the distance between two points along a line on the photograph is 8 inches, and the scaled ground distance from the map between the same points is 8,000 feet,

$$\text{RF} = \frac{8}{8{,}000 \times 12} \text{ or } \frac{1}{12{,}000} \text{ or } 1{:}12{,}000$$

c. COMPARISON WITH THE GROUND OR A KNOWN OBJECT.—Select two points on the photograph which are accessible on the ground. Measure the distance between the two points on the photograph and the actual ground distance between the same points. By the RF formula, if the distance on the photograph is 9 inches and the measured

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ground distance is 4,000 yards, the RF of the photograph is

$$\frac{9}{4{,}000 \times 36} \text{ or } 1{:}16{,}000$$

This same procedure may be followed, but with a lesser degree of accuracy, using the dimensions of an object such as the wing span of an identified aircraft or the length of a known vessel.

MARGINAL DATA.—The information which appears on the margin of photographic prints includes geographic location, altitude in feet of aircraft above sea level, focal length of camera used, and the time and date of photography.

PRINT PAPER.—The paper on which photographs are printed may be either glossy (slick), velvet, semimatte (rough), or matte (very rough). The finish depends on the type of paper used, and finishing methods. Velvet finish, which gives the clearest definition of detail, is ordinarily used for photo interpretation.

RECONNAISSANCE STRIP.—A series of overlapping photographs made from an aircraft flying a selected course. These strips are usually vertical photographs with a minimum overlap of 60 percent of the successive exposures forming the strip. Where two or more strips are necessary to cover a given area, a lateral overlap between strips is also necessary. Oblique reconnaissance strip photographs may be made in similar fashion.

UNCONTROLLED MOSAIC.—An assembly formed by joining several overlapping vertical photographs taken at different camera positions. The term is generally applied to an assembly of one or more vertical strips. When the several photographs are oriented with respect to each other, the result is an uncontrolled mosaic. This provides a good pictorial representation of the ground but has errors in scale and azimuth.

CONTROLLED MOSAIC.—A mosaic formed by combining several photographs of a uniform scale, oriented with respect to one another and fitted to points of ground control. The accuracy of a controlled mosaic used as a map depends upon the quality of the photography, and the character and amount of ground control, and the methods used in preparing it.

PHOTO MAP.—A reproduction of a photograph or mosaic upon which grid lines, marginal data, and place names are added. They may be reproduced in quantity by photographic or lithographic methods.

Photographic Faults adversely affect the detail which is a primary interest of the photo interpreter. Detail depends upon the definition of the lens, the resolving power of the film, the atmospheric conditions at time of photography, the correct exposure and development of the film and the contrast in tones on the photograph. Any condition of the camera or treatment of the film during processing and printing which causes detail to be obscured or diminished is detrimental to the interpretation of photographs.

VECTOGRAPHS.—Prints or slides in which two images of a stereo-pair are superimposed with slight off-set so that each image transmits or reflects light polarized in a plane perpendicular to that of the other. The print or projection must be viewed with polarized glasses so that the plane of polarization in each corresponds to that of the image each eye is required to see, this giving a three dimensional effect. Vectographs are of negligible value to the photo interpreter in interpreting aerial photographs. They are a rapid means of presenting the three dimensional quality of a stereopair to individuals unaccustomed to using a stereoscope or to a group of persons simultaneously.

It is expected that this kind of intelligence will be required to reach proper authorities in much less time than ever before. It is conceivable that adequate equipment and arrangements can be made for an interpreter to accompany the photographing plane and to get required intelligence transmitted over thousands of miles in a few hours time after photographs are taken. The photographing plane might be equipped with a photo lab sufficient to produce pictures in a few minutes. Advanced and specialized interpretation instruments may greatly simplify the necessary techniques of interpretation. Intelligence so obtained could be radioed back for proper use, and subsequent missions sent out without the delay which interpretation at the home base necessitates.

INTERPRETATION AND USES OF RADAR SCOPE PHOTOGRAPHS

Introduction

A conventional photograph of a landscape shows that landscape as it appears to the human eye, but the photograph of a radar scope of that same landscape shows it according to the manner in which various objects reflect radar impulses. In general, the latter result is a map-like image of certain features. However, this similarity may be difficult to recognize or identify except where the area pictured contains a stream or shore line of appreciable size which has definite shape characteristics. Because of these peculiarities, and also the distortions which occur, detailed interpretation of radar scope photographs should be done only by personnel especially qualified for the task. However, all those who have contact with this type of photographs in their duties should be aware of the problems involved in their use, and have at least an elementary knowledge of how to interpret and plot them.

Kinds of Photographs and Uses

There are two kinds of radar scope photographs: Stills and movies. Stills show the appearance of the radar scope during a specific time period (preferably that time required for the sweep to make one complete revolution) while movies present a continuous picture of the changing images on the screen as the plane progresses along its route. The uses of such photographs are limited to briefing radar navigators and radar bombardiers and to making calculated bomb fall plots. Such uses are obviously closely allied to operational problems involving recognition of landmarks or target areas and estimating bombing efficiency. Other uses such as for detailed target analysis and bomb damage assessment are definitely beyond the capabilities of such photographs.

Characteristics of Radar Photographs

A radar set in an aircraft transmits beamed radar energy. When this energy strikes a surface at right angles to the beam, part of the energy is reflected back to the plane causing the P.P.I. (planned position indicator) screen to brighten up. The size, location and shape of the spot on the screen corresponds to the object which returned the radar energy. Water and other horizontal smooth surfaces reflect very little energy back to the plane (except when directly below the plane) while such objects as cities which have many reflecting surfaces transmit back considerable energy. As a result water areas show dark and cities, bridges, mountains, stream banks, etc. are indicated by bright areas on the screen. Therefore, the object on the ground must be identified by the size and brightness and location of the return.

Identification of such items as coast line areas, ships at sea, and coastal cities is relatively easy. However, difficulties arise in identifying locations when the area shown on the screen does not contain a large and easily recognized body of water. So unless the location of overlapping photographs is carefully plotted, it is very easy for even a highly skilled interpreter to become "lost." There is no substitute for experience in interpreting radar returns.

Generally, the return from a large city will start to break up into smaller pieces at a distance of 10 to 20 miles. Persistently bright areas are usually caused by storage areas, factories, oil farms, warehouse areas around docks and railroad yards, marshalling yards containing rolling stock, hangars on airfields, etc. Non-persistent areas – areas which become bright or dim as the reflection angle varies—may be residential or business districts; while parks, cemeteries and dumps usually give no return. In order to properly interpret photographs of such areas for target studies, careful study of all available maps covering a city is a necessity. Radar scope photographs may be classified according to the area which they cover. When navigation is being performed, the set is usually operated on 50 or 100 mile scan. This means, in the case of a 50 mile scan, that the image on the screen represents the area included within a radius of 50 miles from the plane. When a plane is on the bombing run the scan may be switched to a scan of 20 miles or less as this permits greater definition of detail in the target area.

There are also superimposed on the PPI scope certain features which aid greatly in the study of the scope photographs. The scope is usually coupled to the flux-gate compass so that the top of the resulting photographs are oriented to the north, and a heading (or lubber) line indicates the direction of flight. In addition to these two aids, range lines (concentric circles, one, five or ten miles apart) are usually shown which permit the calculation of distance from the aircraft (which is located over the center of the photograph).

Inherent Errors

As indicated in the preceding paragraph the returns from a certain area will vary according to the reflecting surfaces. Not only do these surfaces cause varying returns as the plane moves along its route, but as the sets are not stabilized, the returns will vary as the longitudinal and lateral axis of the plane vary in relation to the surface of the earth (tilt and climb). These may cause a great deal of trouble in identification.

In addition to these very considerable problems, there are the following causes of distortion:

a. AZIMUTH ERROR DUE TO BEAM WIDTH: If the radar beam has a width of three degrees a point reflector (i.e. a small boat) will appear as an object three miles long at 60 miles (or one mile at 20 miles). Width error manifests itself in various ways and amounts.

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b. RANGE ERROR DUE TO RADAR PULSE LENGTH: If the pulse of radio energy is .5 (.5/1,000,000) microseconds long this pulse wave will have a length about 500 feet, and as it takes this wave 12.4 microseconds to go and return one mile, this factor will cause an apparent increase in the width of some objects of about 250 feet. This error will be obvious under some conditions and not under others.

c. RANGE AND AZIMUTH ERROR DUE TO SPOT SIZE: The electron beam from the cathode ray tubes in the radar has a diameter of about 1/30 inch on the face of the average screen, and it is this beam which "paints" the picture on screen. If a set is operating on a 20 mile scan, 1/30 inch represents 1800 feet. A point reflection will appear to be 1800 feet long and 1800 feet wide. Therefore, if two separate points are to be visible on the screen they must be over 1800 feet apart.

When it is recognized that different objects cause returns of varying size, shape and brightness, and that these returns are then distorted by the beam width, pulse length, and spot size, it becomes obvious that the interpretation of radar scope photographs can best be done by a skilled specialist. However, anyone who has the time and patience to study these peculiarities can probably become reasonably proficient in interpretation.

Methods of Plotting and Requirements for Bomb Plotting

The accurate plotting of the course of a plane from radar scope photographs is often difficult. As has been pointed out the location of a pin-point location on a photograph can be difficult. To this problem, the plotter must add that of finding reference points in the proper areas to enable him to make an accurate plot on a map. The mechanics involved are the same as for location by intersection and great circle methods in plane table mapping. The same principles apply and the same requirements must be satisfied to obtain an accurate location. Unfortunately, the photographs to be plotted do not always supply reference points in the proper locations for highly accurate work and in some areas the problem of scarcity may be added to that of lack of proper location. And if the part of the world covered by the photographs does not have adequate or accurate map coverage, then the plotter will be confronted by still another major difficulty.

On a radar bombing mission, determination of the route flown and the general area where the bombs were dropped are the two items of greatest importance. While approximate locations may be satisfactory for route determination, precise location of the point of bombs away is necessary if the bomb fall plot is to be reasonably accurate. This requires a "clear" photograph as soon after bombs away as possible, and that that photograph be positively identified. (One method is mount a small light where it will show in the corner of the photograph and connect it so that it will be lit when the bombs are released.) Also the set should be switched from short (20 mile) or sector scan back to 50 or 100 mile scan just before bombs away otherwise the photograph will probably lack adequate points for plotting. If this photograph can be plotted accurately and the operational data relating to speed, altitude, etc. is complete then a satisfactory plot should result. The most serious problem is that related to finding the geographical location of the plane the instant the bombs were released.

Television Photography

A television screen may be photographed in the same manner as a radar screen; and, in general, the same uses may be made of the photographs which result as with radar scope photographs. Television has an advantage over radar in that the visual image is the same as it appears to the human eye. Television offers the possibility of transmitting visual (or radar) information back from a drone (or guided missile) to a "mother" aircraft, and thus provides a method of securing photographs from a drone or missile.

Questions and Leads for Classroom Discussion

1. What is the classification of photo intelligence as to source and dependability?
2. What are four capabilities of photo intelligence when applied to general military use? What are four limitations?
3. Name six specific uses for photo intelligence.
4. What is meant by "indications" and "associated features" in photo interpretation?
5. What is a comparative study?
6. What is the difference between vertical and oblique photos?
7. What is the difference between high and low oblique photographs?
8. What establishes the scale of an aerial photograph?
9. In what respect does a controlled mosaic differ from an uncontrolled mosaic?
10. What are the two kinds of radar scope photographs?
11. What is the advantage of television over radar?

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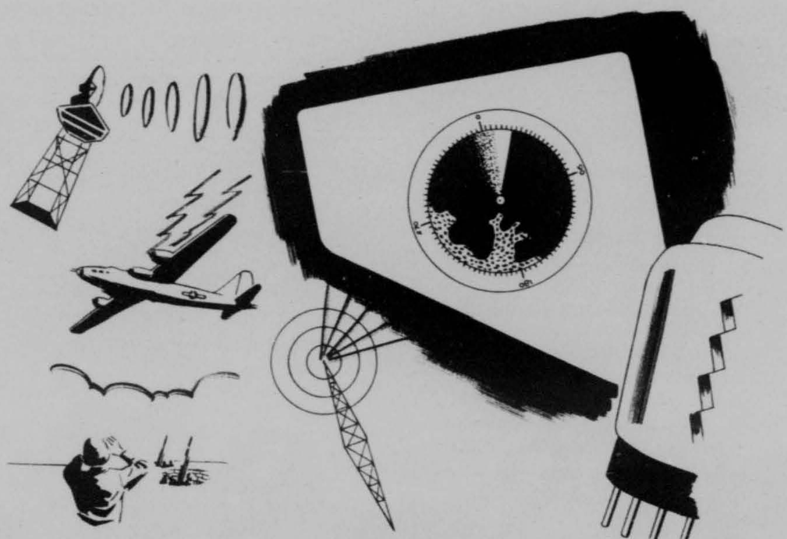


CHAPTER XIII

ELECTRONICS INTELLIGENCE

Electronics intelligence is derived from information concerning the following: Enemy radio and wire communication systems; enemy navigational aids employing radio and radar; enemy radar detection, fighter-control, and gun-laying systems; any other enemy radiation subject to intercept and analysis.

Electronics intelligence must be compared with visual data. For example, the check-points that appear on PPI scope photographs made on a radar bombing strike must be correlated with visual photographs of the same features.

Because electronics information is technical, communication officers, particularly those specializing in radio counter-measures and radar equipment, cooperate with intelligence in collecting, collating, and evaluating it. The final interpretation of electronics information and the distribution of the resultant intelligence are functions of the A-2.

The following kinds of electronics information are commonly sought:

a. Enemy radio. General information:

1. Content, types, origin, and dates of messages.
2. Locations and frequency assignment of stations.
3. Methods of operating radio links.
4. Radio equipment; ranges and uses.

b. Enemy radar. General information:

1. Radar locations and frequencies.
2. Coverage of enemy system as a whole and of individual sets when possible.
3. Radar equipment; ranges and uses.
4. Types and uses of airborne radar.

c. Enemy tactical uses of electronics:

1. Air interception methods and equipment.
2. Fighter direction and ground-controlled interception.
3. Early-warning systems.
4. Systems for anti-aircraft artillery fire and search-light control.

5. Systems for aircraft fire control.
6. Guided missiles.
7. Radar bombing equipment and methods.

d. Enemy uses of electronics in navigation:

1. Aircraft.
2. Shipping.

e. Enemy radio countermeasures:

1. PPI scope photos of enemy areas.

SOURCES OF ELECTRONICS INFORMATION

Sources of information concerning enemy electronics include:

a. Interrogation of air crew members, particularly radar and radio operators.

b. Reports of radio countermeasure (RCM) reconnaissance missions flown by "ferret" aircraft.

c. Intercept reports from:

1. Radio squadrons mobile (Air Force).
2. Radio intercept companies (Signal Corps).

d. Captured electronics equipment reports from:

1. Air technical intelligence teams (Air Force and Navy).
2. Enemy equipment intelligence service teams (Signal Corps).

e. Photographic reconnaissance.

f. Reports from Army and Navy intelligence officers on visual sightings of electronics installations and related information.

g. Captured documents.

h. Interrogation of prisoners of war, evaders, escapers, and repatriates.

i. Reports of special agents in enemy occupied or neutral territory.

j. PPI scope photographs studied by photo interpreters.

AIR FORCE RADIO SQUADRON MOBILE

This mobile organization assigned to the Air Force provides all the radio intelligence facilities except the security monitoring of radio sets and radio countermeasure (RCM) missions, which are flown by "ferret" aircraft. Normally one mobile radio squadron is assigned to each combat air force. The A-2 of the air force designates its missions, which include operating radio interception and direction-finding stations, making crypto-analyses and evaluating intelligence.

DUTIES OF RADAR INTELLIGENCE OFFICERS

Radar intelligence officers, who are specially trained in communications, handle electronics intelligence in the field. They are needed because of the amount of technical knowledge required to operate radio and radar equipment. The intelligence sections of all group and higher Air Force headquarters must have, in addition to these specialists, officers skilled in the collection, processing, and dissemination of electronics intelligence.

In a theater, complete electronics intelligence is normally obtained by delegating different functions to each air echelon. On command, air force, corps, division, and group levels these functions may be distributed in the following manner:

The command, air force, corps and division radar intelligence officers are to:

a. Keep in touch with all sources of electronics information, collect and process information, and disseminate it to higher, adjacent, and lower echelons through the A-2 of the command.

b. Assist operations and intelligence officers in planning radar bombing runs and selecting radar check points.

c. Supervise the preparation of briefing material for target folders, giving such information as location and coverage of enemy aircraft early-warning system and method of fire control and air interception.

d. Prepare electronics intelligence section for mission reports.

e. Recommend coverage for radar-scope photographs and supervise filing and interpretation of such photographs.

f. Assist A-2 in supervising electronics intelligence in lower echelons.

g. Plan and supervise radio countermeasures as directed.

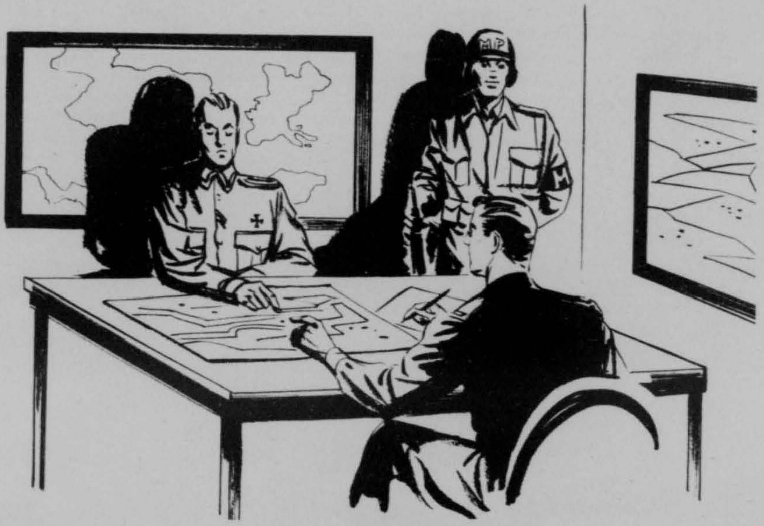
In a division, the duties of the radar intelligence officer are determined by the position of the division in relation to corps headquarters. When the division is near corps headquarters, the radar intelligence officer may do liaison work only, assisting the corps intelligence section and screening and summarizing information. When the division is isolated from corps headquarters, electronics intelligence is handled as it is in the command.

In an air corps, the radar intelligence performs only liaison work if the corps is near the headquarters of the air force. If it is isolated from headquarters, electronics information is handled as it is in the command.

The radar intelligence officer when in a group merely carries out the plans of higher headquarters. He questions crew members, reports missions, and briefs radar and radio personnel on electronics intelligence.

Questions and Leads for Classroom Discussion

1. Must Electronics Intelligence be compared with visual data?
2. Whose cooperation is necessary in collecting this type of intelligence?
3. What kind of information is frequently sought?
4. What are sources of electronics information?
5. What is a radio squadron mobile?
6. Explain the duties of a radar intelligence officer.



CHAPTER XIV

CAPTURE INTELLIGENCE

PRISONER OF WAR INTERROGATION

Capture Intelligence is gained from examination and analysis of captured aircraft equipment and documents and from interrogation and examination of prisoners of war. Additional intelligence is obtained from the interrogation of deserters, repatriates to our own forces, travelers, evacuees and members of the local population. All of these classes are interrogated and some of the latter may actually be prisoners of war and are handled as such under the rules of war.

Valuable information is derived from the examination of maps, sketches, photographs, orders, tactical and technical manuals, code books, war diaries, newspapers, notebooks, service records, pay rolls, uniform and individual equipment, post cards and letters, records of headquarters, post and telegraph offices, telephone exchanges, banks, police stations, municipal and government offices.

Air technical, air prisoner of war, and air interpreter-translator specialists are especially selected and trained for the exploitation of capture intelligence.

Special Identity Cards. Each officer of the Capture Intelligence Branch and its field units operating in combat areas must be furnished with a special identity card and letter of authority, signed preferably in person by the senior area commander, directing all subordinate commanders to render him such assistance as may be required, consistent with their own mission, in the safeguarding and necessary movement for intelligence exploitation of captured air personnel, equipment, and documents. Officers must be very discreet in the use of this special authority, and will, whenever practicable, utilize Air Force troops in preference to ground or naval forces. Combat troops temporarily guarding captured air personnel, equipment, and documents, will be relieved as quickly as possible.

Capture Intelligence Branch (Command or Air Force), A-2 Division, coordinates the functions of the Air Technical Intelligence Section, Air Interpreter Translator Section and the Air Prisoner of War Interrogation Section. The Chief of this Branch is an assistant intelligence officer responsible for coordinating all capture intelligence collecting agencies.

The Chief of the Air Technical Intelligence Section is responsible for the exploitation of Air Technical Intelligence, for operation of the ATI Section and control of ATI Field Units.

The Chief of the Air Prisoner of War Section is responsible for interrogation of captured enemy air personnel, and the exploitation of captured documents, and for operation of the APW Section. The Chief of the Air Interpreter Translator Section is responsible for exploitation of intelligence through translation of foreign documents, for supply of interpreters and translators of foreign languages for intelligence purposes, and for operation of the ATI Section.

AIR PRISONER OF WAR INTERROGATION

The interrogation of captured enemy air force personnel is a valuable source of intelligence during wartime. It furnishes current and detailed information on the enemy air force order of battle, and supplies intelligence for combat operations, economic warfare, psychological warfare and target information. Intelligence information obtained from the interrogation of air prisoners of war (APW's) must be evaluated and checked against other sources before it can be accepted as fact. The intelligence section of the highest echelon in a combat theater has access to the enemy sources of information necessary to verify the accuracy of interrogation results. Agencies issuing reports based on PW interrogations indicate the reliability of source and the information by the use of a code as listed in Chapter VIII.

Air Prisoner of War Interrogation in Combat Theaters

Air Prisoner of War Interrogation units are organized by direction of the Director of Intelligence, for duty with the command or air force as is dictated by combat conditions and the potential amount of air prisoners available in a combat theater.

In the combat theaters an Air Prisoner of War Interrogation Section is organized in the intelligence division of the highest command or air force in each theater.

The APW Interrogation Section is charged with the exploitation of captured enemy air force personnel and documents throughout the geographical area of the command or air force and such other areas as directed. The APW Interrogation Section organizes, controls and supervises APW Field Unit(s) which in turn furnish APW teams according to the demands of the local tactical situation. APW teams organized along similar lines as Air Technical Intelligence teams, are attached to forward tactical units, assault forces or task forces for the purpose of interrogating and examining enemy air personnel and documents at the site of capture.

THE THREE MAIN TYPES OF INTERROGATION

Forward or Tactical Interrogation

Forward or Tactical Interrogation, conducted by the APW Teams and Field Units is concentrated on tactical information of enemy air units opposing our tactical forces in the field. Because the interrogator is aided by information which may be in or on a crashed airplane, it is desirable that the preliminary interrogation be held at the location of the crash if it does not cause delay. The necessity for speed is the governing factor. The result of this preliminary interrogation is disseminated in the form of flash reports by the most rapid means available. Further and more detailed interrogation is carried out by the APW Field Unit when the situation warrants.

Detailed or Strategic Interrogation

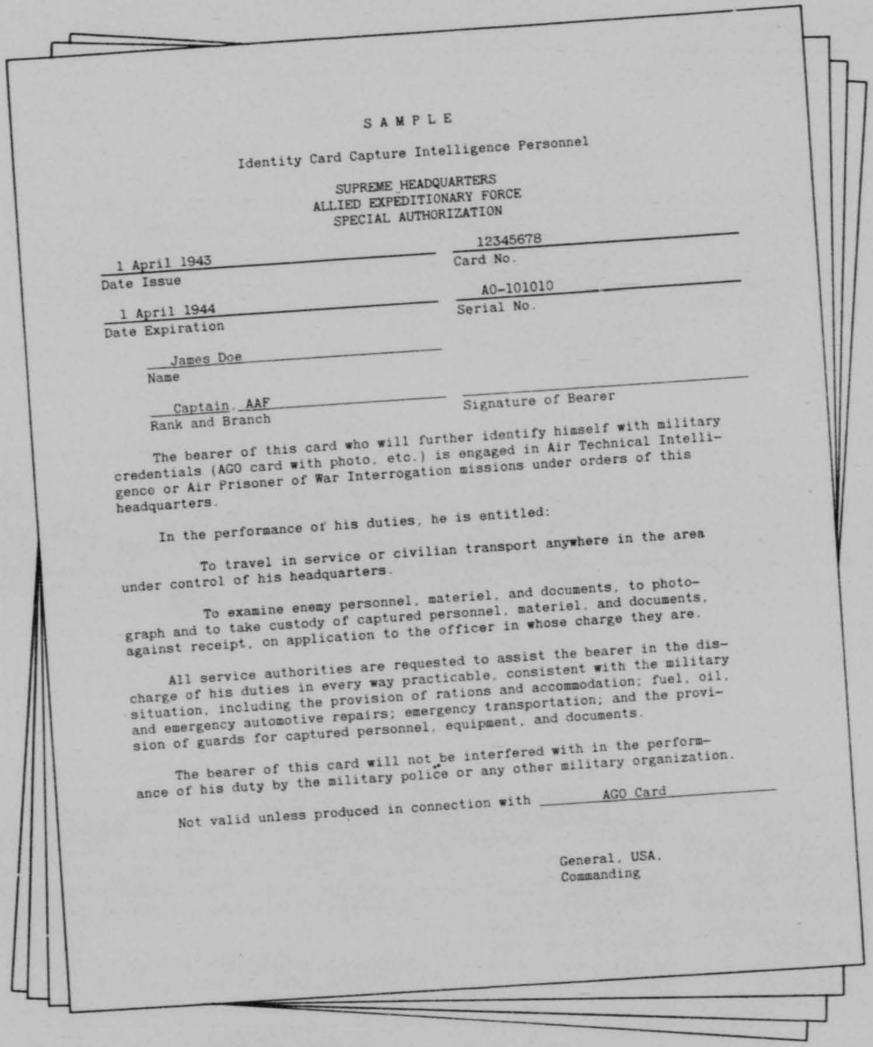
Detailed or Strategic Interrogation, conducted usually at an Interrogation Center which is located in the rear of a combat theater or in the Zone of Interior, depending on the overall situation. Captured personnel of high rank or having additional knowledge are transported from forward areas by rapid means to the Interrogation Center for detailed interrogation on strategic and technical information.

Interrogation on Target Information

Interrogation on target information is conducted at all stages of interrogation and at all levels of command. Deserters and repatriates, evacuees, and local civilian populations, ground and naval prisoners of war, who may possess information of interest to our air forces, are also interrogated as sources of target information. Results of this interrogation may furnish information on tactical as well as strategic air targets.

SEGREGATION AND HANDLING OF AIR PRISONERS OF WAR

Complete examination of enemy air personnel by untrained officers and enlisted men accomplishes no useful purpose and delays and probably frustrates



SAMPLE

Identity Card Capture Intelligence Personnel

SUPREME HEADQUARTERS
ALLIED EXPEDITIONARY FORCE
SPECIAL AUTHORIZATION

1 April 1943 Date Issue	12345678 Card No.
1 April 1944 Date Expiration	AO-101010 Serial No.
James Doe Name	
Captain, AAF Rank and Branch	Signature of Bearer

The bearer of this card who will further identify himself with military credentials (AGO card with photo, etc.) is engaged in Air Technical Intelligence or Air Prisoner of War Interrogation missions under orders of this headquarters.

In the performance of his duties, he is entitled:

To travel in service or civilian transport anywhere in the area under control of his headquarters.

To examine enemy personnel, materiel, and documents, to photograph and to take custody of captured personnel, materiel, and documents, against receipt, on application to the officer in whose charge they are.

All service authorities are requested to assist the bearer in the discharge of his duties in every way practicable, consistent with the military situation, including the provision of rations and accommodation; fuel, oil, and emergency automotive repairs; emergency transportation; and the provision of guards for captured personnel, equipment, and documents.

The bearer of this card will not be interfered with in the performance of his duty by the military police or any other military organization.

Not valid unless produced in connection with AGO Card

General, USA,
Commanding

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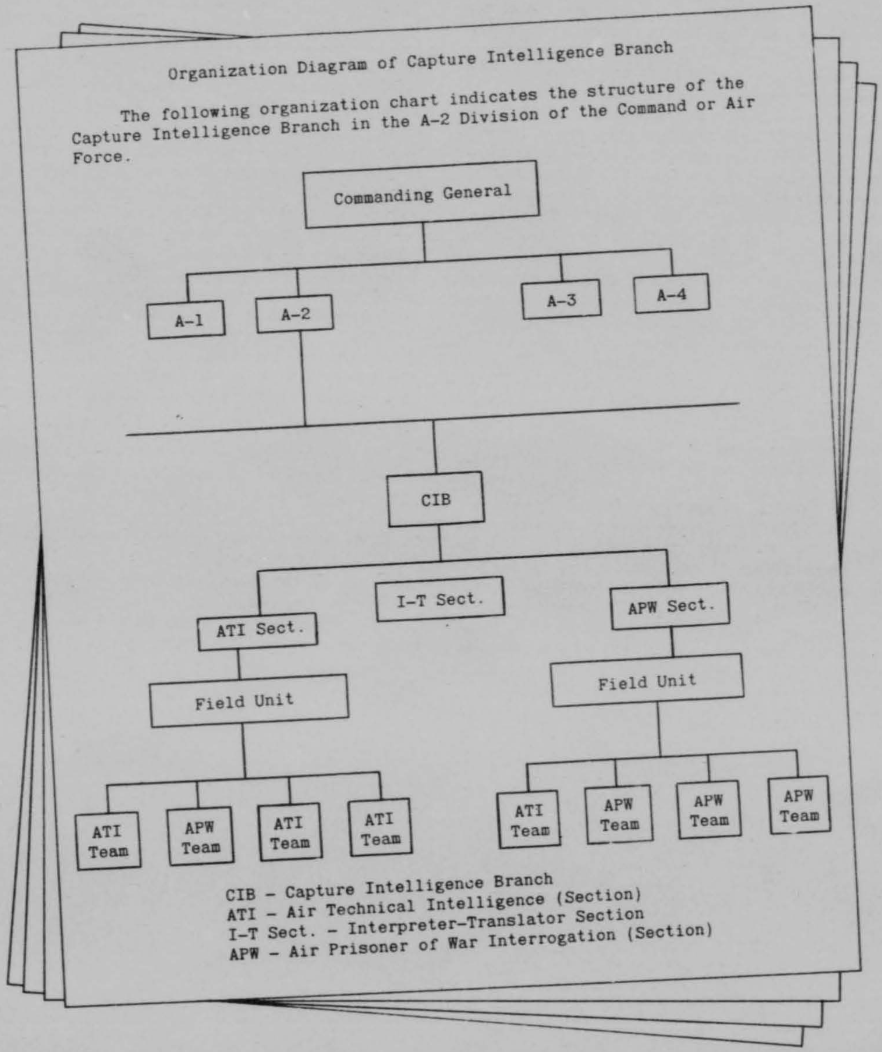

Organization Diagram of Capture Intelligence Branch

The following organization chart indicates the structure of the Capture Intelligence Branch in the A-2 Division of the Command or Air Force.

Commanding General
A-1
A-2
A-3
A-4
CIB
ATI Sect.
I-T Sect.
APW Sect.
Field Unit
Field Unit
ATI Team
APW Team
ATI Team
ATI Team
ATI Team
APW Team
APW Team
APW Team

CIB - Capture Intelligence Branch
ATI - Air Technical Intelligence (Section)
I-T Sect. - Interpreter-Translator Section
APW - Air Prisoner of War Interrogation (Section)

later examination by trained interrogation personnel. The information derived from enemy air crews is of vital importance to air force commands. Crews of enemy aircraft usually have little information of value to ground force units. The handling and interrogation of captured air personnel is a highly specialized function and is conducted by officers and enlisted men especially trained for this purpose, who have technical and linguistic backgrounds. Directives for handling air prisoners of war are issued by the theater air commander and the duty of unit intelligence officers is mainly that of seeing that these instructions are followed by all personnel.

All captured air personnel, with the exception of anti-aircraft and airborne troops (including paratroops) whose principal function is ground combat and defense, will be segregated upon capture. All captured personnel will be searched and all papers, maps and other documents will be removed and inventoried. These documents and individual inventories will be transmitted to designated interrogation personnel with the prisoners by the guards. Every effort will be made to prevent enemy airmen from destroying aircraft, equipment, and documents. Captured air crews will be individually segregated, and kept in confinement without communication with each other until turned over to properly designated air interrogation personnel. Units capturing aircrews together with their aircraft will make an Air Crash Report. Where air crewmen only are captured, especially those landing by parachute, the individual and/or air, ground, or naval unit effecting the capture is responsible for reporting the capture to the nearest air unit or command by the fastest means available. The air unit will assume custody of captured personnel, inventory of documents and the documents, and notify the nearest Air Prisoner of War Interrogation Team or Field Unit by telephone, radio, or telegraph.

Badges, medals, ribbons, insignia, and documents, especially theater and railroad ticket stubs, personal letters, cards, diaries and memoranda, found on prisoners, may be highly significant and of invaluable aid to the trained interrogator. These items will be listed on the inventory of personal effects taken from each prisoner. Rank insignia, and embroidered or sewn insignia or ribbons on the uniform, will not be removed from the prisoners' clothing and will be listed as not removed on the inventory. The military disposal or return of personal effects to individual prisoners will be made only by properly designated interrogation personnel, in accordance with existing policies and directives.

Questions and Leads for Classroom Discussion

1. What are specific sources of capture intelligence?
2. What functions are coordinated by the Capture Intelligence Branch at Command or AF Headquarters?
3. What information is gathered by Air Prisoner of War interrogation?
4. What are the three main types of Prisoner of War interrogation?
5. Discuss briefly the segregation and handling of Air Prisoners of War.

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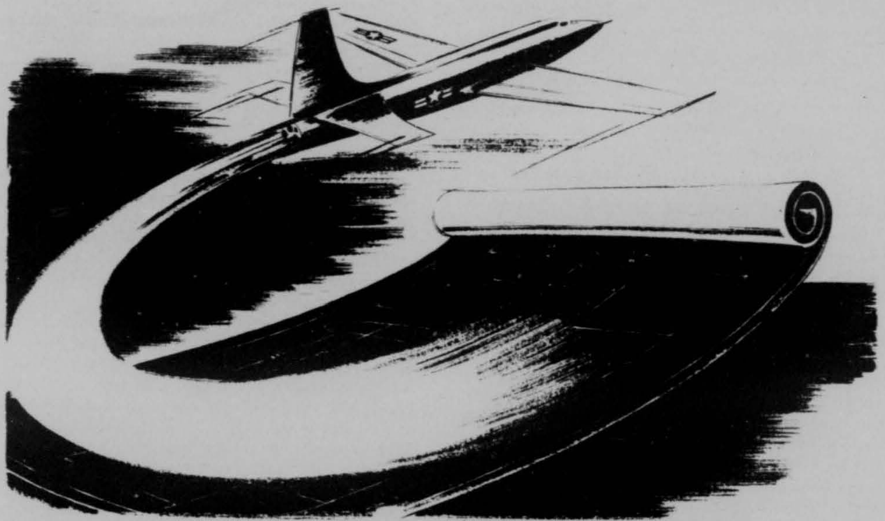

CHAPTER XV

AIR TECHNICAL INTELLIGENCE

GENERAL

Information obtained through Air Technical Intelligence (ATI) channels provides vital data on characteristics, performance, vulnerability, field of fire, and recognition of enemy aircraft. It supplies intelligence for combat operations, economic warfare, and target information, and leads to improvement of domestic designs and to the development of counter-measures against new enemy equipment. Examination and tests of captured equipment reveal new enemy design and engineering trends, and assists materially through name plate and other analysis in the estimate of enemy production.

The central Air Force agency responsible for air technical intelligence activity is the Air Materiel Command (AMC). Among other specific missions, the Commanding General of AMC is charged with the operation of the Technical Intelligence Services of the U. S. Air Forces, and with the training of Air Technical Liaison Officers. Within AMC, direct responsibility for technical intelligence is placed in the Technical Intelligence Division of the command. This Division is staffed with trained technical personnel and the laboratories and other facilities of the Engineering Division of the Command are available for research and analysis.

The Technical Intelligence Division directs the training of ATI personnel for assignment throughout the United States Air Forces. It publishes and disseminates air technical information and technical manuals for the guidance of personnel in the field. It directs the collection of air technical intelligence throughout the world, utilizing the military air attache system, foreign observers, and the intelligence staffs of combat and service units.

Technical intelligence from the field is channeled into AMC for final analysis and evaluation by the Technical Intelligence Division. Foreign air equipment and documents examined by field units are forwarded to AMC for further intelligence exploitation and test when advisable.

Technical Intelligence specifically endeavors to maintain up-to-date data on all actual or potential foreign air materiel including:

a. Performance and characteristics.

b. Quality of workmanship and materials.

c. Raw material sources.

d. Recognition features.

e. Design and construction.

f. Maintenance and supply, including facilities.

AIR TECHNICAL INTELLIGENCE FIELD OPERATIONS

In order to exploit Air Technical Intelligence in the combat theaters or areas, technical specialists are attached to the command or Air Force by Air Materiel Command through Headquarters, USAF. Air Technical Intelligence Units are organized by Air Materiel Command for duty with the command or Air Force as dictated by combat conditions and the potential amount of Air Technical Intelligence available. Individuals are also attached by AMC through Headquarters, USAF as Air Technical Liaison Officers to the Air Attache Offices abroad and to duty with friendly armed forces.

In the combat theaters an Air Technical Intelligence (ATI) Section (formerly called TAI Unit) is assigned to the (A-2 division) highest command or numbered air force in each theater. ATI Sections are organized in peacetime for training purposes.

The ATI Section is charged with the exploitation of all Air Technical Intelligence throughout the geographical area of the Command or Air Force to which it is assigned and such other areas as directed.

As ATI Sections are organized to meet the requirements of the combat situation, a very flexible Table of Organization has been compiled to cover the organization. Assigned to the ATI Section will be one or more ATI Field Units consisting of a mobile Headquarters Unit and a varied number of ATI Teams depending upon locations and operating requirements.

ATI must be organized on an area basis to function effectively. Enemy Aircraft may be shot down anywhere within their radius of action and each geographic area must be under the jurisdiction of air, ground, naval and allied forces. In large geographic areas having two or more numbered Air Forces under an Air Command, the normal area of jurisdiction of each numbered Air Force is seldom exact.

If the area is not too large and land communication facilities are good, one ATI Section with an Air Command may be sufficient. Theater directives should clearly indicate that this Section has responsibility throughout the theater.

Where the geographic area is too large to be handled effectively by one ATI Section, one may be organized in each Air Force. Areas of responsibility between the different ATI Sections must be clearly indicated in theater directives.

When Naval Air Units are present, Naval and USAF ATI personnel should be organized into a joint[1] command ATI Section under either Naval or USAF air commanders. When allied forces are involved in the area, they are frequently utilized in the Section, which then becomes a combined section.[2]

ATI Field Units will be attached to the nearest tactical unit when operating in forward areas for rations, quarters, and necessary guard facilities. ATI Teams operate from the field unit and will be completely self sustained. All administration, communication, and other services will be furnished by the field unit, which operates directly under the jurisdiction of the A-2 of the Command or Air Force. ATI Teams may be ***attached*** to combat units in assault for airborne or amphibious operations for transportation purposes only. The Chief of the Air Technical Intelligence Section will assign the particular areas in which the field units will operate. The operations officer of each Field Unit will be responsible for the movement and control of the ATI Teams of his unit within the area assigned to the unit.

Each ATI Field Unit consists of a headquarters unit and the required number of ATI Teams. The field unit will furnish the necessary supply and service functions for the ATI Teams assigned, i.e., (communications, photography, reproduction, and minor vehicle repair and service), it will also serve as the collection point for all information gathered by the ATI Teams prior to the forwarding to higher echelons.

The ATI Team usually consists of two technically trained officers with mechanical ability who actually investigate the enemy air materiel. The team is completely mobile and self-contained and carries its own rations, tools, radio, and other equipment required for investigations. It can operate for extended periods of time away from the field unit, and is ordered from location to location as assigned by the field unit operations officer, with whom daily radio communication is maintained. The field team conducts a complete investigation of enemy air materiel at the site of capture for intelligence purposes and items of further engineering value are shipped to Air Materiel Command for further test and analysis. The personnel of the ATI team must be qualified for extended field duty under combat conditions and must have a complete knowledge of the latest developments of aeronautical equipment and weapons.

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[1] A "joint command" is composed of personnel of two or more services, i.e., air, ground, and naval.

[2] A "combined command" is composed of personnel of two or more allied nations.

FUNCTIONS AND RESPONSIBILITIES OF AIR TECHNICAL INTELLIGENCE ORGANIZATIONS

Technical Intelligence Division of Air Materiel Command

a. Receives and catalogues actual or potential enemy air equipment and other technical information.

b. Train Technical Intelligence personnel for the USAF.

c. Evaluate and analyze intelligence reports having to do with foreign (actual or potential enemy) air equipment.

d. Conduct or arrange for tests to be made on foreign air equipment.

e. Interpret and reproduce photos of foreign air equipment.

f. Prepare and disseminate Air Technical Intelligence reports and summaries as may be needed during peace or war.

g. Rebuild and distribute foreign air equipment as needed for training purposes.

h. Reproduce sketches and models of foreign air equipment.

i. Prepare and distribute directives concerning the collection, crating, tagging and shipping of captured or other foreign air equipment.

Air Technical Intelligence Section (Command or Air Force)

a. Coordinate all Air Technical Intelligence activities in the theater of operations (or assigned geographic area).

b. Supervise activities of Air Technical Intelligence Field Units and teams.

c. Analyze, examine and evaluate foreign air equipment, technical data and reports from ATI Field Units and Teams and other sources within the command.

d. Issue as required periodic Air Technical Intelligence Summaries.

e. Advise and assist A-2 in preparing Air Technical Intelligence directives and SOPs for inclusion in theater directives for the information and guidance of all military personnel.

f. Prepare and forward to the AMC in the Zone of the Interior:

1. Captured air equipment, technical documents and related information, which in the opinion of A-2 should have further analysis, or be of interest to AMC.
2. Collect and ship items specifically requested by AMC or other proper authority.

Air Technical Intelligence Field Unit

a. Organized and equipped as a mobile unit capable of operating in forward area, provide supply and service functions for Air Technical Intelligence Teams.

b. Control the operation of ATI Teams, maintain communication with teams and ATI Section of A-2.

c. Consolidate, analyze and augment activities of individual teams and maintain reproduction facilities for information being forwarded to higher echelons.

d. Compile consolidated ATI reports for ATI Section from information received from ATI teams. (Make such other immediate distribution of reports as required by theater ATI, SOP and directives.)

e. Collect, consolidate and forward all document manuals and other technical data received from ATI Teams to ATI Section A-2.

f. Prepare selected foreign air materiel and direct crating or shipment to the Zone of Interior in coordination with A-2 of the air force or command.

g. Establish liaison with intelligence agencies of other arms and services in the area, and coordinate other types of intelligence materiel discovered with such agencies (i.e., Chemical Corps., Ordnance, Signal Corps., etc.).

Air Technical Intelligence Team

a. Organized and equipped as a completely self-contained mobile unit capable of extended field operation.

b. Investigate and prepare complete intelligence reports of foreign air materiel at the site of crash or capture.

c. Designate and arrange for movement, and for the guarding of foreign air materiel of new design or of intelligence value.

d. Secure all documents, manuals, photographs and other data on foreign air materiel and forward to Air Technical Intelligence (ATI) field unit.

HANDLING ENEMY AIR MATERIEL

It is essential that captured, shot down or abandoned enemy air materiel be properly segregated and safeguarded by all concerned to permit full intelligence examination and analysis. Technological progress and development in the field of aviation is normally rapid and new designs and improvements often come in swift succession. The vital importance of military aviation in modern war causes belligerent nations to bend every effort to speed up creation of new designs and make every facility available to designers and inventors engaged in aeronautical research and development. Immediate and thorough examination of enemy air materiel, especially aircraft and projectiles, by technically qualified air intelligence personnel, is essential to the early development of counter-weapons and counter-tactics. New air weapons are often tested in battle before full production is developed. Intelligence examination of captured or shot down models may permit our development of countermeasures before the enemy employs the new equipment in quantity. It is mandatory that all military personnel are instructed as to proper procedure for the handling of captured or abandoned enemy air materiel for intelligence purposes.

REPORTING AND SAFEGUARDING ENEMY AIR MATERIEL

The individual and/or air, ground, or naval unit locating enemy air materiel is responsible for reporting the find to the Air Technical Intelligence Section or field unit of the area concerned, and, consistent with battle conditions and the local situation, with safeguarding the materiel until released by authority of A-2.

AIR CRASH REPORTS

Crashed or forced down aircraft, rockets, or other self-propelled air missiles will be reported by telephone, or where impracticable, telegraph or radio. "Enemy Crash Report" will be made direct to the Air Technical Intelligence or Field Unit of the area, and a written confirmation copy forwarded thereto by the most expeditious means through normal intelligence channels. (See "Enemy Crash Report" form and sample report.)

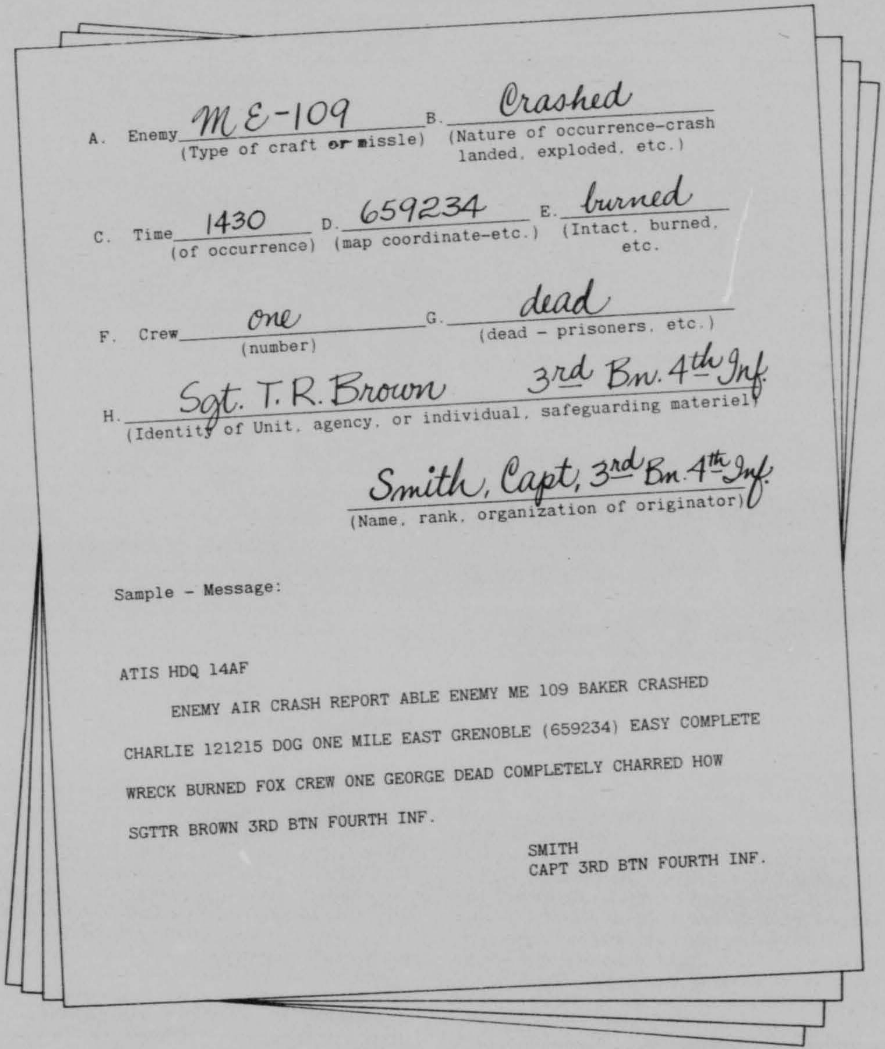
ATIS HEADQUARTERS—AF

All other captured or abandoned air materiel, including aircraft; air supplies and depots; documents; rockets, guided missiles, and rocket launchers; radio, radar and other communication devices will be reported. This report, giving description, location, and disposition will be accomplished by the unit originally locating the materiel. It will be addressed and forwarded to the Air Technical Intelligence Section or field unit responsible for the area, by the most expeditious means through normal intelligence channels. Telephone, telegraph or radio reports may also be made when deemed advisable.

COLLECTION AND FORWARDING OF ENEMY AIR MATERIEL

Except as necessary to remove injured personnel or put out fire, enemy "crashes" will be carefully guarded and not touched except as directed by ATI personnel. Local unit commanders will render such assistance as is requested by the ATI commander for guarding, handling and shipment of air materiel, unless it seriously jeopardizes their combat mission.

Except in the case of air "crashes," all air documents and air materiel captured or found in combat



A. Enemy ME-109 (Type of craft or missle) B. Crashed (Nature of occurrence-crash landed, exploded, etc.)

C. Time 1430 (of occurrence) D. 659234 (map coordinate-etc.) E. burned (Intact, burned, etc.

F. Crew one (number) G. dead (dead - prisoners, etc.)

H. Sgt. T.R. Brown 3rd Bn. 4th Inf. (Identity of Unit, agency, or individual, safeguarding materiel)

Smith, Capt, 3rd Bn. 4th Inf. (Name, rank, organization of originator)

Sample - Message:

ATIS HDQ 14AF

ENEMY AIR CRASH REPORT ABLE ENEMY ME 109 BAKER CRASHED
CHARLIE 121215 DOG ONE MILE EAST GRENOBLE (659234) EASY COMPLETE
WRECK BURNED FOX CREW ONE GEORGE DEAD COMPLETELY CHARRED HOW
SGTTR BROWN 3RD BTN FOURTH INF.

SMITH
CAPT 3RD BTN FOURTH INF.

areas will, if practicable, be moved through normal collection channels designated by the A-2 of the nearest Air Force unit, according to theater directives. Guarding of captured aircraft, supplies, air dumps, etc., and other materiel will be taken over from combat troops by air force military police under the direction of the responsible ATI officer, as soon as practicable.

The MP Commander will be notified as soon as the Intelligence examination has been completed and materiel will then be released to normal salvage.

DISPOSITION OF CAPTURED AIR MATERIEL

Air Materiel found after examination to have no further intelligence value will be released to salvage agencies by properly authorized ATI personnel in the field.

Air Materiel, which in the opinion of ATI Field personnel should be subjected to further technical examination, will be crated as necessary and transported to the Air Technical Intelligence Division or other designated place.

Air materiel requested by Air Materiel Command or other proper agency, or which in the opinion of the Chief, Air Technical Intelligence Section, should be forwarded to AMC for detailed analysis, will be properly crated, tagged, and shipped. Air shipment may be authorized by A-2 in special cases.

ATI personnel are responsible for notifying the technical intelligence agencies of other arms and services, of materiel which is a responsibility of those services, or in which there is reason to believe that they have an interest. Other technical intelligence personnel are likewise required to notify ATI concerning materiel of air interest.

ATI Clearance of Souvenirs and Trophies

After examination by properly authorized ATI personnel and found to have no further intelligence value, items of enemy air materiel, as are authorized in theater directives, may be cleared and given to troops as souvenirs. Authorized ATI personnel will be provided with proper rubber stamps marked "examined and cleared by ATIS,—Air Force." The souvenir or a document clearly identifying same will be stamped for clearance, dated and signed with the name and rank of the authorized ATI officer. When so authorized in theater directives ATI personnel are encouraged to utilize this convenient means of rewarding individuals for reporting, guarding and assisting in the crating and movement of captured materiel.

Name plates will never be cleared as souvenirs, but many other articles such as aircraft instruments; "Directions" and similar plates; gun sights; binoculars; pistons; flare pistols; compasses; etc., are eagerly sought after as trophies of war. Immediate and rigorous disciplinary action will be taken by all commanders against persons, not having an ATI souvenir clearance, found in the unauthorized possession of enemy air materiel.

In order to prevent duplicate reporting and re-examination of crashed aircraft, the ATI Section and the Operations officer of the field units will maintain an up-to-date "crash situation map" showing the location and condition (or removal) of all enemy crashes; and of all friendly crashes located off of recognized airfields. All crashes, friendly or enemy, away from the immediate vicinity of airfields, which are recognizable visually as such from the air or ground, and which cannot be removed or destroyed, will be clearly marked before being abandoned. Each individual wing, fuselage and tail, identifiable as such from the air, will be clearly marked in yellow or white paint with the letter X extending ⅔ the wing chord and width of fuselage. For ground observers the notice "Examined by ATIS—AF and abandoned. ________" will be
(Sig.)
prominently stenciled on each major section. ATI is responsible for marking enemy air materiel. The air unit handling or responsible for the friendly crash is responsible for marking same and for notification to the ATI Section or nearest field unit. The ATI Section will be notified of the exact location (and removal or abandonment) of all friendly as well as enemy crashes, by reporting units.

PROCESSING CAPTURED AIR MATERIEL AND REPORTS

Information obtained in the initial field examination by ATI Teams of air materiel is forwarded immediately to the ATI Field Unit for analysis and consolidation with other reports from other ATI teams, and is then forwarded to ATI section for final evaluation, analysis and necessary dissemination. Speed is essential in locating and getting the ATI Team to the scene of the crash. Likewise speed and accuracy are essential in their reporting the full results of their subsequent examination of the enemy materiel to the ATI Field units. Selected items of equipment are brought to the ATI Section for further analysis and specially qualified technicians in the section or in other ATI Teams may be sent to the crash.

In some theaters the ATI Section may have allied civilian or military laboratories or depots available for further detailed analysis and tests of important enemy materiel. A joint or combined Air Technical Intelligence Center (ATIC) may be organized to centralize and facilitate laboratory and other examination and the exchange of air technical intelligence information between various allied services.

DISSEMINATION OF AIR TECHNICAL INTELLIGENCE

ATI Summaries are issued at regular periods by each ATI Section and or at ATI Center for the dissemination of technical intelligence originating within the area. Special ATI reports or bulletins are issued as necessary to insure prompt release of special information. More comprehensive ATI summaries are published by the Air Materiel Command based on the reports from all field agencies, often supplemented by detailed laboratory and engineering examination and tests by AMC.

Combat interrogation of a fighter pilot may reveal that he encountered a new type enemy aircraft. His description of the aircraft, estimate of its speed, etc., will be checked against information from other sources and published immediately in an ATI Summary or Report. Combat interrogation of other pilots subsequently encountering the aircraft will furnish additional information or disprove the first report. Enemy crashes of the new model and prisoner of war interrogation will give further data. Finally an undamaged aircraft may be captured or an aircraft built up from the parts of numerous crashes. Flight tests of this aircraft will furnish accurate characteristics, performance, and operational data. The time elapsed between the first air encounter with the enemy aircraft and our flight test of an actual example may, however, take many months, even years. Technical information from all the various intelligence sources will, however, usually provide sufficient information that accurate performance estimates can be made by qualified technical specialists soon after the first discovery of the aircraft. Combat personnel are informed immediately, through ATI Summaries and Bulletins, of each new important technical intelligence of operational importance.

COMBAT REPORTS AND AIR CREW INTERROGATION

Technical intelligence is gained not only through physical examination of enemy air materiel but from any other sources, one of the most important of which is interrogation of combat air crews. First reports of a new weapon, new adoption, new tactic, or new employment usually come from interrogation of air crews returned from combat missions. Accurate reports of their encounters with the enemy, and detailed descriptions of some new or unusual occurrence, especially with pertinent on-the-spot notes, are invaluable contributions, to the defeat of the enemy. The factual report of a watchful, alert, pilot or crew will sometimes be an important key in the discovery of an enemy military secret. Our rapid development of counter-tactics and counter-measures in combat air operations depend on accurate reporting of combat experiences by air personnel.

Attention to detail, recognition of the unusual, and a genial ability to extract detailed information from the tired air crew at each routine interrogation are invaluable assets to the interrogator in producing intelligence.

ATI personnel participate in air crew interrogation only in special cases but depend on unit interrogation reports as one of their sources of technical intelligence.

Questions and Leads for Classroom Discussion

1. What is the purpose of Air Technical Intelligence?
2. What Air Force Agency is responsible for ATI?
3. On what basis is ATI organized?
4. What is the composition of a joint ATI section? A combined ATI section?
5. What does an ATI team usually consist of?
6. Discuss briefly the functions of the:
    a. Technical Intelligence Division, AMC.
    b. ATI Section, command or air force.
    c. ATI field unit.
    d. ATI team.
7. What is involved in handling enemy air materiel?
8. How is enemy air materiel collected, forwarded and disposed of?
9. What are sources of ATI other than enemy air materiel?

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CHAPTER XVI

FLAK INTELLIGENCE AND ANALYSIS

The processes of Flak Intelligence and Flak Analysis were conceived and developed during the years of World War II. By the spring of 1943 the decline of the *Luftwaffe* had speeded the development of enemy anti-aircraft defenses to an unprecedented degree. Flak had become so effective that it more than kept pace with our growing air effort.

As a countermeasure to this menace, the AAF established a flak intelligence and flak analysis program intended to reduce the high operational losses directly attributed to flak.

The name flak was derived from the German, "Flieger Abwehr Kanone" or "cannon against aircraft." This term was applied to all enemy anti-aircraft and has remained in use. However, since the end of World War II, new weapons and aircraft have introduced many new air defense problems which have increased the scope of the term.

These new problems have been reflected by various phases of the mission assigned to the Defensive Air Branch, Directorate of Intelligence, USAF. This mission includes:

a. Produce air intelligence on the defensive capabilities of alien air forces and on the defensive capabilities of all counter-air weapons of foreign nations against offensive air operations and coordinate with the Intelligence Department, Air Materiel Command.

b. Analyze the capabilities of surface-to-surface, air-to-surface, and air-to-air guided missiles and their technical features now developed or contemplated by all alien countries.

c. Analyze electronics as applied to detection, identification, guidance, control, and communications, existing or contemplated in all alien countries.

d. Analyze foreign nuclear physics activities as applied to guided missiles and airborne equipment; and foreign biological activity as applied to guided missiles and airborne equipment.

e. Analyze the capabilities, characteristics, and performance of all conventional and non-conventional foreign aircraft and aircraft engines and their existing or contemplated technical features.

f. Process all information on foreign land-based and shipborne anti-aircraft artillery, and surface-to-air missiles, including technical information on performance characteristics of weapons and fire control instruments, current tactical doctrine, techniques of employment, and order of battle.

g. Collaborate in developing new and improved methods of analyzing all types of enemy land-based and shipborne anti-aircraft defenses and in preparing flak computers and other special equipment for facilitating and improving current methods of flak analysis. This includes liaison and collaboration with the Flak Analysis Section of the AA School.

FLAK INTELLIGENCE

Flak Intelligence, as one of the sources of intelligence information, is that part of air intelligence concerned with the collection, processing and dissemination of information on enemy ground-based air defenses and with avoiding or counting such defenses during operations in order to reduce their effectiveness. The term, Flak Intelligence, embraces a consideration of active and passive means of ground-based air defenses. It does not include airborne defense weapons such as fighter aircraft and air-launched missiles.

Flak intelligence provides flak officers with basic data required to analyze flak defenses. Based on this analysis, the flak officer reports information necessary for the planning phase of air missions of many different types including airborne and para-troop attacks. These reports give specific information including the location and probable intensity of route flak and the necessary evasive tactics required to minimize effects of that fire. They also include an analysis of all enemy anti-aircraft defenses in the vicinity of the proposed target as an aid to determining data for the mission on the initial point, altitude of attack, favorable and unfavorable axis of attack, evasive action procedures prior to bomb runs, and action after bombing.

Flak intelligence also provides data needed by both air and ground units who employ countermeasures against the flak defenses. For example, it contributes much valuable data to the general intelligence task of locating enemy ground concentrations because these units are often employed in quantity to protect troop and supply establishments. Also, it provides valuable data for use in the development of our air force formations and air maneuvers which minimize the capabilities of enemy anti-aircraft equipment.

Flak intelligence is produced from information which is obtained from three main sources.

The first of these, photo interpretation, is by far the most prolific, accurate, and dependable source. It must be emphasized that photo interpretation for flak must be accomplished with accuracy, dispatch, and from a central interpreting center. Central interpretation makes possible the elimination of duplication which has been the cause of many inaccuracies in flak data in the past.

The second major source of flak intelligence is the multitude of operations reports and interrogations which every air unit initiates immediately after a mission is completed. During World War II, this chain of intelligence produced much useful data on enemy defenses not obtainable from photo sources.

The third source of flak intelligence comprises miscellaneous sources, such as prisoner of war interrogation, captured documents, examination and test of captured material, and electronic countermeasure reconnaissance.

FLAK ANALYSIS

Flak analysis is that part of flak intelligence which evaluates the relative chance for damage and loss of combat aircraft or missiles when any one or more of a group of variables which effect the efficiency of the defense is altered The chief variables are:

a. Vulnerability and spacing of aircraft.

b. Capabilities of defending weapons.

c. Speed and altitude of approach.

d. Speed and direction of wind.

e. Number and disposition of defending weapons.

f. Aircraft heading.

The planning of air operations against an enemy must include provision for the defense of the participating aircraft against both enemy air opposition and enemy anti-aircraft defenses. In some cases, these two provisions conflict. For example, compact bombing formations usually offer the best defense against enemy fighters, but at the same time such a formation offers a better target to enemy anti-aircraft gunners. It follows then that types of defense measures employed are contingent on the character of the enemy opposition.

The first logical step to reduce flak loss and damage is to avoid exposure to anti-aircraft fire or guided missiles whenever possible. Specifically, combat crews are briefed on the location of enemy flak batteries and navigators avoid these positions by accurate route navigation. Good flak analysis assists proper route selection, evasive action, and countermeasures. The strategic flak map is of great assistance in selecting the best route because it shows the overall picture of AA defenses over enemy-held territory to the target. Routes can be selected with a view not only of avoiding flak areas but also with due regard to weather, time of attack, and range capabilities of the aircraft. Prudent and accurate routing of combat missions is an important part of any air operation.

The best method of lowering the efficiency of enemy defenses at a target is to discover and exploit the weak spots. Flak analysis discovers these weak spots and provides information for exploiting them and determining gun-defense effectiveness. This is defined as the total expected number of hits from a battery or batteries on the ground and it is calculated by summing up all the hit expectancies for all the bursts delivered on a target. Flak computers are used which take into account all of the theoretical factors which combine to indicate the true effectiveness of a gun-defended area. Computers are individually constructed to a set of given data, dependent on composition of the defense and the type of defense employed. When an AA battery attempts to place a burst at a certain point in space, a number of factors cause scattering of the bursts. This scatter effect is called dispersion, and the cluster of bursts in the sky is called dispersion volume. At short ranges for mechanically fuzed ammunition the transverse errors are smaller than the range errors, thus the dispersion volume appears egg-shaped, with the long axis along the trajectory. At long ranges, the reverse is true and the dispersion volume looks like a door knob. The dispersion volumes at the longer ranges can contain an entire formation of 18 bombardment aircraft in combat box stagger, and all planes in the formation contribute to the hit expectancy of any burst.

The results of this analysis of the target area may be presented in several forms. One is the Flak Clock, which shows the best "in" and "out" courses in green with low priority figures in red with high numbers. This clock is the final result of a target flak analysis and forms part of the recommendation of the attack axis or sector which the flak officer makes in the mission planning conference. Depending on all factors, such as navigator requirements, sun, and weather, the final axis of attack on the target is actually selected by compromise.

The important point to remember is that flak MUST be considered on all air missions. Flak is like fire: Neither can be disregarded; both must be respected. Fire makes both fire prevention and a fire department necessary. Flak opposition demands both flak intelligence and flak analysis. In addition, flak analysis techniques must be studied and modified to insure effectiveness against future ground-to-air defenses (e.g., rockets and guided missiles) as well as against present anti-aircraft artillery.

GLOSSARY OF FLAK TERMS

ALTITUDE.—The vertical distance to a point in space from a horizontal reference plane, usually the horizontal plane containing the battery.

ANTI-AIRCRAFT.—Any artillery used against aircraft. In the broad sense this term includes searchlights, balloons, warning nets and all ground installations used in the engagement of hostile aircraft.

AUTOMATIC WEAPON.—See "Medium Flak."

BARRAGE FIRE.—Anti-aircraft fire having for its purpose the placing of a curtain or barrier, executed on predetermined firing data, across the probable course of enemy aircraft.

BARRAGE JAMMING. — The simultaneous jamming of a number of adjacent channels or frequencies.

CHAFF.—Electromagnetic wave reflectors in the form of narrow metallic strips used for creating radar echoes for confusion purposes. See also *Window* and *Rope*.

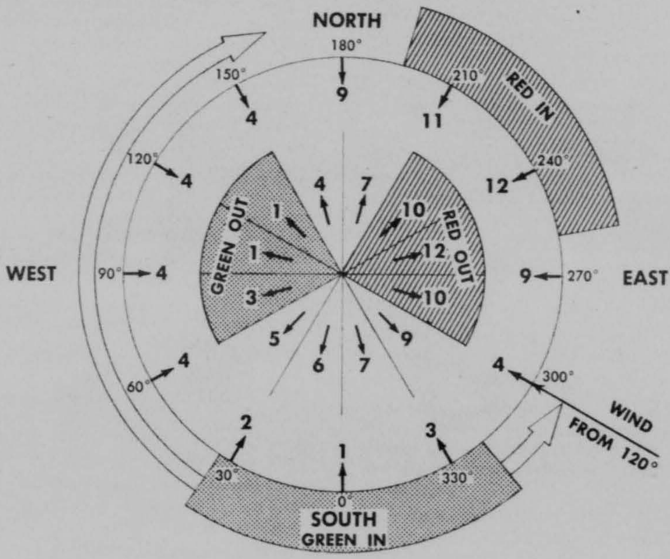
CHANCE OF DAMAGE.—The summation of the chances of being hit by anti-aircraft fire when passing along a crossing course within range of gun batteries. This equals the "effectiveness."

COMBAT MANEUVERS.—See "Evasive Action."

COMPUTER, FLAK.—A series of curves of fire effectiveness drawn to scale, used in the determination of the effectiveness of anti-aircraft guns, automatic weapons, and in the near future surface-to-air missiles against aerial targets flying along various courses.

CONTINUOUSLY POINTED FIRE.—A system of fire control which results in the placing of a line of anti-aircraft artillery burst along and continuing with the target aircraft. If the fire is inaccurate and the gun density high, however, the impression may be gained that barrage fire is being employed.

FLAK CLOCK


NORTH
180°
9
150°
4
210°
11
RED IN
120°
4
240°
12
4
7
GREEN OUT
1
1
3
10
12
10
RED OUT
WEST
90°
4
9
270°
EAST
5
6
7
9
60°
4
4
300°
WIND
FROM 120°
2
1
3
30°
330°
0°
SOUTH
GREEN IN

COMPUTED ASSUMING A WIND OF 50 M.P.H. FROM 120°

TARGET: A

DATE: 20 APRIL

RECOMMENDED ROUTES

(1) IN - DIRECTION OF FLIGHT ➡ 0°
OUT - DIRECTION OF FLIGHT ➡ 300°
(2) IN - FROM SOUTH AND TURN LEFT INTO WEST SECTOR.

NOTE: STAY OUT OF THE NORTH-EAST SECTOR

NUMBERS AT ENDS OF ARROWS SHOW PRIORITIES OF APPROACH AND WITHDRAWAL

The flak clock shows in graphic form recommended priorities of approach and withdrawal.

CROSSING COURSE.—The horizontal course of an airplane which is within range of an anti-aircraft gun battery, but which does not pass vertically over the battery.

CROSSING COURSE FOR MAXIMUM EFFECTIVENESS.—A crossing course tangent to the dead zone of the battery. Along this course the chances of damage are greater than along any other straight line course at that altitude.

DAMAGE, CHANCE OF.—A term sometimes used to denote effectiveness of anti-aircraft fire or surface-to-air missiles.

DEAD ZONE.—The area directly above a gun position in which the gun cannot fire because the quadrant elevation cannot exceed a definite value (70° to 85°).

DIRECTOR.—A predictor, or fire control instrument which, electrically or mechanically, continually calculates the firing data pertaining to the future position of the target.

DUAL PURPOSE GUN.—A gun so designed and constructed that effective fire may be delivered against either aerial or surface targets.

EFFECTIVE CEILING AA.—The maximum vertical range for a directly approaching aircraft at 300 miles per hour which can be engaged for 20 seconds with the last round fired at a quadrant elevation of 70°.

EFFECTIVE GUN CIRCLE.—The horizontal cross-section of the limiting envelope at a constant altitude. The radius of the effective gun circle is the maximum horizontal range of the gun at that altitude.

EFFECTIVENESS.—The summation of the hit expectancies of all rounds or missiles fired at a given aerial target.

ELECTRONIC COUNTERMEASURES.—That major subdivision of the military use of electronics involving actions taken to reduce the military effectiveness of enemy equipment and/or tactics employing or affected by electromagnetic radiations.

ELECTRONIC DECEPTION.—The radiation or reradiation of electromagnetic waves in a manner intended to mislead the enemy in the interpretation of data received by his electronic equipment. This does not include manipulative and/or imitative communication traffic.

ELECTRONIC JAMMING.—The deliberate radiation or reradiation of electromagnetic waves with the object of impairing their use by the enemy.

ELECTRONIC SEARCH OR RECONNAISSANCE.—Search for electromagnetic radiations to determine existence, source, and pertinent characteristics.

EVASIVE ACTION.—Maneuvers of a single airplane or formation (turns, changes of altitude and speed) designed to decrease the accuracy of opposition. At high altitudes, or for airplanes in formation, evasive action is normally gentle, or gradual. For airplanes encountering fire at short ranges, evasive action is normally violent, involving rapid changes of course, altitude and speed.

FIRE CONTROL.—All operations connected with the preparation and actual application of effective fire upon a target. Instruments, such as aiming circles, range finders, telescopes, director, radar, etc., which determine the directing and sighting of the guns or missiles, are known as "fire control instruments."

Fire, Intensity and Accuracy of.

a. Heavy Flak

1. Accuracy

Accurate: Burst in close proximity so that airplane is either hit or rocked. Inaccurate: Burst beyond danger area and no hits obtained.

2. Intensity

Meager: Less than 2 burst per second. Moderate: From 2 to 5 burst per second. Intense: Over 5 burst per second.

b. Medium and Light Flak

1. Accuracy

Accurate: Tracer streams in close proximity to plane and/or hits obtained. Inaccurate: Tracer streams well away from planes and no hits obtained.

2. Intensity

Meager: Less than 4 weapons in action. Moderate: 4 to 12 weapons in action. Intense: Over 12 weapons in action.

(Note: No standards for accuracy or intensity of surface-to-air missiles have as yet been established due to present state in the development of the weapon.)

FIRING TABLE.—A table or chart giving the data needed for firing a gun accurately on a target under standard conditions, and also the corrections that must be made for special conditions, such as winds or variations in temperature or muzzle velocity. A set of firing tables is made for each weapon.

FLAK NEUTRALIZATION.—The reduction of the volume or accuracy of anti-aircraft fire or surface-to-air missiles by application of active countermeasures to these installations. The process may include actual destruction of personnel and materiel or temporary interference with the delivery of actual fire.

FLAK.—Foreign anti-aircraft artillery and surface-to-air missiles. The term originated from the German *Flieger Abwehr Kanone,* or cannon for use against aircraft in World War II. The fire of such weapons.

FLAK ANALYSIS.—That part of flak intelligence which deals with the determination of the effectiveness of anti-aircraft fire and surface-to-air missiles, including the capabilities of specific defenses.

FLAK CLOCK.—A graphic presentation of the expected effectiveness of a flak defense for various headings of attack.

FLAK INTELLIGENCE.—That part of air intelligence which deals with enemy anti-aircraft artillery and surface-to-air missiles.

FLAK MAP.—A map of flak-defended area on which are plotted the positions and numbers of surface-to-air launchers; light, medium and heavy anti-aircraft guns; searchlights; radar and other appropriate defense installations.

GROUND SPEED.—The speed of the airplane relative to the ground. The ground speed is the vector sum of the air-speed and the speed of the wind. Ground speed is designated as Vg.

HEAVY FLAK.—Large caliber foreign anti-aircraft guns, 75mm and larger. The fire of such weapons.

HORIZONTAL RANGE (AA). — The length of the base of the vertical right triangle in space, the vertical side of which is the altitude and hypothenuse of which is the line of sight between gun or director and airplane.

INITIAL POINT, IP.—A landmark used for navigation purposes over which the turn is made toward the target prior to bombing run by piloted aircraft.

LIGHT FLAK.—Small caliber foreign anti-aircraft machine guns, less than 20mm in caliber. The fire of such weapons.

LIMITING ENVELOPE.—When points in space, which represent the maximum horizontal ranges for all altitudes, are connected by a continuous line, this curve is called the limiting envelope. The maximum range for any altitude is limited by the muzzle velocity and the maximum time of fuze burning. Mathematically, the limiting envelope is the focus of all points on trajectories for the time of flight for maximum fuze range.

MAXIMUM CEILING (AA).—The maximum vertical range of a projectile. This is limited in heavy anti-aircraft by the maximum fuze range.

MEDIUM FLAK.—Foreign anti-aircraft weapons from 20mm to 75mm in caliber. The fire of such weapons.

MID-POINT.—The point on a crossing course when the airplane is nearest to the target.

PREDICTED CONCENTRATION. — Anti-aircraft fire in which one or more sets of fixed firing data are used to aim fire at one or more future positions of the target.

PROBABILITY.—The chance of a single shot being a hit.

QUADRANT ELEVATION.—The vertical angle between the horizontal and the axis of the bore when the gun is ready to fire.

RADAR.

a. The principle of locating reflective targets or objects by the measurement of the reflected pulses of radio frequency energy.

b. A term applied to devices which make use of the radar principle. (The word was derived from a contraction of the phrase "Radio Detection and ranging.")

RADAR CONTROL.—General term applied to radar used for:

a. Control of fighters in interception missions.

b. Control of guided missiles.

c. Control of aircraft engaged in close co-operation missions.

d. Fire control.

RADAR, EARLY WARNING.—Long range search radar in which accuracy in the exact positioning of the target has been sacrified for range.

RADAR, GUN LAYING.—Gun-laying radar or fire control radar. Radar furnishing position data accurate enough for computation of gun firing data (by a director).

RADAR, SEARCHLIGHT CONTROL. — A radar furnishing position data sufficiently accurate for control of searchlights.

RADCM—RADAR COUNTERMEASURES AND DECEPTION.—This includes all electronic countermeasures against radar.

RATE OF FIRE MAXIMUM—The greatest sustained rate of fire in rounds or missiles per minute of which a gun, weapon, or launcher is capable. This equals the cyclic rate in automatic weapons when the operation is fully automatic.

RATE OF FIRE PRACTICAL.—The rate of fire, in rounds or missiles per minute, capable of being attained by an average crew with a particular weapon.

ROCCM—CONTROLLED DEVICES COUNTERMEASURES.—This includes all electronic countermeasures against guided missiles, pilotless aircraft, proximity fuzes and similar devices.

ROPE (electronics).—Electromagnetic wave reflectors, consisting of long strips of metal foil. A small parachute or other device may be attached to each strip to reduce rate of fall. See *Window*.

SATURATION.—The presentation to a flak defense of more aerial targets per unit of time than can be engaged effectively by that defense.

SCOPE.—An oscilloscope or cathode ray tube indicator.

SEEN FIRE.—Anti-aircraft fire directed by fire control instruments in which the target is tracked visually. Present slant range or altitude may be determined by other visual means.

SLANT RANGE (AA).—The distance in yards from the gun to the predicted position of the target airplane. The slant range is the hypothenuse of the vertical right triangle in space, the vertical side of which is the altitude and the base of which is the horizontal range.

SMOKESCREEN.—Curtain of smoke used to mask either friendly or enemy installations or maneuvers.

SPOT JAMMING.—The jamming of a specific channel or frequency.

SURFACE-TO-AIR MISSILES. A guided ground-launched missile to counter any air attack by piloted or pilotless aircraft or missiles.

TIME OF FLIGHT.—The elapsed time from the instant of departure of the projectile to the instant of impact or the instant of burst. In a crossing course this varies from the time for maximum fuze range at the effective gun circle to seconds at mid-point.

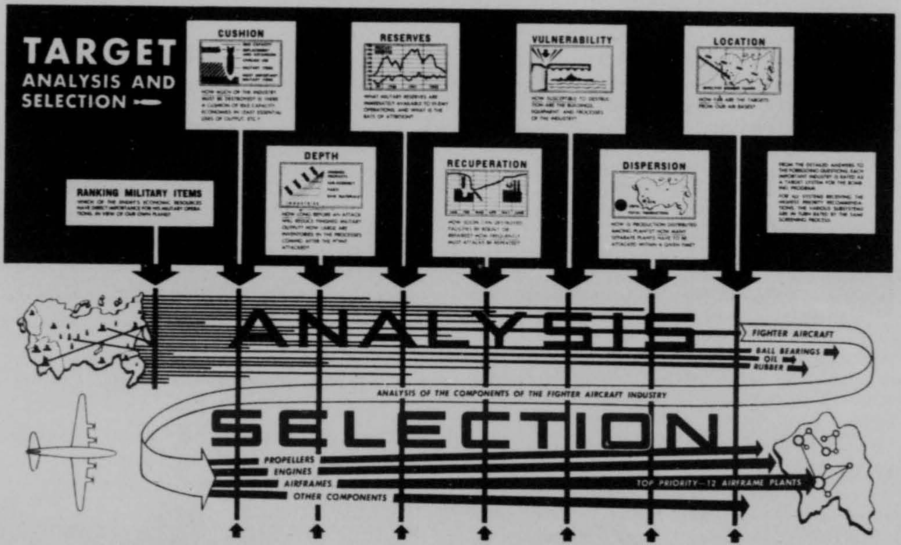
UNSEEN FIRE.—Anti-aircraft fire directed by non-visual position-finding instruments at night or during periods of low visibility.

TOTAL EFFECTIVENESS.—The total chance of damage along a crossing course when the airplane is first fired upon at the effective gun circle for that altitude. The "contour" curves of the Curve VII are for the total effectiveness. In order to measure effectiveness a difference reading must be taken between two of these curves.

WINDOW.—The name for strips of frequency-cut tinfoil, metal, wire, or bars usually dropped from planes or expelled from shells or rockets as a radar countermeasure.

Questions and Leads for Classroom Discussion

1. The name "flak" was derived from "__________ __________ __________"?
2. What are four phases of the mission assigned to the Defensive Air Branch, Directorate of Intelligence, U. S. A. F.?
3. What is provided by flak intelligence?
4. What are three sources of flak intelligence?
5. What is flak analysis?
6. What is a "flak clock"?
7. How is the final axis of attack selected?


TARGET
ANALYSIS AND
SELECTION
CUSHION
RESERVES
VULNERABILITY
LOCATION
DEPTH
RECUPERATION
DISPERSION
RANKING MILITARY ITEMS
ANALYSIS
FIGHTER AIRCRAFT
BALL BEARINGS
OIL
RUBBER
ANALYSIS OF THE COMPONENTS OF THE FIGHTER AIRCRAFT INDUSTRY
SELECTION
PROPELLERS
ENGINES
AIRFRAMES
OTHER COMPONENTS
TOP PRIORITY—12 AIRFRAME PLANTS

CHAPTER XVII

TARGET INTELLIGENCE

INTRODUCTION

"The mission of Air Power is to force the capitulation of an enemy nation through air attacks or threats of air attacks."

Without target intelligence the Air Force mission could not be accomplished. Ignorance of the various enemy target systems on the part of any air force results only in a fruitless expenditure of energy, a misuse of air power and a failure to reduce the enemy's ability to wage war. Witness the *Luftwaffe.*

In the early part of World War II our own inability to properly select targets effectively prevented us from deriving the utmost benefit from our bomber and fighter efforts. Many of the targets selected for attack did not materially affect or reduce the enemy's war potential. However, as the war progressed and our technique developed, more and more selective damage was inflicted on the enemy with telling results.

The demanding requirements of modern war have rapidly diminished the margin for error and forced the development of target intelligence into an exceedingly complicated affair. It is recognized that time, more than ever, will be the essence of success in the waging of war in the future, and the ability to deliver a vital crushing blow on the enemy without delay is a paramount necessity. This factor, plus the natural limitations imposed by the costly expenditures of bombing missions in terms of highly trained personnel, equipment, and energy make precise and correct selection of targets an absolute requirement. Each factor relating the target to the enemy's war-making ability must be carefully evaluated in order to establish correct priorities for destruction.

The present target system of the Air Forces is based on past experience and attempts to give world coverage. Information in many instances is incomplete and great effort will be necessary to obtain complete and up-to-date intelligence.

A state of global war presents innumerable targets and the proportionate striking forces available at any one time are necessarily limited due to the factors previously mentioned.

Realization of this fact resulted in the development of the science of target evaluation and priority rating as it is practiced today. The procedures involve an exhaustive study of the potential enemy's entire industrial and economic system. These strategic studies determine the pressure points and bottlenecks in his war potential and indicate his sensitivity to their destruction.

Before proceeding on to the principles employed in the selection of strategic targets, it may well be noted that industrial dispersion, particularly over a large land mass, may considerably nullify the effects of indiscriminate atomic bombing. As such dispersion is an obvious and logical action on the part of a potential enemy, target intelligence assumes an added importance in the waging of atomic war. (Discussion of atomic warfare is not within the classification of this handbook.)

STRATEGIC TARGETS

Strategic targets are pre-selected objectives, vital to the industrial support of the enemy's war potential. Targets in this general category include oil and steel centers, hydro-electric plants, aircraft factories, armament and automotive plants, transportation hubs, etc.

In strategic target selection, industries are selected for attack in accordance with the following principles:

a. Upon the basis of their immediate importance to the war machine of the enemy.

b. Their relative importance to the entire industrial system.

c. Their vulnerability to attack.

The selection is, in fact, simply a process of elimination based on certain well designed criteria. Logically then, the purpose and plan of strategic bombing may be defined as, *"The progressive destruction of concentrated material and reserves."* It is generally agreed that the most menacing capabilities of the enemy are found in his reserve. At this point materiel is ordinarily more decisive than personnel. This reserve position when limited to materiel includes:

a. Strategic Targets

1. Productive capability.
2. Completed materiel under centralized control.
3. Means of distribution of materiel to support particular engagements.

b. Tactical Targets

1. Materiel in immediate support of particular engagements.

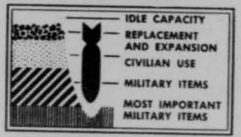
The function of strategic bombing is to interfere with the enemy's ability to produce military supplies and thus affect his replacements at the front. The emphasis here is upon interference with production, in order to weaken the enemy's front line strength by making it impossible for him to replace the losses he suffers by attrition from our tactical attack.

In planning a program of strategic bombing, the whole economy of the enemy will be spread out before us as a possible bombing target. This economy is divided into target systems, each of which will have its own particular bottleneck or pressure point.

FACTORS WHICH DETERMINE TARGET SELECTION

The following criteria determine the selection of targets and the priority rating which each one should have:

CUSHION



HOW MUCH OF THE INDUSTRY MUST BE DESTROYED? IS THERE A CUSHION OF IDLE CAPACITY, ECONOMIES IN LEAST ESSENTIAL USES OF OUTPUT, ETC.?

Cushion

How much excess capacity exists within the industry? What percentage of the total production goes to non-essential use? What is the position of his stock-piled reserves?

It is said that any industry is protected in some measure by economic cushion, both internal and external, which may be drawn upon in emergency to overcome actual or threatened impairment of the output. Utilization of such economic cushions by one industry is almost always at the expense of other industries. Thus, the managers of the war economy must decide in each case whether the restoration

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or maintenance of output in a particular industry is of sufficient importance to warrant sacrifice of other production. The criterion that we call cushion is merely a consideration of the capacity that must be destroyed before it has been reduced to such a critical point that the enemy's military strength is seriously affected. The enemy can usually suffer some loss of capacity without critical consequence. The problem is to determine for every industry where this point occurs and how much of the capacity has to be knocked out before the critical point is reached. Consideration of the cushion of a potential target must always involve a detailed study of the consumption pattern of the product. This pattern will disclose the proportions of the output going respectively into:

a. Strategically important military end items.

b. Insignificant military end items.

c. Capital equipment.

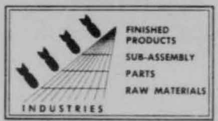
d. Civilian goods.

With this knowledge it will be possible to ascertain how specific the effect of attacking the industry will be and what economies the enemy will probably be able to effect by cutting down low priority uses. For example, the enemy might be in the position to reduce the proportions ordinarily devoted to the production of capital equipment and civilian goods. This proportion can often be reduced quite drastically, and the enemy's capacity for tightening his belt should not be underestimated.

Very often further reduction can be made in civilian consumption long after it is believed that the irreducible minimum has been reached. Part of the cushion, too, is the excess capacity which may exist in the industry. It may be possible for the enemy to increase production in plants which were idle. If idle capacity in the same industry is not available, the enemy may be able to convert facilities in other industry to produce the product. For example, the Japanese had so constructed their cement plants that they were able to convert them in three to six months into aluminum plants, thus adding considerable cushion to the aluminum industry. In Japan, 80% of all aluminum produced went to the aircraft industry. When our bomber forces attacked and wrecked the aircraft engine plants and airframe plants, the requirements for aluminum decreased with the result that that industry had an ever growing cushion in the stockpile of materials on reserve.

There is the further possibility that the enemy may use substitutes for the particular product turned out by the industry under consideration. In general, it might be said that the more diversified the use of the particular product, the greater choice the enemy has in determining where the loss of output is going to fall. It is essential in analyzing any industrial target to imagine what an enemy Board of Allocation would do in the event the output dropped 50%. In this way it is possible to envisage where the blow would fall in the event of serious loss of output, and the consequences of an attack on a particular target system can then be approximated.

DEPTH



HOW LONG BEFORE AN ATTACK WILL REDUCE FINISHED MILITARY OUTPUT? HOW LARGE ARE INVENTORIES IN THE PROCESSES COMING AFTER THE POINT ATTACKED?

Depth

Our second consideration is that of depth. In judging the value of attacking any target system, we are concerned with the depth of that target or the time lag. How quickly will loss in production be felt by the armed forces? How soon will the attack affect the enemy's military strength, particularly his front line strength? This time lag is the thing that determines the depth of the target and consists of:

a. The time of manufacturing or processing cycle.

b. The time required to move the military end product up to the front line.

For our purposes, it is particularly important to consider the length of the so-called manufacturing cycle. If, for example, aluminum factories are attacked, the time between the destruction of the factory and the effect on front line aircraft strength will be much longer than if the air force attacked aircraft assembly plants which are, of course, turning out the final end item. In other words, the closer one comes to the raw material or semifabricated stage, the longer it takes for the destruction of output to affect the military front-line strength of the army. It is obvious, therefore, that depth is of extreme importance.

If, for example, an invasion of enemy territory within two months is contemplated and the strategic bombing program must be geared to that objective, it will not pay to go after targets like the steel industry, the destruction of which might not be felt for six or seven months. Only those targets should be selected which lie at or in the semi-fabricated or final fabrication steps, because their destruction will have a quick effect on the enemy's military strength.

The depth of the potential target system has other implications. The deeper the target, the greater possibility of cushion at the various stages of the whole productive process. This factor alone gives the enemy some opportunity to adjust himself to the loss of output by utilizing the reserves at various stages in the manufacturing cycle. The deeper the target, the greater the likelihood that part of the output may have a low priority and that economies can be made. Steel might be a case in point. It has many uses, so it is probable that at least some adjustment can be made by reducing the lower priority uses. Hence, there would be a sufficient cushion to guarantee material for the production of high priority military end products.

WHAT MILITARY RESERVES ARE IMMEDIATELY AVAILABLE TO ENEMY OPERATIONS, AND WHAT IS THE RATE OF ATTRITION?

Reserves

What military reserves are immediately available to enemy operations and what is the rate of attrition?

Initial conclusions on available enemy reserves may be reached by consideration of a number of factors.

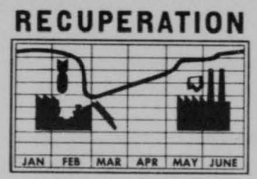
a. The enemy's attitude toward war as an instrument of policy and the amount of his peacetime economy diverted into his military establishment.

b. The probable length of time he was preparing for a state of active war.

c. His capacity for stock-piling certain expendable materials.

d. An evaluation of the enemy's estimate of his initial requirements for replacement based on definite time intervals.

Evaluation of available reserves, as a continuous project, will base its findings on an analysis of the enemy's gains by capture, losses by attrition, and his ability to replace and move his reserves to where they are needed.



HOW SOON CAN DESTROYED FACILITIES BE REBUILT OR REPAIRED? HOW FREQUENTLY MUST ATTACKS BE REPEATED?

Recuperation

How long will it take the damaged productive capacity to be repaired or otherwise replaced? For example, an aircraft assembly plant would have to have buildings of certain dimensions, and it would be safe to figure on the time necessary to build such a building. In some industries, special equipment and machinery would require a long time to replace whereas in other industries, machinery could be taken from plants manufacturing a low priority end product or equipment in low priority plants could be converted to the manufacture of high priority military end products. We must know for what period the plant and equipment can be knocked out and how quickly it can be replaced and repaired. The period of recuperation or repair has an obvious bearing on the frequency of attack which is required. If the damaged plant or equipment can be restored in three months, it means that the attacks must be repeated three or four times a year. However, if parts of another industry can be put out for nine months at a time, one would obviously choose targets in that industry over those in an industry that can be restored in three months, all other things being equal.

The recuperative period is determined by several factors. The buildings in which the operations take place are usually specialized for some manufacturing processes and not at all specialized for others. In some industries production can be carried out in almost any building, the salvaged equipment easily transferred and operations resumed very quickly. If, on the other hand, production requires a specialized building as we mentioned in aircraft assembly plants, it might not be too easy for the enemy to find another building in which to carry on the manufacturing operations. The second factor affecting recuperation is the extent to which the equipment within the building is specialized and custom made. Certain kinds of equipment are fairly standard and can be bought in the market. If general purpose tools are damaged, for example, they may be replaced rather quickly from the manufacturer's stock or borrowed from lower priority plants. On the other hand, if the machinery is special purpose and built to order, the period of recovery or replacement would be longer, thus decreasing the frequency with which the same facilities have to be attacked.

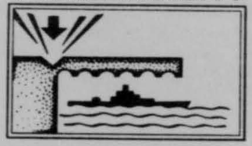
Another factor bearing on recuperation is the time required for the resumption of output once the equipment and plant have been replaced. Some products require only a day or two to manufacture; others require several months; and still others, such as large turbines, for example, would require eleven or twelve months. Thus, if a turbine plant were destroyed, the enemy would get no output both during the time required to replace the plant and equipment and also during the eleven months required to manufacture the finished product. This estimate of eleven months is based on two assumptions:

a. That the plant is virtually self-sufficient and that it produces all the components and parts for turbines.

b. That all the materiel in process would be rendered unfit or completely destroyed.

These two assumptions might not be correct in the majority of cases. It should be stressed, however, that the length of the manufacturing cycle must be taken into consideration in calculating the period of recuperation, the period required before the finished output is restored and ready for use.

VULNERABILITY



HOW SUSCEPTIBLE TO DESTRUCTION ARE THE BUILDINGS, EQUIPMENT, AND PROCESSES OF THE INDUSTRY?

Vulnerability

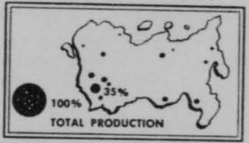
How susceptible are the units within the target system to destruction by bombardment? In assessing the susceptibility of any target system to attack, we must consider the nature of the manufacturing or productive process. It must be ascertained, for instance, whether combustive or explosive materials are utilized. It is important to consider the degree to which the production process is integrated. One can roughly divide industrial processes into two classes:

a. A continuous process.—Most of the industries using this type of production are found in the chemical field, such as the manufacturers of synthetic ammonia or synthetic oils. This process involves the continuous flow and transformation of new material through successive stages into the final product. If the process is interrupted at any particular stage, operations in the entire plant come to a halt.

b. The other type of process is found in the metal working or mechanical industries and does not have the same degree of continuity in operation. There are usually many more units of equipment utilized at each particular stage, so that it is less easy to interrupt the process permanently and bring the operation in the entire plant to a halt.

Susceptibility to damage is also determined by the nature of the manufacturing equipment. Is it of heavy construction and hard to damage? Is it custom built and difficult to replace? Is the machinery of a common type which could be borrowed from a lower priority industry? We need to know whether the equipment is delicate, whether it does high precision work and if it is susceptible to damage by ground shock sustained through near-miss bomb hits. Another factor about which we should have information is the nature of the buildings utilized in the industry and, particularly, of the existence of structural characteristics common to the entire industry. We know the engineering industry which

DISPERSION



HOW IS PRODUCTION DISTRIBUTED AMONG PLANTS? HOW MANY SEPARATE PLANTS HAVE TO BE ATTACKED WITHIN A GIVEN TIME?

turns out heavy industrial products and is engaged in forging, casting, etc., would have one type of building, probably of heavy, solid construction. On the other hand, those plants engaged in light manufacturing processes would be housed in a lighter type of building more susceptible to damage. Under this criterion we are concerned about that portion of the industry which is operating underground, and if so, how far under.

Dispersion

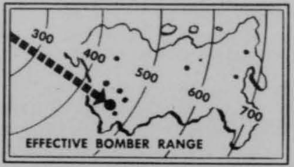
On the basis of this criterion, several very profitable target systems offered themselves to our B-29's. For example, four plants were producing 80% of all Japanese electronic equipment, and three of these plants were located in Tokyo. This lack of dispersion not only simplified the problem of selecting our strategic targets but added greatly to the ease with which they could be attacked.

The aircraft industry posed another problem in that over a thousand plants, producing component parts, were scattered throughout the large cities of Japan with the production pattern going deep into the residential areas. Every neighborhood was organized to utilize the productive capacities of the home including the labor of children. Thousands of hand operated presses, as well as automatic presses, were stamping out parts for these component industries that were supporting the aircraft and electronic industries. The dispersion, then, of Japanese industry into the home areas not only invited but made necessary the pattern fire bombing which they received.

Dispersion is a factor that has an important bearing on the overall vulnerability of any target system. This criterion will aid in determining the ability of a limited air force to achieve that essential reduction in capacity which substantially affects the frontline military strength. We consider not only the number of plants within a target system and how close they are together, but also the extent and area of each individual plant. For example, steel plants usually cover an enormous area. The buildings in the plant are widely spaced and there is a lot of empty space on which the bombs could fall harmlessly. The proportion of vital equipment within any plant to the total floor space will indicate the number of bombs which must be dropped on the plant.

In the last analysis we want to know how many sorties per year are necessary to achieve and maintain the desired curtailment of output; and the number of sorties that are necessary to determine the overall vulnerability of the target system or the individual target within a system.

LOCATION



HOW FAR ARE THE TARGETS FROM OUR AIR BASES?

Location

What percentage of the particular target system is within effective bombing range and will the requirements for the desired degree of destruction be within the capabilities of our Air Force? These capabilities are subject to the factors of range and numbers and types of aircraft available. In the Pacific the choice of strategic targets initially was limited by the element of range alone. However, as soon as forward bases brought the whole economy of Japan within range of our attack, targets were selected on the basis of the other criteria we have just discussed.

TACTICAL TARGETS

Tactical targets are divided into three classifications:

a. High priority targets: Neutralization of enemy air effort, fighters and bombers in order to attain air superiority.

b. Neutralization of airfields, supply dumps, enemy troop concentrations, etc.

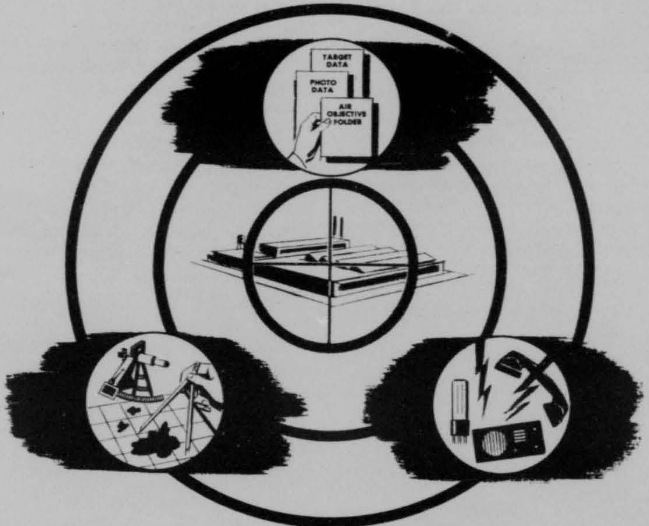
c. Direct support of ground forces and continuing interdiction of the battle area.

Of these three classifications, the first is SOP. Obtaining air superiority is the highest priority target and must be accomplished before anything else can be done. Regarding second and third classification targets, it is SOP to have daily reconnaissance missions over the entire area, both photographic and visual, weather permitting. Missions conducted against second classification targets are for the purpose of isolating the battlefield, preventing the enemy from bringing supplies and troops, and preventing the enemy from using any airfield located near the battlefield itself.

Targets attacked in support of ground forces are normally targets selected by the ground force commander in the area. The commander is normally advised by an air liaison officer who forwards the request through air channels and frequently directs the strike from an observation post. Usual targets are strong points, armor, gun batteries, enemy troop concentrations, etc.

Questions and Leads for Classroom Discussion

1. How does Target Intelligence affect the mission of air power?
2. Define strategic targets.
3. What are the three principles governing the selection of strategic targets?
4. Where are the most menacing capabilities of the enemy found?
5. How many factors determine target selection?
6. Discuss briefly each of these factors.
7. What are the classifications of tactical targets?



CHAPTER XVIII

OBJECTIVE FOLDERS AND TARGET CHARTS

OBJECTIVE FOLDERS

One of the primary tasks recently completed by Headquarters, USAF was the standardization of Air Objective Folder material. These folders apply to both tactical and strategic operations and will be used by all air force units in planning, briefing, the conduct of training and the execution of all types of air operations.

The success of air attack is directly related to and dependent upon the adequacy and usability of target material available for planning and operational usage. Since Air Objective Folders will now be uniform throughout the services, constant usage will result in familiarization with this material. Interchangeability, both of air force personnel and Air Objective Folder material can be achieved within air force units operating on a global basis. The standards specified in this discussion shall not necessarily be regarded as permanent but may be revised by Headquarters, USAF (Directorate of Intelligence) to include changes as they become desirable.

In order to achieve standardization, two methods of assembling Air Objective Folder material were contemplated and included in the new regulation, AF 200-25, "Standardization of AOF Material," 15 December 48.

These folders are a compilation of intelligence on important targets in a given area and are the result of detailed analysis of enemy territory. They are one of the most important devices employed in the dissemination of intelligence and contain the following information:

a. BY AREA. Each area shall correspond to that covered by a 1:1,000,000 World Aeronautical Chart shall be grouped in one or more loose-leaf binders. For example, all target material relating to targets within the area of 1:1,000,000 World Aeronautical Chart No. 0165 would be grouped in one or more looseleaf binders shall be known as *"Air Objective Folders by Area."* The material relevant to specific targets shall be arranged consecutively by the target number assigned to each target by Headquarters, USAF (Directorate of Intelligence).

Contents for Air Objective Folders by Area should include:

1. General Notes.
2. Target listing by target number.
3. Target Listing by category.
4. Navigation and Pilotage Chart Section.
5. Urban Chart Area.
6. Individual Installation Target Data Section.
7. Urban Area Target Data Section.

b. BY CATEGORY. All target material relating to a specific target category within land masses specified by Headquarters, USAF (Directorate of Intelligence) shall be grouped in one or more looseleaf binders. Individually and collectively, these binders shall be known as "Air Objective Folders by Category." For example, all target material on all aircraft plants within the United States would be grouped in one or more looseleaf binders. The material relevant to specific targets shall be arranged consecutively by the target number assigned to each target by Headquarters, USAF (Directorate of Intelligence).

Contents for Air Objective Folders by Category should include:

1. General Notes.
2. Strategic Vulnerability Category Study.
3. Photo-Industrial Study of the Category.
4. Outline Charts.
5. Indices for each sub-category.
6. Target Data Section.
7. Urban Area Target Data Section.

Objective folders are usually, but not always, compiled in Air Force headquarters having a wide range of collecting agencies; but lower echelons are expected to forward all strategic information for inclusion in subsequent objective folders.

The objective folder or any part thereof will not be taken into the air on combat missions. For operational purposes, copies of air photographs of the objective and target maps and charts will be carried into the air. It is the responsibility of intelligence to prepare navigators' and bombardiers' kits containing such material.

TARGET CHARTS

A target chart is a chart or map by which the navigator and bombardier orient themselves in the general target area and identify the specific target on which the bombs are to be dropped. Perspective charts, drawn in oblique and foreshortened, show approaches from all angles so that bombardiers and radar operators will have a map portraying the terrain from the same angle of approach and in approximately the same perspective as seen from the air.

One of the major problems of all operations is locating the target. This problem evolves itself into two separate phases.

a. Finding the target area itself.

b. Locating the specific objectives within the target area.

In this connection, target charts are used in three different ways.

a. To aid in planning the mission, determining the IP, Aiming Point and Rally Point.

b. To aid in briefing the mission. Blowups of target and target areas will be used to graphically illustrate landmarks, approaches, etc., to the crews.

c. To be taken into the air by combat crews. For best uses, target charts should contain the following:

1. A chart of the target area. The scale should be small enough to include an area of at least 20 miles in radius so that the IP, Rally Point, etc., can be located on it. This chart is called the approach side.

2. A large scale map of the target itself. The scale should be such as to allow ready identification of the objective. This map is called the recognition side.

3. A compass rose should appear on each map as well as latitude and longitude subdivisions.

4. Elevation of the target and of other points around the target should be indicated. This is to assist the bombardier in rapid orientation and calculation of the bombing problem. It also orients the crew members as to their relative position.

5. Charts should be of such size as to allow easy handling in an airplane.

6. Coloring should be used to distinguish between topographic forms and should be printed in fluorescent colors making maps legible under night conditions. A black and white sketch is not enough.

7. All prominent landmarks that can be seen from the air should be shown on the chart. All other details should be eliminated from the charts as this creates confusion. Major landmarks that should be included on a target chart are bodies of water, railroads, highways, built-up areas, woods and other significant outstanding landmarks.

We might add, at this time, that in briefing for a mission, the following visual aids are generally used:

a. Route Map. (Includes I.P. and R.P.)

b. Approach Map. (Includes A.P.)

c. Target Map.

d. Blow-ups (balopticon projection or draftsman's drawings) of the target area and surrounding checkpoints.

e. Mosaics of the area.

f. Flak Map.

Target Strips

Target strips will normally contain a map of the general target area, usually covering a 25 mile radius. A sketch map of the immediate target area in larger scale is also included, showing installations buildings in detail, etc. These are usually numbered for rapid identification.

Also included are vertical photographs scaled 1:10,000 covering the immediate area of the target and also covering the very same area as that covered by the sketch map.

Target strips are usually provided by higher headquarters along with the Air Objective Folder and the target charts; however, in some cases the intelligence officer may have to improvise the best he can, should these not be available for certain specific targets. Although target charts, target strips and photographs are taken on combat missions, the *Air Objective Folder is never taken on combat missions.* Each crew will receive a target folder containing the necessary target charts and reconnaissance photos of the assigned primary, secondary and tertiary targets.

Photo Material

Photo material used in briefing of missions in conjunction with target charts are single photos, verticals and obliques, and photo maps—either mosaics or composites.

VERTICALS.—Vertical photographs are made from an aerial view point with the camera axis perpendicular to the earth. Features on the ground are registered on a vertical photo in perspective with little or no distortion in their relative shapes or sizes. The advantages of vertical photographs are:

a. Possess in pictorial effect a wealth of detail which no map can equal.

b. Possess accuracy of form.

c. With freedom of flight, an aerial photograph may be prepared in a short time.

d. May be reproduced in quantity.

e. May be made of an area otherwise inaccessible due to physical or military reasons.

OBLIQUES.—An oblique photograph is one made from an aerial viewpoint with the camera deflected from the perpendicular. They are classified as high or low obliques. High obliques contain the horizon while low obliques are without the horizon.

Obliques are used to very good advantage in briefing navigators and bombardiers on approach to targets. The oblique gives them a very good idea of what the ground will look like as they fly toward the target.

PHOTOMAPS.—Photomaps are classified into two types: Mosaic and composite. A mosaic photo map is an assembly of two or more overlapping vertical photographs properly assembled and is the most common form of photo map. It often serves as a map substitute or supplement and gains importance when a topographic map of the area does not exist or when it is desired to show current conditions or details not shown on existing maps.

In intelligence studies, the mosaic is adaptable to studying ground features which cannot be followed out completely on a single photograph.

A composite photograph is made by joining several photographs taken at a single camera position and transforming them to a common plane. A multilens camera is usually employed in taking composites.

A photomap is a single photograph, composite or mosaic to which has been added grid, marginal and place-name data, and produced in quantity by contact print or lithography.

Scale Models

Scale models are exceptionally useful and at times very necessary in the preparation and briefing of certain types of missions, either aerial bombing missions or ground attacks. Such was the case in the preparations made before D-Day. Months ahead of the invasion date, relief models (plaster, rubber and sand) were made of the area to be invaded and all the ground troops, including airborne, were constantly briefed and trained to land and fight in a manner most advantageous to them in that locality. Models made it possible for men to know the exact location and distance of every building, road, and gully that might afford them protection in their advance.

Models were also employed in the planning of amphibious assaults. These models were sponge rubber with terrain features, houses, etc., painted in their natural colors. In the CBI the employment of native troops made models an absolute necessity. Gurkha airborne troops had to be shown by means of models where they would land and what they were to do when they got there.

SUMMARY

Proper selection of targets is and will continue to be a most important factor in determining the successful accomplishment of the mission of Air Power.

As a major conflict will mean global war, all steps must be taken to achieve complete world coverage. Maximum benefit from our Air Power cannot otherwise be achieved.

Target material required for training and briefing crews for missions must be as complete and as practical as possible.

CHECK LIST TO BE USED IN THE PREPARATION OF A STRATEGIC VULNERABILITY CATEGORY STUDY

Summary and Conclusions

(Brief and unqualified restatement of findings.)

Importance of Industry or Service in the National or Regional Economy

a. Relative Size and Significance:

1. Value of product as % of national output.
2. Employment as % of national labor force.
3. Rank in value of output in employment, etc.
4. Output, capacity, mileage, etc., as % of world.

b. Use Pattern of Product.

1. Function of product or service in general terms:
    - (*a*) Types of uses.
    - (*b*) Indispensability—existence of alternate or substitute products or services.
2. Use pattern in as precise and graphic form as possible:
    - (*a*) Non-essential civilian:
        - (1) Present peacetime.
        - (2) Probable future war.
    - (*b*) Non-essential military:
        - (1) Present peacetime.
        - (2) Probable future war.
    - (*c*) Essential civilian:
        - (1) Present peacetime.
        - (2) Probable future war.
    - (*d*) Essential military:
        - (1) Present peacetime.
        - (2) Probable future war.

c. Export/Import Position of Product.

d. Place in National Policy:

1. Active government support—subsidy, priority, etc. Attachment 2 to AF Regulation 200-25.
2. Place in war planning:
    - (*a*) Expansion or contraction.
    - (*b*) Protection.
    - (*c*) Stockpiling of supplies or products or equipment.
    - (*d*) Maintenance of essential imports.
3. Potential contribution to possible allies or invaders.

Structure of Industry

a. Output and Capacity. (Tabular presentation is essential.)

b. Number, Location, and Size Distribution of Plants and Installations. (Presentation by maps and graphs is essential.)

c. Input needs.
1. Materials.
2. Power.
3. Components.
4. Basic Equipment.
5. Transportation.
6. Manpower.

d. Technical Characteristics.
1. Description of processes or activities.
2. Description of typical equipment and installations.
3. Organization:
   (*a*) Industrial integration.
   (*b*) Administrative controls.
4. Efficiency of industry.

Vulnerability Factors and Force Requirements

a. Vulnerability Factors. (These are mainly economic factors deduced from sections "Importance of Industry or Service in the National or Regional Economy" and "Structure of Industry."

1. Essentiality of product or service.
2. Essentiality of current production or operation:
   (*a*) Ratio of consumption or wastage to total holdings.
   (*b*) Stocks and reserves:
      (1) Normal proportion of stocks to rate of consumption.
      (2) Feasibility of stockpiling.
   (*c*) Imports.
   (*d*) Ratio of current production to consumption.
3. Dependence on supplies and services:
   (*a*) Transportation arteries.
   (*b*) Power and fuel sources and conduits.
   (*c*) Raw materials, supplies: Domestic and imported.
   (*d*) Subcontractors.
   (*e*) Manpower.
4. Concentration and accessibility of installations. (Maps essential.)
   (*a*) Of major plants.
   (*b*) Within urban areas.
   (*c*) Within major regions.
   (*d*) Dispersal forecast.
   (*e*) Concentration of production of single critical products or services within the industry.
5. Physical Vulnerability:
   (*a*) Manpower.
   (*b*) Buildings.
   (*c*) Processes and equipment.
   (*d*) Underground potentialities.
6. Resilience:
   (*a*) Time factor: Period of grace allowed by depth in pipeline and by cushion of stocks, sustitution, excess capacity, etc.
   (*b*) Individual plants:
      (1) Rebuilding.
      (2) Equipment replacement and repair.

Questions and Leads for Classroom Discussion

1. Air Objective Folders are applicable to what types of missions?
2. What were the two methods employed in the standardization of material for Air Objective Folders?
3. When will an Air Objective Folder be taken into the air?
4. What is a target chart?
5. What are the three different ways target charts are used?
6. Target strips are usually provided by?
7. Name three advantages of aerial photos.
8. What is a scale model used for?
9. How are they constructed?

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CHAPTER XIX

STAFF DOCTRINES AND FUNCTIONS—WING LEVEL AND BELOW

GENERAL FUNCTIONS OF A STAFF

The staff of any unit consists of the officers who assist the commander in his exercise of command.

The staff procures and furnishes information required by the commander, prepares the details of his plans, translates his decisions and plans into orders, and causes such orders to be transmitted to those affected. Within the scope of its authority, the staff supervises the execution of plans and orders and takes such other action as is necessary to carry out the commander's decisions.

Each staff officer must have a thorough knowledge of the policies of his commander and should be acquainted with subordinate commanders and their units, and with the personnel of higher, lower, and adjacent units.

Command Responsibility

The commander alone is responsible to his superior for the performance of his unit.

All orders from a higher to a subordinate unit are issued by the commander of the higher unit to the commander of a subordinate unit.

In order to expedite the execution of orders and to promote teamwork between units, a commander may authorize his staff officers to communicate directly with staff officers of other units on details of orders issued or received.

Organization

a. Basis: The organization of a staff is based upon the duties of the commander. Although personnel strength at headquarters is shown in Tables of Organization or Manning Tables, detailed assignments of personnel to sections, particularly in the general staff group, will be made by the commander.

b. Duties: The duties of all commanders in wing levels and below can be divided into four principal functions: Personnel, Intelligence, Operations and Training, Supply and Evacuation. In each duty the commander is assisted by a specialized staff officer. Coordinating the work of staff members and directly responsible to the commander, is the executive.

c. Executive: The executive is the chief assistant and advisor to the commander. As the principal coordinating agent of the command, he may himself execute the orders of the commander or he may delegate their accomplishment to other staff members.

d. Forward and Rear Echelons: In advance areas, the staff is sometimes divided into two echelons. The forward echelon, consisting of the elements of the staff immediately required by the commander for tactical operations; the rear echelon, consisting of the remainder of the staff, chiefly administrative officers.

Cooperation and Flexibility

Teamwork is essential within and between all sections of a general and special staff, and between the staffs of higher, lower, and adjacent units. This can be furthered by frequent staff conferences so long as they do not interfere with the performance of essential duties.

Although a staff is organized in sections, staff functions overlap; coordination and prompt interchange of information, therefore, are essential. Every staff officer must be thoroughly conversant with the duties of other staff officers, as at times he may be required to assist or to take over, in whole or part, other staff sections.

Authority

A staff officer as such has no authority to command except in his own staff section. All policies, decisions, and plans whether originating with the commander or with the staff must be authorized by the commander before they are put into effect. When a staff officer by virtue of delegated authority issues an order in the name of the commander, responsibility remains with the commander even though he may not know of the order.

Two channels exist in every command: Staff and Command. Through the staff channels pass suggestions and recommendations from one staff officer to another. Through the command channel pass orders of the commanding officer.

STAFF FUNCTIONS OF THE AIR INTELLIGENCE OFFICER

Responsibility

The primary function of the intelligence section is to keep the commander and all others concerned informed of the enemy situation and the enemy's capabilities.

Initiative

Immediately upon assumption of his duties, responsibility rests with the intelligence officer on his own initiative to obtain information on every phase of the enemy situation and capabilities. He will strive to obtain information that will answer every question on the enemy that may arise in the commander's mind prior to specific requests for that information by the commander. His duties will not be executed properly if he awaits detailed direction from the commander as to what information is required.

COMPLETED STAFF WORK

Completed staff work is the study of a problem, and presentation of a solution, by a staff officer, in such form that all that remains to be done on the part of the head of the staff division, or the commander, is to indicate his approval of the completed action. The words "completed action" are emphasized because the more difficult the problem is, the more the tendency is to present the problem to the chief in a piece-meal fashion. It is the duty of a staff officer to work out the details. He should not consult his chief in the determination of those details, no matter how perplexing they may be. He may and should consult other staff officers. The product, whether it involves the pronouncement of a new policy or affects an established one, should, when presented to the chief for approval, be worked out in finished form.

The impulse which often comes to the inexperienced staff officer to ask the chief what to do recurs more often when the problem is difficult. It is accompanied by a feeling of mental frustration. It is so easy to ask the chief what to do, and it appears so easy for him to answer. Resist that impulse. The staff officer will succumb to it only if he does not know his job. It is his job to advise his chief what he ought to do, not to ask him what should be done. The chief needs answers, not questions. The staff officers' job is to study, write, re-study, and rewrite until he has evolved a single proposed action—the best one of all he has considered. The Chief merely approves or disapproves.

The staff officer should not worry his chief with long explanations and memoranda. Writing a memorandum to the chief does not constitute completed staff work, but writing a memorandum for the chief to send to someone else does. The views evolved should be placed before him in finished forms so that he can make them his views simply by signing his name. In most instances, "Completed Staff Work" results in a single document prepared for the signature of the chief, without accompanying comment. If the proper result is reached, the chief will usually recognize it at once. If he wants comment or explanation he will ask for it.

The theory of "Completed Staff Work" does not preclude a "rough draft," but the rough draft must not be a half-baked idea. It must be complete in every respect except that it lacks the requisite number of copies and need not be neat. But a rough draft must not be used as an excuse for shifting to the chief the burden of formulating the action.

The "Completed Staff Work" theory may result in more work for the staff officer, but it results in more freedom for the chief. This is as it should be. Further, it accomplishes two things:

a. The chief is protected from half-baked ideas, voluminous memoranda, and immature oral presentations.

b. The staff officer who has a real idea to sell is enabled more readily to find a market.

When a staff officer has finished his "Completed Staff Work," the final test is this:

"If you were the chief would you be willing to sign the paper you have prepared, and stake your professional reputation on it being right?"

If the answer is in the negative, take it back and work it over, because it is not yet "Completed Staff Work."

Questions and Leads for Classroom Discussion

1. What is the function of the Commander's Staff?
2. What is command responsibility?
3. What is meant by cooperation and flexibility?
4. What authority does a staff officer possess?
5. What two channels exist in every command?
6. What is "Completed Staff Work"?

CHAPTER XX

INTELLIGENCE RESPONSIBILITIES IN LOWER ECHELONS OF COMMAND

THE STAFF INTELLIGENCE OFFICER AND SECTION

The general responsibilities of the staff intelligence officer are practically the same throughout all echelons. The specific duties performed in intelligence sections in bomber, fighter, troop carrier and other type units vary with the size of the unit and the nature of its mission. In the higher echelons of command, responsibilities become broader and more general, and intelligence estimates and plans must reach farther into the future. In order to simplify and standardize reports and maintain uniform intelligence procedures in subordinate units, the staff intelligence officer for the air commander and for each of the highest bomber, fighter, reconnaissance, and other functional units, establishes intelligence policies and SOP's. Technical specialists, such as photo interpreters, translators, and electronic engineers, may be assigned or attached to intelligence sections to assist the intelligence officer. Immediate intelligence requirements are dictated by the unit's mission and the work and assignments of individuals and sub-sections are adjusted to the situation.

SQUADRON INTELLIGENCE

The basic administrative and tactical unit of the air force is the squadron. Administrative duties of the combat squadron intelligence officer are limited. Most of his efforts are devoted to preparation for air operations. Since the squadron rarely operates away from the group but simply executes orders and flies the assigned mission, the squadron commander is not required to make decisions regarding priority of objectives. Target information is furnished by higher headquarters. As a result the squadron commander requires little advice from his intelligence officer, who serves more as an advisor to air crews and collects information from flying personnel. The briefing and interrogation of aircrews are also supervised by the group. In fact, when the squadron is operating close enough to the group, the group intelligence officer may assume this responsibility for briefing and interrogation and the squadron intelligence officers become, in practice, assistants to the group intelligence. The primary collection agencies for combat information are combat squadron and group intelligence sections. During peacetime, combat situations should be simulated for training purposes. If an intelligence officer is assigned to non-combat squadrons, his principal concern is security of the unit and its installations.

Duties of Squadron or Group Intelligence Officers

The specific duties of the intelligence officer of a squadron (or group) are:

a. Maintains informal personnel records (histories, capabilities, and efficiency records of personnel of the section).

b. Assigns definite duties to personnel in the section.

c. Is responsible for the security and storage of all written matter and equipment in the section, including correspondence, enemy information, maps, supplies, purses, escape kits.

d. Maintains supplies of maps, charts, drafts, plots, and target strips necessary for operations.

e. Maintains a supply of equipment for the section.

f. Handles intelligence training aids, recognition material, periodicals, publications, maps, photographs, and other data for combat personnel.

g. If directed by the commanding officer, keeps information on crew members for consideration in the awarding of decorations.

Intelligence Training of Unit Personnel

The intelligence officer is responsible to the commanding officer for the intelligence training of all personnel of the unit. Direct instruction is conducted either for individuals or groups. Training is done continuously by displaying graphic training aids. Personnel must be kept current on combat information through news bulletins, open forums, or other types of presentations.

Knowledge of the Enemy

a. Maintains a war (situation) room.

b. Obtains, summarizes, and disseminates information of the enemy, including information about:

1. Air fields and air installations.
2. Ground and naval forces.
3. Aircraft.
4. Air tactics.
5. Radar system.
6. Anti-aircraft artillery.
7. Searchlights.
8. Barrage ballons.
9. Rockets and guided missiles.
10. Decoys, dummies, camouflage, and smoke screens.
11. Potential targets.
12. Special weapons (atomic, biological, etc.)
13. Press and radio releases.
14. Propaganda and psychological warfare.

c. Maintains information on the enemy air order of battle (as much in graphic form as possible) including:

1. Identification of enemy units.
2. Aircraft and unit insignia.
3. Historical data regarding enemy units and their commanders.
4. Types of aircraft with their serviceability, armament, equipment, and performance data.
5. Enemy air tactics.
6. Combat efficiency of enemy air crews.

d. Prepares estimate of enemy air reaction.

e. Keeps situation map showing:

1. Location and strength of enemy units.
2. Territory under enemy, neutral, and friendly control.
3. The location of enemy airfields.
4. The location of enemy barrage balloons.
5. Location and range circles of enemy anti-aircraft artillery.
6. Location of launching sites and range of ground launched missiles.
7. Zones covered by enemy radar-warning net.
8. Additional information that can be effectively shown on the map.

f. Maintains and keeps up-to-date objective folders for each potential target containing:

1. Target map.
2. Description of the target.
3. Photographs of the target.
4. Summary of experiences of previous operations on the target.
5. Defenses at the target
6. Other information.

Knowledge of the Friendly Situation

a. Obtains, keeps up-to-date, and disseminates information on the friendly situation including:

1. The location of our own front line.
2. Location of strategic and tactical bomb lines.
3. The friendly communications net.
4. The location and strength of our own and Allied air, ground, and naval units, including location of friendly airfields.

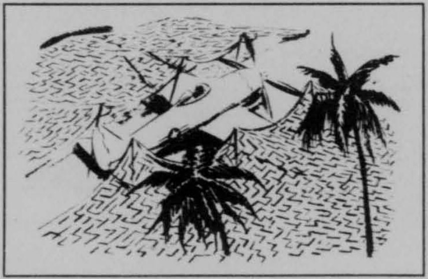
Briefing of Air Crews

a. Establishes adequate facilities for the briefing.

b. Conducts the briefing as directed by the commanding officer.

c. Prepares intelligence briefing data including:

1. The target.
   - (*a*) Importance.
   - (*b*) Purpose of the mission.
   - (*c*) Landmarks and other target identification.
   - (*d*) Aiming points.
   - (*e*) Bomb-damage assessment and other results or previous attacks.
   - (*f*) Prisoner of war camps, hospitals, churches, etc. in vicinity.
   - (*g*) Secondary target and targets of opportunity.
2. Bombing line (s), bomb dumping area, safe-landing area, and neutral areas.
3. Enemy ground defenses at the target and enroute.
   - (*a*) Anti-aircraft artillery, location and capabilities.
   - (*b*) Barrage balloons.
   - (*c*) Searchlight areas.
   - (*d*) Anti-aircraft missiles.
   - (*e*) Radar stations.
   - (*f*) Fighter airdromes and fields.
   - (*g*) Camouflage, including dummies, decoys, smoke screens, fires.



4. Enemy recognition procedure.
5. Escape and evasion technique.
6. Procedure if captured.
7. Destruction of aircraft and equipment if forced down.
8. Survival, search and rescue.
9. Friendly balloon barrages, anti-aircraft and missile areas, restricted flying areas, friendly convoys and shipping.
10. Issuing of target charts, maps, flimsies, and escape kits.
11. Handling personal papers, diaries, and valuables of crew members prior to flight.

Interrogation of Air Crews

a. Interrogates combat crews on their return from missions in order to:

1. Determine the results of the mission.
2. Obtain information on the performance of the unit.
3. Obtain combat information, knowledge of the enemy, and statistical data.
4. Obtain information for public relations, unit records and histories, and for awarding decorations.

Reporting

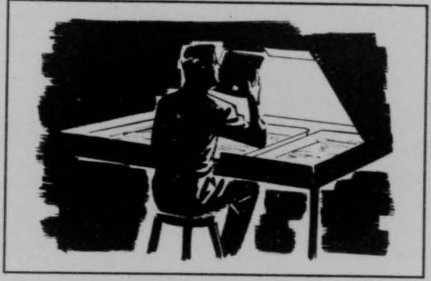
a. Prepares, transmits, and disseminates, as directed:

1. Flash reports (information demanding immediate action, such as friendly aircraft or personnel in distress or important enemy activities).

2. A preliminary summary of the mission.

3. Complete report of the mission, including encounter reports and statistics.

4. Such special reports as may be necessary.



Photographic Intelligence

a. Maintains facilities for the immediate development of mission or strike photos.

b. Supervises the rapid development and transmission of prints of mission or strike photos, as directed.

c. Gives a first-phase interpretation of mission or strike photos for the commanding officer, crews, and tactical and technical personnel.

Capture Intelligence

a. Notifies air technical intelligence units or air prisoner of war interrogation units of the capture of enemy air materiel or personnel.

b. In accordance with theater and air force SOP, supervises handling of captured enemy materiel and personnel.

1. Safeguards captured materiel pending release to authorized air technical intelligence units.

2. Segregates and guards prisoners.

3. Searches prisoners and inventories and removes all personal effects, such as papers, ticket stubs, maps, photographs, and other documents, for inspection by authorized personnel.

4. Prevents any fraternization with prisoners.

Security

a. Supervises the handling of classified materiel including maps, photographs, codes; prepares for their removal or destruction in case of necessity.

b. Instructs all unit personnel in the maintenance of security (AR 380-5, "Safeguarding Military Information").

c. Supervises censorship.

d. Advises the commanding officer and staff officers concerning:

1. Unit Defense Plan.

2. Camouflage and concealment and camouflage discipline.

3. Dummies and decoys.

4. Disposal of equipment, installations, and personnel.

GROUP AND WING INTELLIGENCE

The group intelligence officer supervises the intelligence sections of its squadrons, coordinating their activities. He prepares group reports, such as the consolidated mission report. He obtains intelligence data and transmits it to the squadrons. In the group he has the staff responsibility for all duties listed under duties of squadron intelligence.

When ordered by the commander, he assumes direct control of squadron intelligence and the squadron intelligence officers act as his assistants.

The wing controls, administers, and services an air base and assigned units. It usually consists of a tactical group, a maintenance and supply group, an airdrome group, a station hospital, and other necessary service and technical organizations. The wing intelligence officer has staff responsibilities similar to those that the intelligence officer has in a squadron or a group. Unlike the group intelligence officer, however, he does not assume intelligence responsibilities for lower units. His principal functions are consolidation of intelligence reports from subordinate units, and distribution of intelligence received from other headquarters.

IMPORTANT FUNCTIONS IN VARIOUS TYPE UNITS

In bomber units all operations must be directed toward the bombing of enemy targets. Since target

information is naturally of vital importance to each echelon of command, a target section must be organized in each intelligence section to fulfill requirements. Briefing combat air crews also requires accurate information about enemy defensive capabilities and tactics.

Strategic Targets

Although target information (air estimates, air objective folders, target folders, target charts, photographs and models), target assignments, and target priorities may be given by higher command, including the Chief of Staff, United States Air Force, considerable personnel are required in the target section of the senior strategic bomber unit in each theater. Target analysis consists of the following steps:

a. Analysis of the entire enemy industrial economy to find vulnerable strategic target systems.

b. Analysis of selected target systems to determine priorities.

c. Maintenance of information on designated targets. The first and second stages of strategic target selection are being continuously performed by Headquarters, United States Air Force, but once combat operations are undertaken, a certain amount of this work must be performed in each theater. Industrial and military experts in many fields are required to choose targets, assign priorities, determine the effect of air strikes, and maintain up-to-date objective and target folders. Combat operations will, of course, make it necessary to revise target information continuously. Combat intelligence will reveal new targets and change target priorities. Periodic photo reconnaissance missions should be planned to furnish adequate photo coverage.

Air force, air corps, and air division bomber commanders will normally be allowed some latitude in their directive and occasionally may have full authority to pick their own targets. The intelligence staff of each commander should be organized so that it can help him select targets and furnish subordinate units with objective and target folders. When the situation is static and headquarters is relatively near, the senior echelon may analyze targets, study bomb damage, and revise, print, and distribute folders and other target data for subordinate units.

Since bomber groups merely carry out assigned missions, their principal responsibility for target information is to pass it on to squadrons and air crews, interrogating crews concerning operations and conducting flash interpretations of strike photographs.

Tactical Targets

Information on tactical targets, like information on strategic targets, may be given to the senior tactical air commander by higher command. During combat operations, each independent tactical air commander will develop within his command, usually as a result of operations, the intelligence necessary to select targets and assign priorities. Tactical photo reconnaissance missions must be planned for army as well as for air units. Full advantage should be taken of all strategic photos available. Adequate communication facilities must be established at all echelons of command to transmit target information rapidly, especially information about transient and moving targets. The intelligence section of the senior air echelon in each area or task force analyzes target information and furnishes up-to-date objective folders and target charts for all units. Subordinate units, including groups, maintain photo laboratory facilities so that they can interpret photos for their immediate needs or the combat intelligence requirements of higher headquarters.

Tactical air operations are often conducted jointly with Army operations. If air units are to furnish close support, especially in a moving ground situation, there must be careful planning with the ground commander, good ground-air communication facilities, and thorough briefing of air crews. The intelligence officer of each air unit that operates with a ground unit must brief air crews as to the location of the front line, location of each friendly unit, and the contemplated movements of our front line, in addition to all necessary enemy information. Tactical air operations with ground units may frequently become decentralized, the air division being given control over light bomber and fighter units. In such cases, the air division intelligence section will be required to supply complete data on new targets and produce target charts and photos for air crews.

Fighter Units

Although the fighter is designed to seek out and destroy enemy aircraft in the air and on the ground, it can also be used effectively to bomb and strafe other surface targets. Moreover, even though the fighter is inherently an offensive weapon, fighter units may be employed in purely defensive roles, such as when they escort bombers or air transports. On an escort mission, the intelligence officer is primarily concerned with information on enemy air order of battle, and characteristics, performance, and tactics of enemy fighters and other anti-aircraft weapons. For bombing and strafing missions he must obtain, in addition, adequate target information. When fighters are used against targets close to the front lines, particularly when employed in close support of Army troops or amphibious landings, detailed knowledge is required of the ground situation in order to brief air crews. Sometimes it may even be necessary for liaison officers from the Army to assist by briefing crews on the exact ground situation.

Air Defense Units

In combat zones the tactical air commander uses his fighter aircraft for both tactical missions and air defense. In the rear of the combat zone air defense is the responsibility of the air defense commander. In air defense the functions of the intelligence officer differs from those in other fighter units. He is not concerned with target information. There is, of course, no time for the intelligence officer to brief fighter crews when enemy aircraft are reported. Intercept bearings, altitudes, and other information concerning hostile aircraft must be radioed to the fighters while they are aloft. Only before routing combat air patrols is there time for briefing. In air defense the primary mission is air fighting and other anti-aircraft action. No special organic reconnaissance units are assigned. The air defense commander controls aircraft warning services and anti-aircraft units and coordinates passive defense measures but he depends on other air commands for intelligence, augmenting this with information from interrogating his own air crews. He must train his air crews in intelligence between alerts, stressing information such as enemy air tactics, recognition, aircraft characteristics and performances, and enemy strong points and weaknesses.

Troop Carrier Units

In combat areas troop carrier units furnish air lift for airborne operations and for air supply. To do this they must cooperate closely with ground units and with other air units, particularly escort fighters. When the troop carrier units are preparing for a drop, they need detailed information on enemy defenses and the general suitability of the area as a drop zone (DZ). The intelligence officer requests detailed air reconnaissance and photographs (both vertical and oblique). He also assists the Army unit in getting the information it needs. Detailed maps and photos are prepared for each air crew. Scale models of the DZ's are helpful for briefing. If such models are not furnished by higher headquarters, they should be constructed by the squadron and group intelligence officers.

Reconnaissance Units

Reconnaissance units obtain information by photographic, visual, and electronic methods. Aerial photographs are by far the most important source of information about the enemy because they give the most details and are the most reliable. Intelligence officers in reconnaissance squadrons and groups brief air crews on the area to be reconnoitered and interrogate returning crews. In units that have field laboratory facilities, the intelligence officer supervises first-phase flash photo interpretation and forwards prints, negatives, and flash reports to agencies as directed. Speed is essential in handling tactical photographs. The principal functions of reconnaissance squadron and group intelligence officers are to advise flying personnel and obtain information from air crews. The staff intelligence officer of the division furnishes the group with briefing data and other intelligence material; maintains a basic intelligence reference library for photo interpretation and a negative and print library; coordinates the handling of photo material by photo laboratories; and supervises liaison with combat units for whom reconnaissance is being made. His most important functions are to coordinate collection, evaluate and interpret information, and disseminate photo intelligence, especially aerial photographs secured by reconnaissance units.

Military Air Transport Service

Military Air Transport Service units furnish logistical support, especially the movement of materiel and personnel by air. In time of war, the transport planes must sometimes enter combat areas as they fly from one theater of operations to another. The combat intelligence functions of an intelligence officer in MATS unit will depend upon how much likelihood there is that its planes will encounter the enemy.

NON-COMBAT AREAS. The intelligence officer of a unit operating in a non-combat area is principally concerned with training of the unit and with briefing air crews and passengers concerning survival and search and rescue procedure.

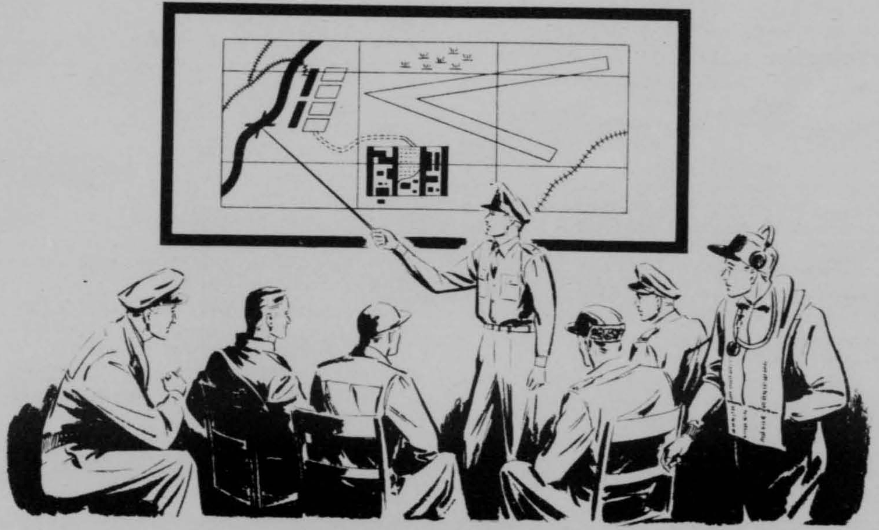
COMBAT AREAS. As just pointed out, MATS flights may pass through areas where the enemy is capable of offering air opposition. In such areas the intelligence officer must find out what the enemy's offensive capabilities against transport aircraft are. He gets his information normally from air force headquarters, air defense control centers, or adjacent bomber or fighter units within the theater. This information is supplemented by data obtained from interrogation of transport air crews. In those areas where enemy opposition is possible or where reconnaissance may be made, the intelligence officer briefs, interrogates, and reports in a manner similar to that in a combat unit.

Service and Technical Units

Since service and technical units provide maintenance and services for tactical units and bases, their principal command responsibility for intelligence is advising the commander on security measures and safeguarding information. This latter function is important especially in overseas theaters during wartime when units which operate technical services, such as overhaul and maintenance of air materiel, are sometimes directed to analyze, test, and report on foreign air equipment. Units that operate electronics detection devices and whose basic mission is collecting information, evaluate the information only from its technical aspects. When the information gathered by technical units reaches higher echelons, the staff intelligence officer may call upon specialists who can help him evaluate it.

Questions and Leads for Classroom Discussion

1. What dictates the intelligence requirements of the unit?
2. Who furnishes target information to the squadrons?
3. What are the primary collection agencies for combat information?
4. Who is responsible for intelligence training of unit personnel?
5. Discuss the specific duties of the squadron intelligence officer.
6. Discuss important intelligence functions in various type units.



CHAPTER XXI

BRIEFING OF COMBAT CREWS

DEFINITION AND PURPOSE

Briefing is the organized presentation of information which has been processed into mission intelligence. It is presented to air crews prior to their departing on a mission.

The purpose of briefing is to give crews information that will enable them to accomplish the mission and return safely.

In heavy bombardment, anti-submarine, troop carrier and other units where missions are planned in advance, briefing should commence from three to three and one-half hours before take-off. In fighter and air support units, necessity for a quick take-off may make formal briefing impossible; but when there is no cause for hurry, it is advisable to allow ample time between briefing and take-off to enable crews to confer, to mark their maps and charts properly, and to assemble personal flying equipment. The time between briefing and take-off, however, should never be so great as to permit information to leak to the enemy.

The briefing room should be large enough to seat all combat personnel. It should be well-lighted, but so prepared that it can be darkened for projections.

Equipment should include large-scale maps, aeronautical charts of friendly and enemy territory, perspective target charts and landfall strips, all prominently mounted near a platform from which briefing officers may speak.

Complete reference material should be included in files. Special reports on enemy installations such as runways, revetments, ammunition, gasoline and supply dumps, personnel areas, smoke screens, dummies and decoys, balloon barrages, flak and searchlight positions and other data should be easily available.

Equipment should include a balopticon (epidiascope) and screen for projecting, on as large a scale as possible, maps and photographs of the target area and identifying landmarks; it should include a portable blackboard and facilities for collecting personal belongings of combat crews and for distribution of pilots', bombardiers' and navigators' kits, pouches and escape kits.

BRIEFING PROCEDURE

The commander may prefer to conduct the entire briefing himself, relying on his staff to furnish him the necessary information. Frequently, however, the commander opens the briefing, announces the objective and comments generally on the mission; then other staff officers, including intelligence officers, brief on specific phases of the operation. In some units, intelligence officers may be called upon to conduct the entire briefing, supplemented by additional comments from the flight leader.

Typical procedure in bomber unit:

a. Commander opens the briefing, announces the mission and, in a large operation, discusses the part the unit is to take.

b. Commander or S-3 explains the operational plan: Timing, taxi and take-off procedure, formations, other units participating, escort, rendezvous, method and altitude of attack, routes to and from the target, etc.

c. Intelligence officer briefs on special subjects.

d. Communications officer briefs on radio procedure and reviews pertinent signal instructions.

e. Unit navigator discusses route out and back.

f. Weather officer and, possibly, ordnance officer brief on their specialities.

g. Commander summarizes.

h. After the general briefing, special briefings or group conferences are usually held with pilots and co-pilots, navigators, bombardiers, radio operators and, possibly, air gunners.

PREPARATION FOR BRIEFING

Certain principles are basic in any briefing.

a. Subject to the approval of the C.O., briefings are usually planned by intelligence officers working with S-3, with aid from other staff sections. In such cases, the intelligence officer should submit a program to the commanding officer prior to each briefing and advise each participating officer of his part.

b. In a well-planned briefing, each officer will confine his remarks to his specific subject, thereby avoiding duplication. Unnecessary repetition must be avoided.

c. Briefing will be matter-of-fact and to the point. All pertinent facts must be included and stated as simply and directly as possible.

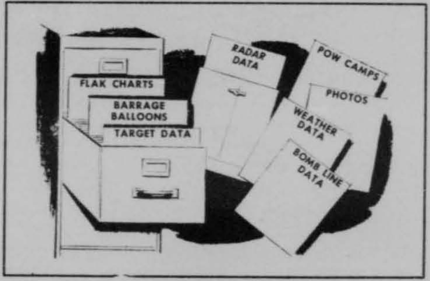
d. Briefing should be concise. Brevity and clarity are all important. Nothing should be introduced that does not pertain to the immediate mission. Instruction on general intelligence subjects, such as recognition and principles of A A fire, should have been given in earlier periods of training.

e. Visual aids are invaluable, but only when unmistakably pertinent and well-organized. Basic subjects to be covered include:

1. Importance of the target, and the effect its destruction will have on the enemy.
2. Landmarks, checkpoints and target identification features.
3. Enemy defenses, which should be described calmly, pictorially and precisely.
4. Friendly situation, which should include restricted areas, aids to navigation, bomb line, friendly aircraft and shipping that may be encountered on the mission and recognition procedure.
5. Positions and formations to be flown.
6. Weather.
7. Radio procedure and signals.
8. Routes and bombing procedure.

Immediately on receipt of mission order intelligence should:

a. Study field order (operations or combat order).



b. Procure the folders, charts and photographs of the target.

c. Assign assistant intelligence officers to specific duties.

d. Supervise posting of maps, and charting of route.

e. Ascertain that the balopticon operator knows the sequence of target maps, photographs, etc., and the exact positions to be projected.

f. Telephone higher headquarters or other sources for latest information on flak, enemy fighters, location of bomb line and other data.

g. Prepare a reference check list to assure that no important information is omitted in the briefing.

In certain theaters one or a few officers may do all the briefing, particularly where the unit of operation is as small as a group or squadron. For larger missions, the tendency is towards specialization.

Subjects on which intelligence briefs

For a heavy bomber group on an ordinary mission, intelligence will probably discuss:

a. Targets—primary, alternate and last resort—and their strategic importance; identification of targets from various air approaches, and exact aiming point for each flight or squadron.

1. Results of recent attacks on the targets. (Illustrated with photographs and slides)

2. Targets of opportunity that may be found in target area.

3. Prisoner of War camps or other restricted areas in target vicinity.

4. Outstanding terrain features such as waterways or valleys that might aid navigation to or from target, or mountains that might be obstacles to the mission.

5. Elevation of target.

6. Information on tides, if pertinent.

b. Bomb Line (BL) is a line beyond which any target may be attacked without danger of bombing friendly ground forces. During movements in forward areas, bomb line is fixed daily by higher headquarters. There are two bomb lines: *Strategic,* which is the more permanent and effective throughout the theater, and *tactical,* which may vary from hour to hour and is only used by air units directly engaged in ground support. The intelligence division must at all times know the location of front lines, friendly and enemy positions, patrols, and ground fighting. For ground support operations the intelligence officer must keep his crews constantly informed of the exact location of the tactical bomb line, and the areas in which they may and may not attack. He may have to establish his unit's tactical bomb line through direct liaison with ground units or through the A.L.O.

c. Enemy ground defenses to, from and at targets. Flak on recent mission.

1. Battery positions if the area is lightly defended, or areas in which flak is located if defenses are numerous.

2. Type of weapon: Guns, automatic weapons, or small arms.

3. Accuracy.

4. Amount of fire: Meager, moderate, or intense.

5. If the fire was from guns it should also be stated whether the fire was "seen" or "unseen," whether it was barrage, plotted concentration, or continuously pointed fire, and the altitude of the bursts.

6. Barrage balloons.

7. Searchlight areas.

8. Radar stations.

d. Enemy air defenses.

1. Total number of enemy fighters within operational range of route to target, the target itself, and route back.

2. Fighter standing patrols.

3. Latest enemy tactics.

4. Possible enemy use of reclaimed Allied aircraft.

e. Enemy passive defenses.

1. Camouflage.

2. Dummy installations.

3. Decoys.

4. Smoke and fire.

5. Enemy recognition procedure.

f. Security measures.

1. Deposit of personal papers, diaries, etc., before take-off.

2. Disposition of aircraft and documents in event of forced landing.

3. Instructions in event of capture.

g. Mention of escape and evasion technique in event of landing in enemy or neutral territory.

h. Special air-sea rescue instruction.

i. Requests for specific information desired by commander or by intelligence.

j. Friendly situation.

1. Balloon barrage areas.
2. Restricted flying areas.
3. Position of friendly convoys.
4. Position of other friendly shipping.
5. Free bombing areas.
6. Other friendly aircraft operating in mission area.

k. Any other special information.

Separate Briefing for Gunners

In heavy bomb groups separate briefing for gunners may be held simultaneously with the main briefing. This separate briefing is conducted by an intelligence officer with the assistance of the gunnery officer and will ordinarily cover the following points:

a. Name of target and explanation of its importance.

b. Route in and out and timing.

c. Enemy fighter types which may be encountered and their expected tactics.

d. Enemy defenses.

e. Friendly fighter support-types and tactics, and caution against firing on them.

f. Possibility of enemy using captured friendly aircraft.

g. Review of possible stoppages and malfunctions of guns and equipment.

h. Importance of making and reporting observations.

Briefing for sea search or anti-submarine mission follows procedure similar to that for bomber mission except that information relates to sea rather than land defenses and targets.

Briefing for fighter interception mission usually is impossible because of necessity for immediate take-off. Intelligence in fighter units must, therefore, have supplied pilots with a continuous flow of "background" information: Enemy aircraft, equipment, performance and tactics; identification of enemy and friendly aircraft, vessels and armored force equipment; geography of theater, flying restrictions and recognition procedure over friendly territory, location of alternate landing fields, evasion methods and escape routes. Intelligence with fighter unit must keep his situation map absolutely up to the minute so that pilots will at all times know latest details of enemy and friendly situation.

Briefing for air-ground support mission will include the maximum amount of ground information, including enemy and friendly installations, ground to air recognition signals, and strategic and tactical bomb lines.

Briefing for reconnaissance or photographic mission will include area to be covered, altitude of target and of flight, time of day for taking photographs and same information of enemy defenses as for combat crews.

Briefing for troop carrier mission will include information given combat crews and, in addition, describe in detail the point of landing (D. Z.—drop zone), altitude of D. Z., altitude of drop, barometric pressure at D. Z., initial point, run-in, and geographic features that might be useful in navigating or harmful in low altitude flying.

Briefing of air transport and ferry crews emphasizes navigational aids, recognition signals, evasion and air-sea rescue technique, as well as health and protection if forced down in isolated territory.

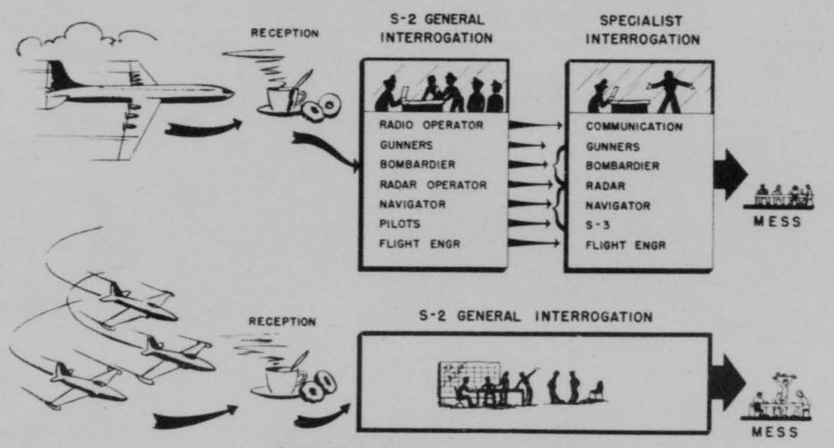
RECONNAISSANCE VALUE OF MISSIONS

At briefing, the intelligence officer will ask for any particular information he wishes the crews to bring back. Little information is obtained by a general request, but by making specific requests, the intelligence officer will frequently obtain facts that might otherwise be overlooked or not reported.

Questions and Leads for Classroom Discussion

1. What is the purpose of briefing?
2. Discuss briefing procedures.
3. What preparation should be made for briefing?
4. Discuss subjects on which intelligence briefs in a heavy bomber unit.
5. How is the reconnaissance value of mission realized?

FLOW OF CREWS THROUGH INTERROGATION


RECEPTION
S-2 GENERAL INTERROGATION
SPECIALIST INTERROGATION
RADIO OPERATOR
GUNNERS
BOMBARDIER
RADAR OPERATOR
NAVIGATOR
PILOTS
FLIGHT ENGR
COMMUNICATION
GUNNERS
BOMBARDIER
RADAR
NAVIGATOR
S-3
FLIGHT ENGR
MESS
RECEPTION
S-2 GENERAL INTERROGATION
MESS

Combat personnel should be interrogated as soon as possible after a mission. Food and the opportunity to relax are necessary aids to good interrogation.

CHAPTER XXII

INTERROGATION OF COMBAT CREWS

PURPOSE

The primary purpose in fighting a war, or a campaign, or even a single battle or mission is to win it. In order to win, a constant flow of precise information is needed on a variety of subjects so that requisite operations can be made more and more effective. The interrogation of combat crews is one exceedingly important source of this information. Therefore, it is highly important not only that it be done, but that it be done correctly.

The purpose of interrogation of combat crew personnel is three-fold:

a. To secure information about your own operations.

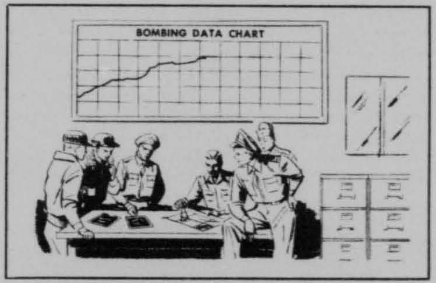
b. To secure information about the enemy.

c. To stimulate continued observation on the part of combat personnel.

Interrogation of combat crews has been a very important source of information about the enemy, particularly for data pertaining to the enemy air order of battle, on enemy tactics and reactions, on enemy targets and defenses, and for valuable tips for further research by other intelligence specialists. This is in addition to information of value in regard to our own operations, such as mission results and functioning of equipment.

GENERAL PROCEDURE

Combat crews are interrogated after each mission to determine whether or not the objective was accomplished and to get from them all information of military value they have obtained. Even though the mission or sortie may have been abortive, interrogation should take place to obtain observations of crew members and to determine whether the failure to accomplish the objective was due to personnel factors, malfunction of equipment, weather, enemy action or other causes. As soon as possible after landing, crews are interrogated by the intelligence officer and his assistants. If not radioed in prior to landing, hot news for flash reports are obtained



from the crews at their planes, or as they enter the interrogation room. The more comprehensive interrogations are held a bit later and, still later, special interrogation officers may question the crews. The armament officers may question the gunners; group bombardier, the bombardiers; group navigator, the navigators; group engineering officer, the pilots and flight engineers; group communications officer, the pilots and radio operators. In addition, intelligence flak specialists, and electronic specialists may hold separate short interrogations.

On landing, crews must be brought to the place of interview as quickly as possible. On some fields aircraft are widely dispersed and unless transportation is efficiently organized, harmful delays result. Arrangements should be made to supply appropriate refreshments to the crews as soon as they reach the quarters reserved for interrogation. Facilities for interrogation vary, but for bomber crews it is best, when possible, to provide one large room for the reception of all, and a number of small rooms for the separate interrogation of each crew privately. In contrast to such ideal interrogation quarters, the exigencies of combat may require interrogation of crews near their aircraft immediately after landing. In the interest of accuracy, interrogation must take place as soon as possible after return from the mission. Delay serves only to encourage unconscious suggestion between crew members with characteristic modifications or alterations of true and individual impressions of actual occurrences. The interrogation itself should be as brief as is consistent with accurate and complete coverage because the immediate forwarding of the preliminary report to higher headquarters is essential.

Interrogation forms ordinarily are prescribed by higher headquarters. The intelligence officer fills out these forms (see end of chapter) and adds other information he considers of value. During interrogation the intelligence officer should have basic reference materials available, such as maps, charts, target illustrations, and photographs. Silhouettes, pictures, and models of aircraft and naval vessels are useful in checking recognition reports. The interrogation officers must be thoroughly familiar with the general situation within their theater of operation, and know the background and details of the particular mission. Those who cannot attend the briefing should be completely informed concerning details of the mission.

Crews should not be interviewed by anyone prior to their interrogation by intelligence officers. Even the commander should be encouraged to defer any detailed questioning until after the interrogation. Because of their natural interest, combat crews who have not gone on the mission usually are the worst offenders in causing confusion. They should not be permitted to talk to returning crews until interrogation is concluded. Newspaper reporters should not be present and should get their stories afterwards.

Hot News or Flash News of immediate importance must be transmitted to higher headquarters by the swiftest available means. In general, flash news will include such information as:

a. Friendly aircraft down at sea; dinghies or life rafts seen; all friendly aircraft in distress.

b. Enemy convoys, warships, and naval movements.

c. Enemy tank and troop concentrations and movements.

d. Any other urgent or tactical information.

The report should always include:

a. Location of object reported.

b. Description of object reported:

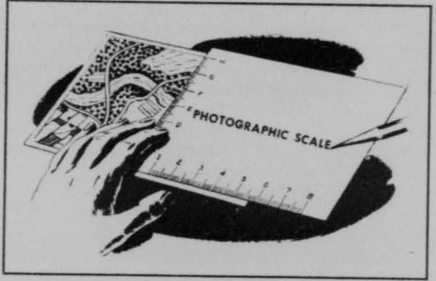
1. Enemy ships: Type, speed and heading.
2. Enemy troops: Approximate number, disposition, and direction of movement.
3. Enemy vehicles: Type, number, disposition, and direction of movement.

c. Time of observation.

d. Height of observation.

INTERROGATION TECHNIQUE

The stress of combat operations and the consequent difficulty of clear and accurate observation poses a great problem for the interrogator. This problem is encountered even in the interrogation of battle-seasoned personnel. The speed of events and the complexity of the action or object being observed often make it impossible for personnel to see enough to make a comprehensive and accurate report. Complete descriptions are evolved only by piecing together many bits and pieces of information. In many cases erroneous reports are given to the interrogator in all good faith. In recognition of this human capacity for error, final reports are frequently made by checking the photographs from gun cameras and ascertaining bombing results through the report of the Photo Interpreter.



Another problem faced by the interrogator is the human proclivity to distort facts for personal gain, with the obvious result that the reporting is necessarily inaccurate. Many intelligence officers in the past war were faced with the problem of evaluating interrogation reports that were not all they should have been, claims of enemy aircraft shot down were highly exaggerated, interceptions were inaccurate, bomb drop locations were incorrect, etc. Actually, the individual making a deliberately erroneous or inaccurate report helped only to confuse the picture and possibly prolong the war. No interrogation officer can beat this problem by himself, no intelligence section can carry out good interrogation work without support from the top side. In short, the responsibility for the general calibre of the interrogation and reporting rests squarely on the Commanding Officer.

The personal qualities of the interrogating officer are of great importance. These qualities as listed have no relative importance. They are all of equal importance but not necessarily all inclusive. However, they are qualities worthy of consideration in selecting personnel to interrogate combat crews:

a. Possess the ability to think analytically.

b. Develop an ability to sense items of value (no matter how insignificant).

c. Possess the ability to guide and direct questions.

d. Possess the ability to project an attitude of patience, tolerance, understanding, etc.

e. May be sympathetic, but not "softhearted."

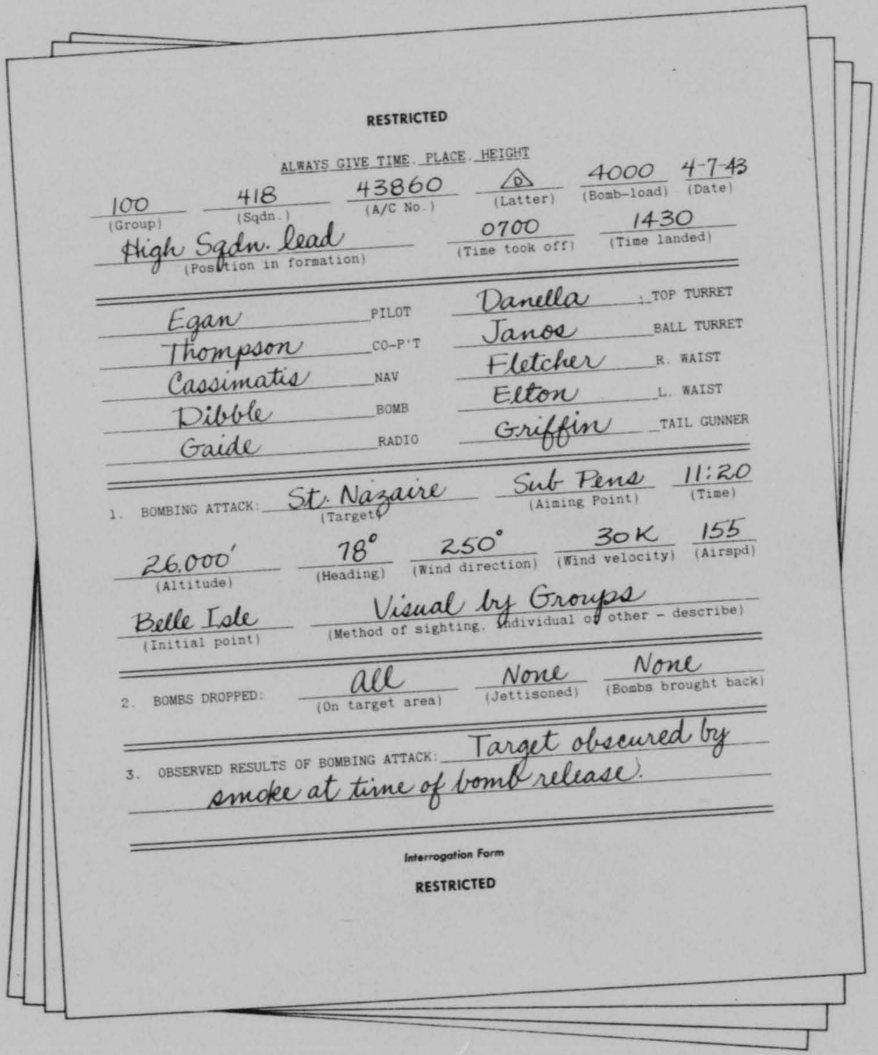
f. Must be scrupulously honest, not a "wishful thinker."

g. Must have a good memory.

h. Should have combat experience of one type or another. These traits are not unusual, nor are they limited to interrogating officers only. But, just as all officers are not all good leaders, so it follows that all officers are not all good interrogating officers. If accurate intelligence information is to be secured from interrogation of combat crews, the initial requirement is the securing or developing of officer personnel who are qualified to do the job.

Questions and Leads for Classroom Discussion

1. What is the purpose of interrogation?
2. Discuss general interrogation procedures.
3. What is a flash report?
4. What should a flash report always include?
5. Discuss the technique of interrogation.
6. What personal qualities should the interrogating officers possess?



RESTRICTED

ALWAYS GIVE TIME. PLACE. HEIGHT

100 (Group) 418 (Sqdn.) 43860 (A/C No.) △D (Latter) 4000 (Bomb-load) 4-7-43 (Date)

High Sqdn. lead (Position in formation) 0700 (Time took off) 1430 (Time landed)

Egan PILOT
Thompson CO-P'T
Cassimatis NAV
Dibble BOMB
Gaide RADIO
Danella TOP TURRET
Janos BALL TURRET
Fletcher R. WAIST
Elton L. WAIST
Griffin TAIL GUNNER

1. BOMBING ATTACK: St. Nazaire (Target) Sub Pens (Aiming Point) 11:20 (Time)

26,000' (Altitude) 78° (Heading) 250° (Wind direction) 30K (Wind velocity) 155 (Airspd)

Belle Isle (Initial point) Visual by Groups (Method of sighting. individual or other - describe)

2. BOMBS DROPPED: All (On target area) None (Jettisoned) None (Bombs brought back)

3. OBSERVED RESULTS OF BOMBING ATTACK: Target obscured by smoke at time of bomb release.

Interrogation Form

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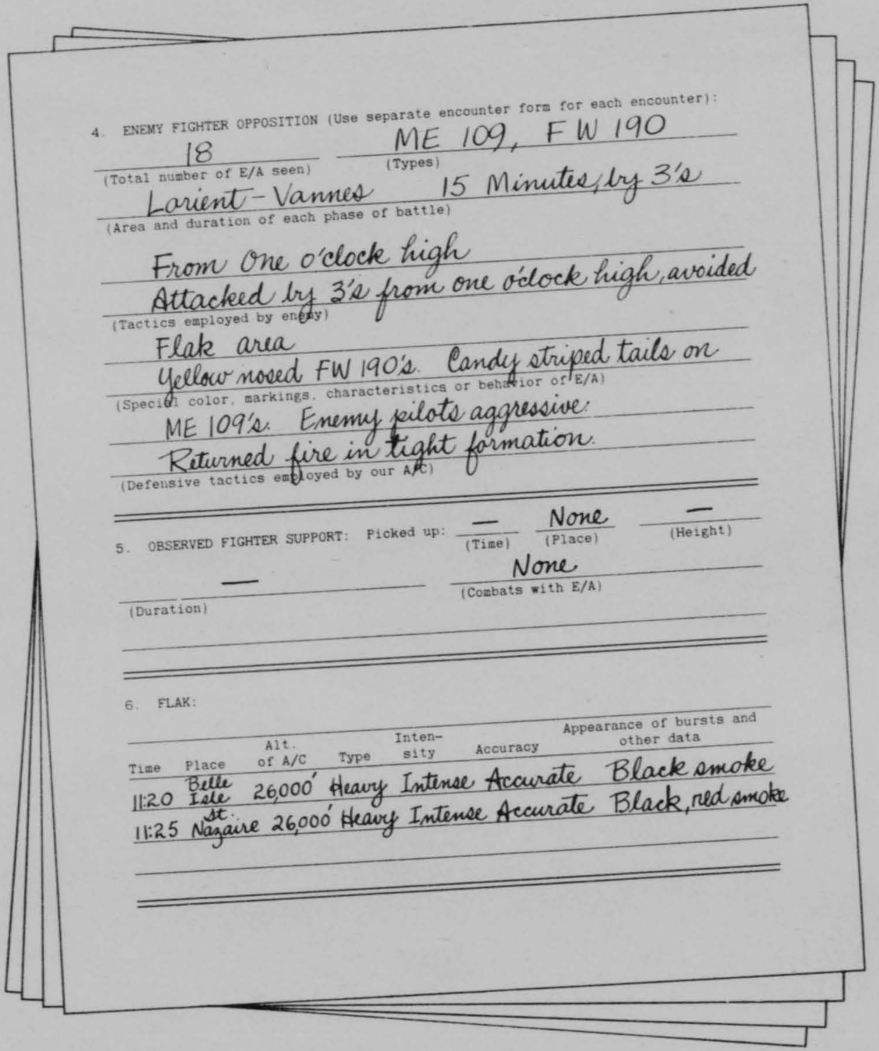

4. ENEMY FIGHTER OPPOSITION (Use separate encounter form for each encounter):

18 (Total number of E/A seen)

ME 109, FW 190 (Types)

Lorient - Vannes 15 Minutes, by 3's
(Area and duration of each phase of battle)

From One o'clock high
Attacked by 3's from one o'clock high, avoided
(Tactics employed by enemy)
Flak area
Yellow nosed FW 190's. Candy striped tails on
(Special color, markings, characteristics or behavior of E/A)
ME 109's. Enemy pilots aggressive.
Returned fire in tight formation.
(Defensive tactics employed by our A/C)

5. OBSERVED FIGHTER SUPPORT: Picked up: — (Time) None (Place) — (Height)

— (Duration)

None (Combats with E/A)

6. FLAK:

Time	Place	Alt. of A/C	Type	Intensity	Accuracy	Appearance of bursts and other data
11:20	Belle Isle	26,000′	Heavy	Intense	Accurate	Black smoke
11:25	St. Nazaire	26,000′	Heavy	Intense	Accurate	Black, red smoke

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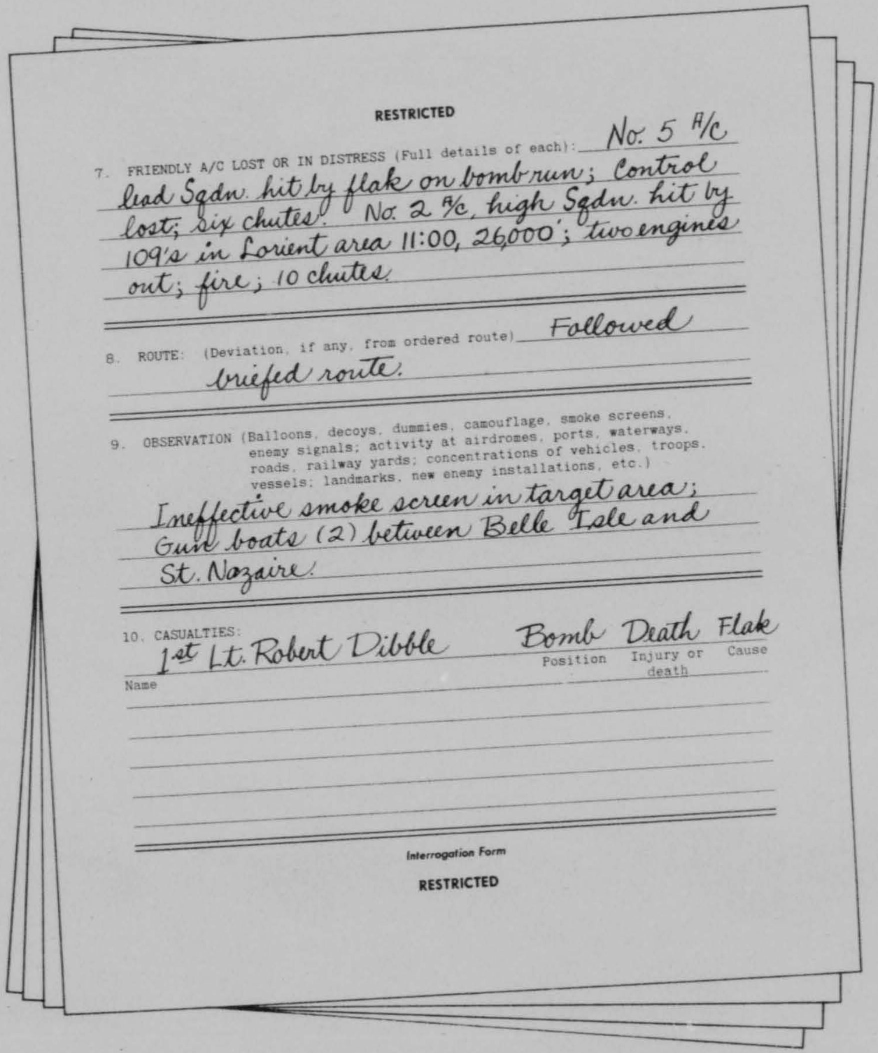

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7. FRIENDLY A/C LOST OR IN DISTRESS (Full details of each): No. 5 A/c lead Sqdn. hit by flak on bomb run; Control lost; Six chutes. No. 2 A/c, high Sqdn. hit by 109's in Lorient area 11:00, 26,000'; two engines out; fire; 10 chutes.

8. ROUTE: (Deviation, if any, from ordered route) Followed briefed route.

9. OBSERVATION (Balloons, decoys, dummies, camouflage, smoke screens, enemy signals; activity at airdromes, ports, waterways, roads, railway yards; concentrations of vehicles, troops, vessels; landmarks, new enemy installations, etc.)

Ineffective smoke screen in target area; Gun boats (2) between Belle Isle and St. Nazaire.

10. CASUALTIES:

Name	Position	Injury or death	Cause
1st Lt. Robert Dibble	Bomb	Death	Flak

Interrogation Form

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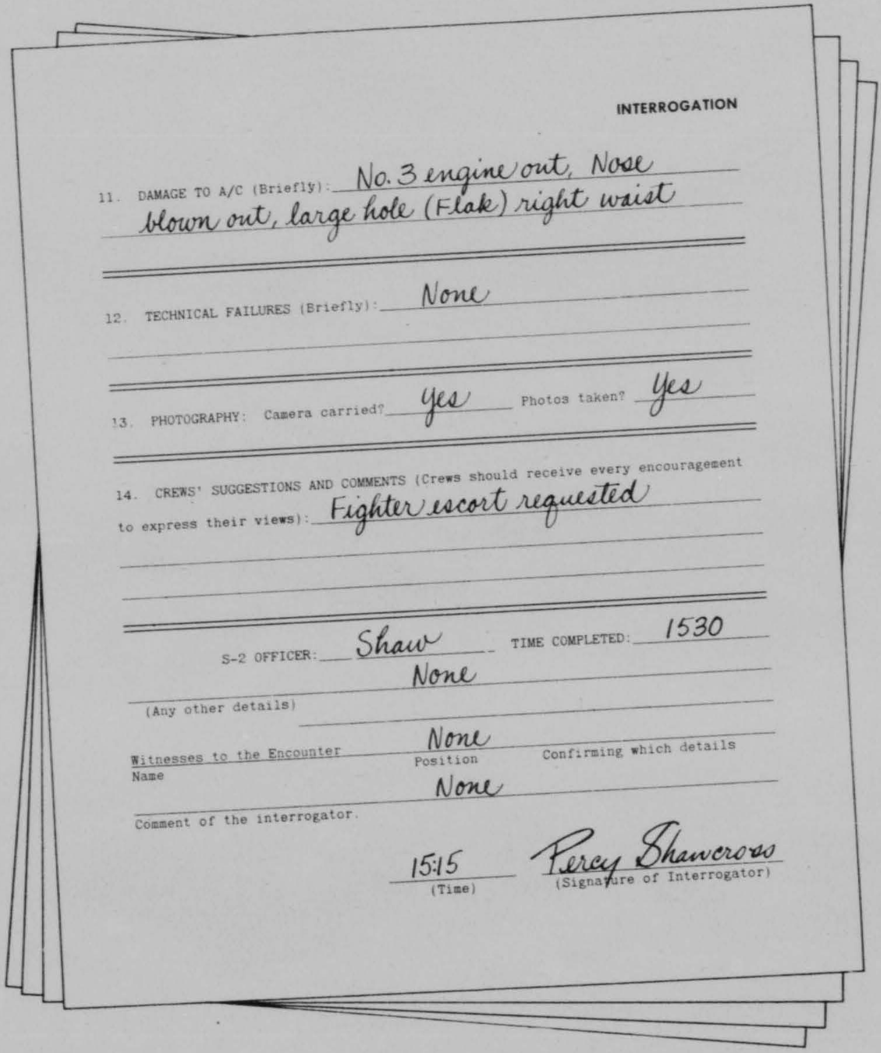


INTERROGATION

11. DAMAGE TO A/C (Briefly): No. 3 engine out, Nose blown out, large hole (Flak) right waist

12. TECHNICAL FAILURES (Briefly): None

13. PHOTOGRAPHY: Camera carried? Yes Photos taken? Yes

14. CREWS' SUGGESTIONS AND COMMENTS (Crews should receive every encouragement to express their views): Fighter escort requested

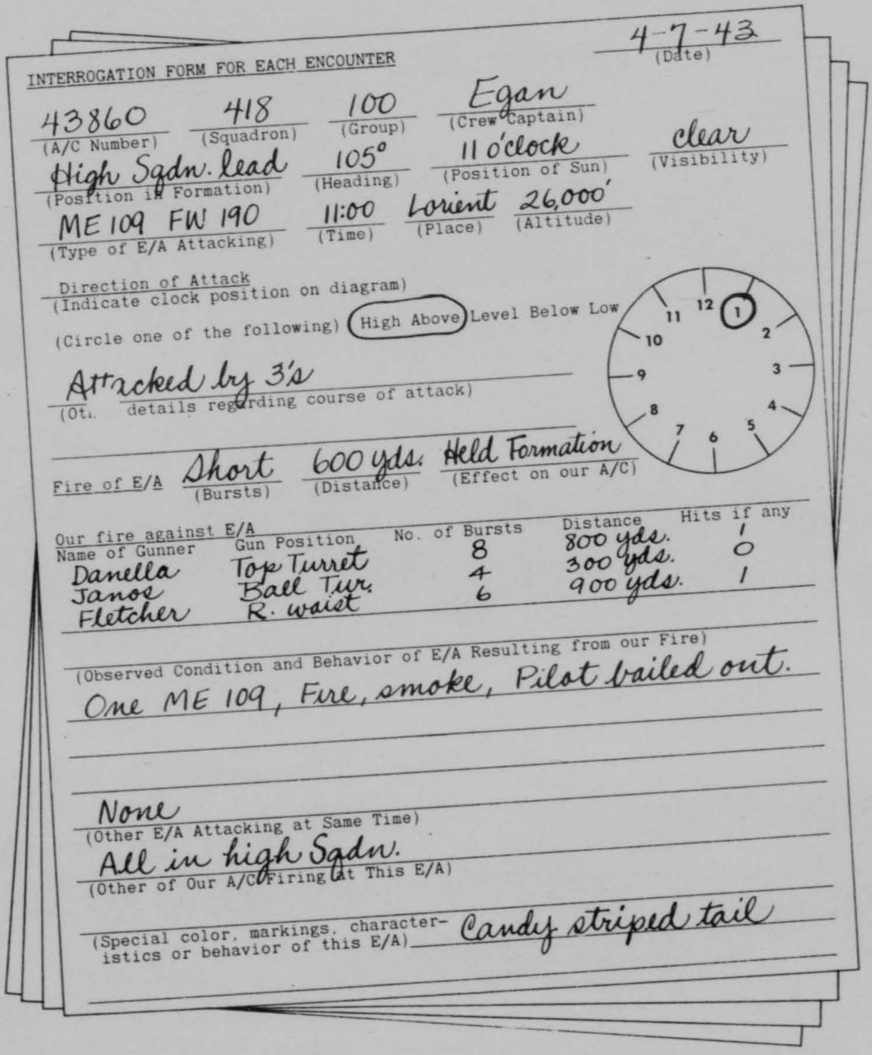
S-2 OFFICER: Shaw TIME COMPLETED: 1530

None
(Any other details)

None
Witnesses to the Encounter Name Position Confirming which details

None
Comment of the interrogator.

15:15 (Time) Percy Shawcross (Signature of Interrogator)



4-7-43 (Date)

INTERROGATION FORM FOR EACH ENCOUNTER

43860 (A/C Number) 418 (Squadron) 100 (Group) Egan (Crew Captain)

High Sqdn. lead (Position in Formation) 105° (Heading) 11 o'clock (Position of Sun) clear (Visibility)

ME 109 FW 190 (Type of E/A Attacking) 11:00 (Time) Lorient (Place) 26,000' (Altitude)

Direction of Attack
(Indicate clock position on diagram)

(Circle one of the following) [✓ High Above] Level Below Low

Attacked by 3's
(Ot... details regarding course of attack)

Fire of E/A Short (Bursts) 600 yds. (Distance) Held Formation (Effect on our A/C)

Our fire against E/A

Name of Gunner	Gun Position	No. of Bursts	Distance	Hits if any
Danella	Top Turret	8	800 yds.	1
Janos	Ball Tur.	4	300 yds.	0
Fletcher	R. waist	6	900 yds.	1

(Observed Condition and Behavior of E/A Resulting from our Fire)
One ME 109, Fire, smoke, Pilot bailed out.

None
(Other E/A Attacking at Same Time)

All in high Sqdn.
(Other of Our A/C Firing at This E/A)

(Special color, markings, characteristics or behavior of this E/A) Candy striped tail

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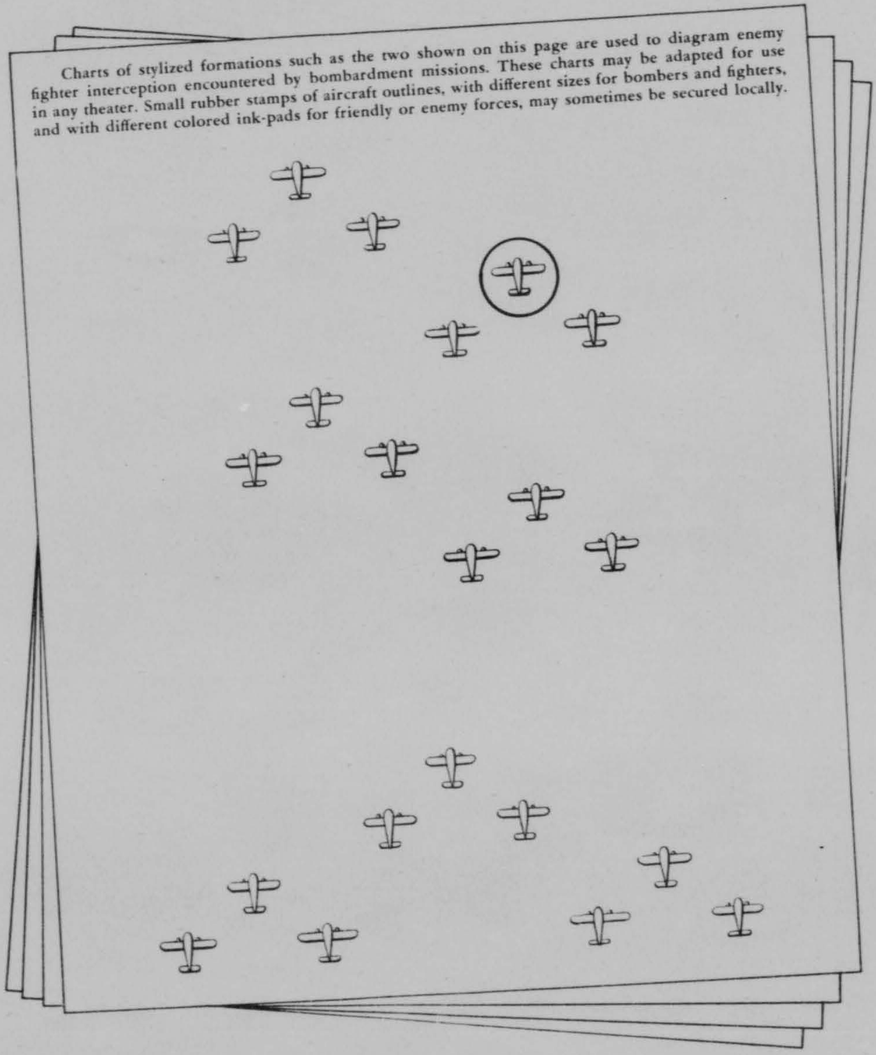
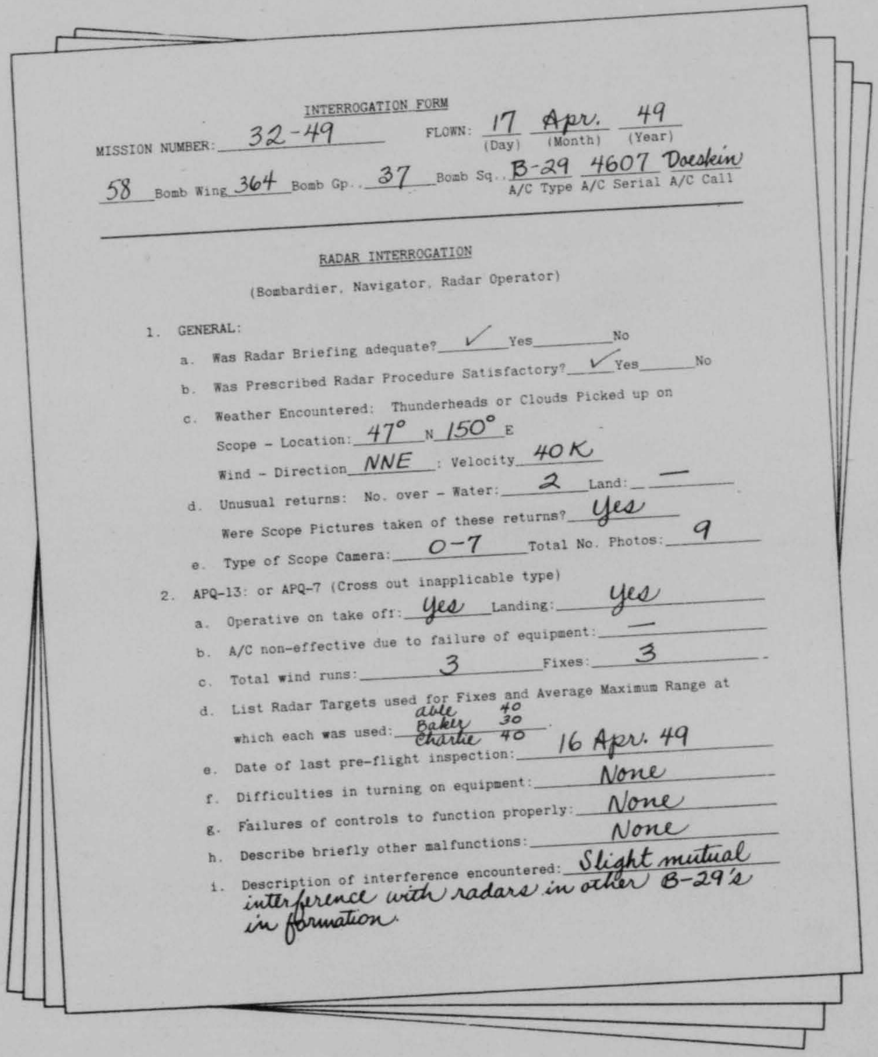


Charts of stylized formations such as the two shown on this page are used to diagram enemy fighter interception encountered by bombardment missions. These charts may be adapted for use in any theater. Small rubber stamps of aircraft outlines, with different sizes for bombers and fighters, and with different colored ink-pads for friendly or enemy forces, may sometimes be secured locally.



INTERROGATION FORM

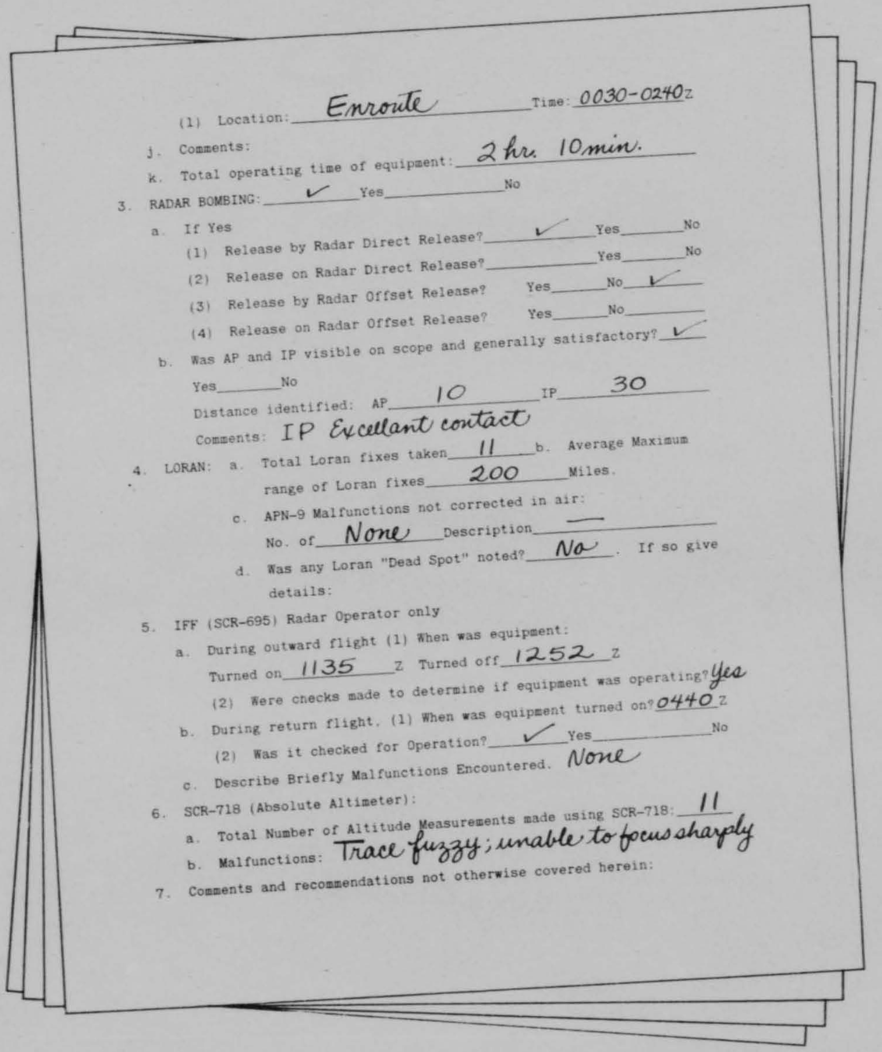
MISSION NUMBER: 32-49 FLOWN: 17 (Day) Apr. (Month) 49 (Year)

58 Bomb Wing 364 Bomb Gp. 37 Bomb Sq. B-29 A/C Type 4607 A/C Serial Doeskin A/C Call

RADAR INTERROGATION

(Bombardier, Navigator, Radar Operator)

1. GENERAL:
   - a. Was Radar Briefing adequate? ✓ Yes ___ No
   - b. Was Prescribed Radar Procedure Satisfactory? ✓ Yes ___ No
   - c. Weather Encountered: Thunderheads or Clouds Picked up on Scope - Location: 47° N 150° E
     Wind - Direction NNE : Velocity 40K
   - d. Unusual returns: No. over - Water: 2 Land: —
     Were Scope Pictures taken of these returns? Yes
   - e. Type of Scope Camera: O-7 Total No. Photos: 9
2. APQ-13: or APQ-7 (Cross out inapplicable type)
   - a. Operative on take off: Yes Landing: Yes
   - b. A/C non-effective due to failure of equipment: —
   - c. Total wind runs: 3 Fixes: 3
   - d. List Radar Targets used for Fixes and Average Maximum Range at which each was used: able 40
Baker 30
Charlie 40
   - e. Date of last pre-flight inspection: 16 Apr. 49
   - f. Difficulties in turning on equipment: None
   - g. Failures of controls to function properly: None
   - h. Describe briefly other malfunctions: None
   - i. Description of interference encountered: Slight mutual interference with radars in other B-29's in formation.



(1) Location: Enroute Time: 0030-0240z

j. Comments:

k. Total operating time of equipment: 2 hr. 10 min.

3. RADAR BOMBING: ✓ Yes ____ No

a. If Yes

(1) Release by Radar Direct Release? ✓ Yes ____ No

(2) Release on Radar Direct Release? ____ Yes ____ No

(3) Release by Radar Offset Release? Yes ____ No ✓

(4) Release on Radar Offset Release? Yes ____ No ____

b. Was AP and IP visible on scope and generally satisfactory? ✓ Yes ____ No

Distance identified: AP 10 IP 30

Comments: IP Excellant contact

4. LORAN: a. Total Loran fixes taken 11 b. Average Maximum range of Loran fixes 200 Miles.

c. APN-9 Malfunctions not corrected in air:

No. of None Description —

d. Was any Loran "Dead Spot" noted? No. If so give details:

5. IFF (SCR-695) Radar Operator only

a. During outward flight (1) When was equipment:

Turned on 1135 Z Turned off 1252 Z

(2) Were checks made to determine if equipment was operating? Yes

b. During return flight. (1) When was equipment turned on? 0440 Z

(2) Was it checked for Operation? ✓ Yes ____ No

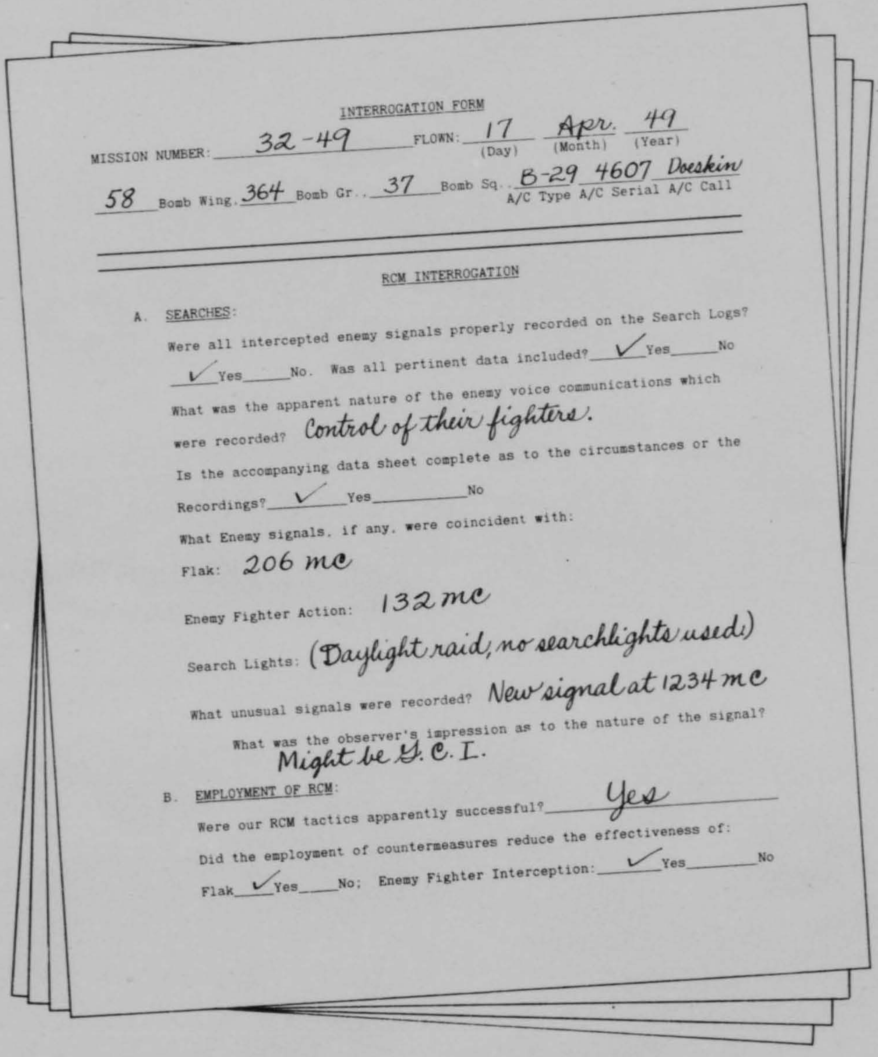
c. Describe Briefly Malfunctions Encountered. None

6. SCR-718 (Absolute Altimeter):

a. Total Number of Altitude Measurements made using SCR-718: 11

b. Malfunctions: Trace fuzzy; unable to focus sharply

7. Comments and recommendations not otherwise covered herein:



INTERROGATION FORM

MISSION NUMBER: 32-49 FLOWN: 17 (Day) Apr. (Month) 49 (Year)

58 Bomb Wing. 364 Bomb Gr., 37 Bomb Sq., B-29 A/C Type 4607 A/C Serial Doeskin A/C Call

RCM INTERROGATION

A. SEARCHES:

Were all intercepted enemy signals properly recorded on the Search Logs? ✓ Yes ____ No. Was all pertinent data included? ✓ Yes ____ No

What was the apparent nature of the enemy voice communications which were recorded? Control of their fighters.

Is the accompanying data sheet complete as to the circumstances or the Recordings? ✓ Yes ____ No

What Enemy signals, if any, were coincident with:

Flak: 206 mc

Enemy Fighter Action: 132 mc

Search Lights: (Daylight raid, no searchlights used.)

What unusual signals were recorded? New signal at 1234 mc

What was the observer's impression as to the nature of the signal? Might be G.C.I.

B. EMPLOYMENT OF RCM:

Were our RCM tactics apparently successful? Yes

Did the employment of countermeasures reduce the effectiveness of:

Flak ✓ Yes ____ No; Enemy Fighter Interception: ✓ Yes ____ No

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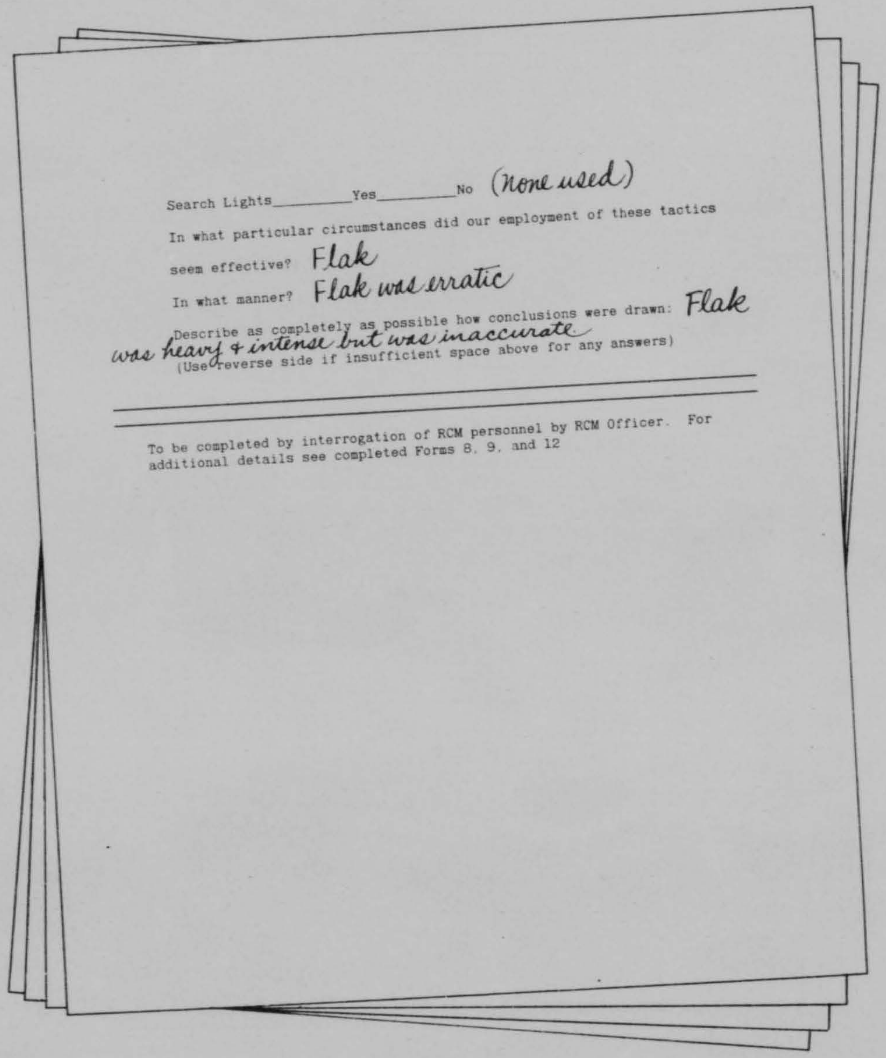

Search Lights_________Yes_________No (None used)

In what particular circumstances did our employment of these tactics seem effective? Flak

In what manner? Flak was erratic

Describe as completely as possible how conclusions were drawn: Flak was heavy & intense but was inaccurate

(Use reverse side if insufficient space above for any answers)

To be completed by interrogation of RCM personnel by RCM Officer. For additional details see completed Forms 8, 9, and 12

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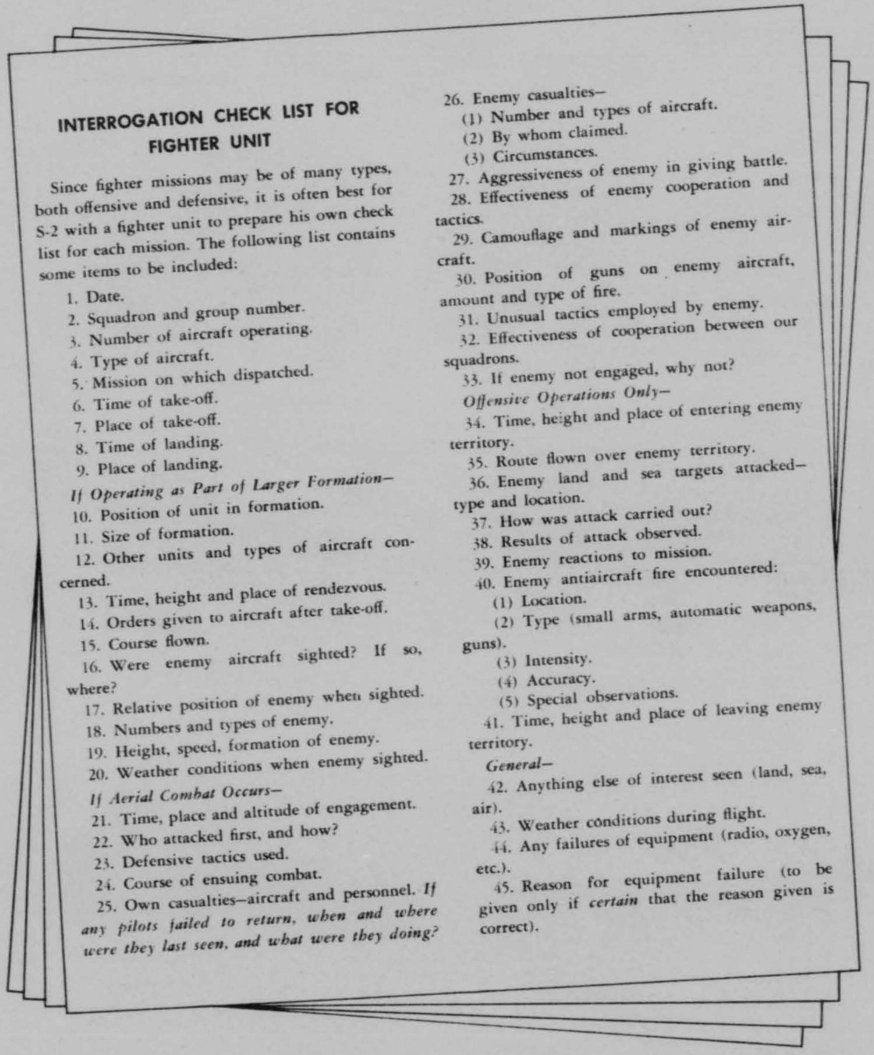


INTERROGATION CHECK LIST FOR FIGHTER UNIT

Since fighter missions may be of many types, both offensive and defensive, it is often best for S-2 with a fighter unit to prepare his own check list for each mission. The following list contains some items to be included:

1. Date.
2. Squadron and group number.
3. Number of aircraft operating.
4. Type of aircraft.
5. Mission on which dispatched.
6. Time of take-off.
7. Place of take-off.
8. Time of landing.
9. Place of landing.

If Operating as Part of Larger Formation—

10. Position of unit in formation.
11. Size of formation.
12. Other units and types of aircraft concerned.
13. Time, height and place of rendezvous.
14. Orders given to aircraft after take-off.
15. Course flown.
16. Were enemy aircraft sighted? If so, where?
17. Relative position of enemy when sighted.
18. Numbers and types of enemy.
19. Height, speed, formation of enemy.
20. Weather conditions when enemy sighted.

If Aerial Combat Occurs—

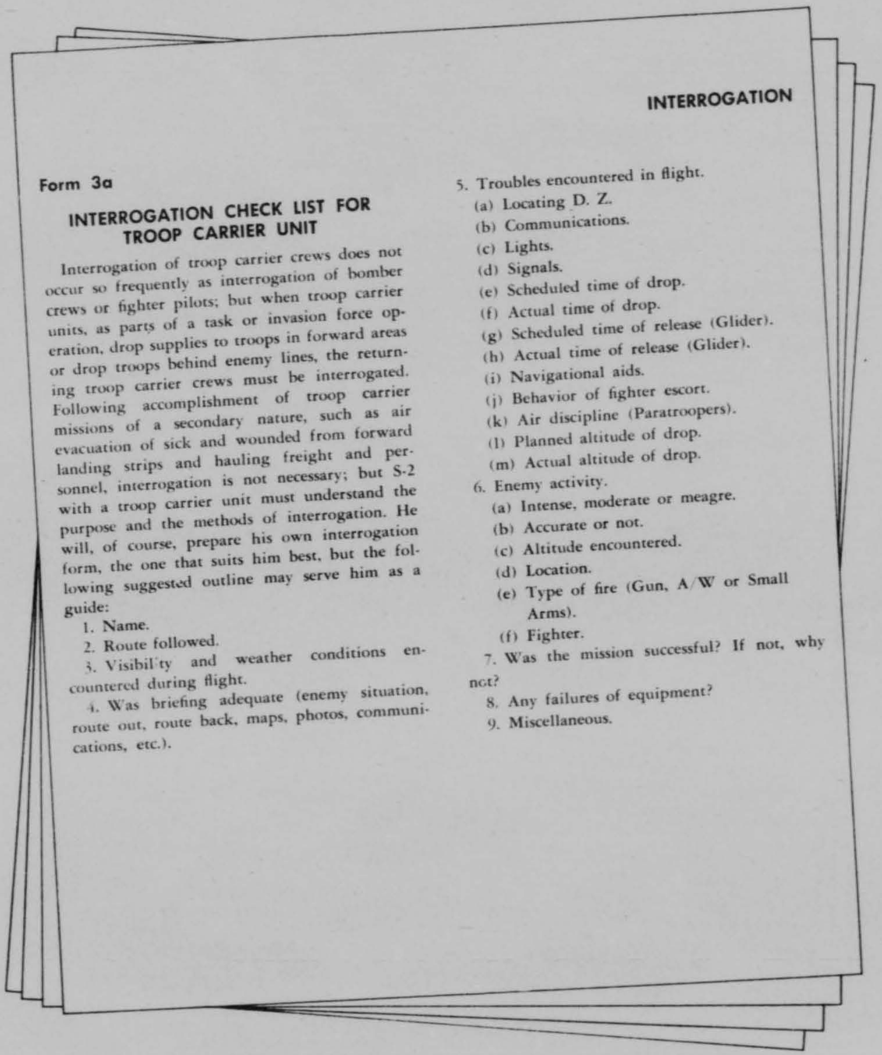
21. Time, place and altitude of engagement.
22. Who attacked first, and how?
23. Defensive tactics used.
24. Course of ensuing combat.
25. Own casualties—aircraft and personnel. *If any pilots failed to return, when and where were they last seen, and what were they doing?*
26. Enemy casualties—
    (1) Number and types of aircraft.
    (2) By whom claimed.
    (3) Circumstances.
27. Aggressiveness of enemy in giving battle.
28. Effectiveness of enemy cooperation and tactics.
29. Camouflage and markings of enemy aircraft.
30. Position of guns on enemy aircraft, amount and type of fire.
31. Unusual tactics employed by enemy.
32. Effectiveness of cooperation between our squadrons.
33. If enemy not engaged, why not?

Offensive Operations Only—

34. Time, height and place of entering enemy territory.
35. Route flown over enemy territory.
36. Enemy land and sea targets attacked—type and location.
37. How was attack carried out?
38. Results of attack observed.
39. Enemy reactions to mission.
40. Enemy antiaircraft fire encountered:
    (1) Location.
    (2) Type (small arms, automatic weapons, guns).
    (3) Intensity.
    (4) Accuracy.
    (5) Special observations.
41. Time, height and place of leaving enemy territory.

General—

42. Anything else of interest seen (land, sea, air).
43. Weather conditions during flight.
44. Any failures of equipment (radio, oxygen, etc.).
45. Reason for equipment failure (to be given only if *certain* that the reason given is correct).

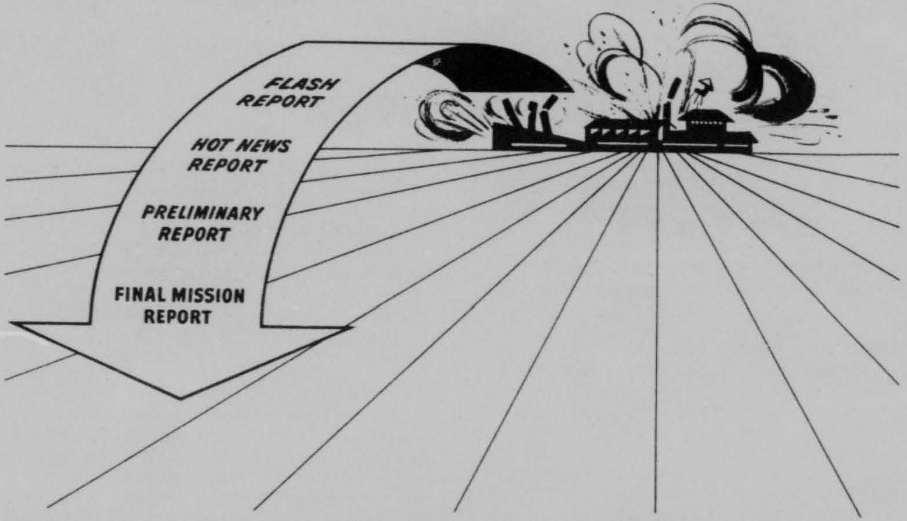


Form 3a

INTERROGATION CHECK LIST FOR TROOP CARRIER UNIT

Interrogation of troop carrier crews does not occur so frequently as interrogation of bomber crews or fighter pilots; but when troop carrier units, as parts of a task or invasion force operation, drop supplies to troops in forward areas or drop troops behind enemy lines, the returning troop carrier crews must be interrogated. Following accomplishment of troop carrier missions of a secondary nature, such as air evacuation of sick and wounded from forward landing strips and hauling freight and personnel, interrogation is not necessary; but S-2 with a troop carrier unit must understand the purpose and the methods of interrogation. He will, of course, prepare his own interrogation form, the one that suits him best, but the following suggested outline may serve him as a guide:

1. Name.
2. Route followed.
3. Visibility and weather conditions encountered during flight.
4. Was briefing adequate (enemy situation, route out, route back, maps, photos, communications, etc.).
5. Troubles encountered in flight.
   - (a) Locating D. Z.
   - (b) Communications.
   - (c) Lights.
   - (d) Signals.
   - (e) Scheduled time of drop.
   - (f) Actual time of drop.
   - (g) Scheduled time of release (Glider).
   - (h) Actual time of release (Glider).
   - (i) Navigational aids.
   - (j) Behavior of fighter escort.
   - (k) Air discipline (Paratroopers).
   - (l) Planned altitude of drop.
   - (m) Actual altitude of drop.
6. Enemy activity.
   - (a) Intense, moderate or meagre.
   - (b) Accurate or not.
   - (c) Altitude encountered.
   - (d) Location.
   - (e) Type of fire (Gun, A/W or Small Arms).
   - (f) Fighter.
7. Was the mission successful? If not, why not?
8. Any failures of equipment?
9. Miscellaneous.



CHAPTER XXIII

MISSION REPORTING

GENERAL

Reporting is the first span in the bridge between the collection of information and the dissemination of intelligence. It is a primary function of the intelligence officer. Through reporting, the information secured and consolidated from interrogation of combat crews is transmitted to higher headquarters. There it will be used to evaluate the success of that particular mission, and in the planning of future missions. It also provides a primary source of intelligence information for later dissemination to lower echelons.

Reports from combat units are higher headquarters' only source of information on the results of combat missions. Accuracy, completeness, and speed of transmission are the major factors governing the writing of reports; neglect of any one of these factors may render the entire report worthless.

DISPOSITION OF REPORTS

Mission reports usually originate at group level, are consolidated at higher level, and forwarded to Command or Air Force to be merged with reports of other participating units. The merged reports are analyzed and the substance of them forwarded to the Commanding General, United States Air Forces, Washington. Summaries of these reports, together with other intelligence information, are consolidated and distributed to lower echelons for dissemination to combat crews.

Reports contain classified military information and their transmision must be properly safeguarded. Yet in transmitting "Hot News" reports, the intelligence officer should remember that while codes delay the enemy in securing the information, they also delay receipt of the message at higher headquarters and prevent the taking of the urgent action that is necessary. Moreover, flash radio (in flight) reports are sent in the clear after the target is reached, with the extent of the flash report dependent upon the decision of the commander authorized

to make that decision. *(For report forms see end of chapter.)*

"Hot News" Report

Sent immediately upon receipt of information by the most rapid available means either to the next higher headquarters or directly to the agency immediately involved. It primarily concerns itself with friendly aircraft in distress, and unusual concentrations of enemy aircraft, troops, or shipping. The form of the report should include:

a. Who, What, When, Where.

b. Time, Place, Height.

c. Time of receipt and transmission.

d. Source of information.

e. Evaluation of information.

Flash Report

This report varies with the conditions and the unit reported on. In a fighter unit, headquarters is primarily concerned in this initial Flash Report with the number of aircraft lost, missing or returned. In a bomber unit they are interested primarily in the results of the mission, was the target hit, and which one? In either case, this first report or Flash Report is merely a rough estimate, subject to correction. Upon receipt at the unit originating the report, either by radio or from landed crews, it is sent immediately by the most rapid available means to the next higher headquarters.

Preliminary Report

This report is sent as soon as the general picture becomes clearer and a rough estimate of the results of the mission can be compiled from the interrogation. It is generally telephoned to the next higher headquarters within two hours after the aircraft have landed. For the sake of brevity in telephoning, it is usually SOP to simply give the name of the target, and then mention the paragraph number only, followed by the figure or descriptive word.

Final Mission Report

This report normally is sent to the next higher headquarters by teletype as soon as it is complete and accurate after interrogation reports are correlated. In no event should it be sent later than 1200 hours the day following the mission. This report should present a complete intelligence account of the mission unless a special report is called for or additional information is uncovered later, such as the Missing Aircraft Report. The final mission report is divided into two sections, Statistical and Narrative. By consolidating the information received at the time of the interrogation and by checking with the unit specialists who participate in the interrogation, it should be possible to forward the statistical part of the report within a short time. Effort can then be concentrated on the narrative part which can be forwarded later, separately.

Supplementary Reports

Supplementary or special reports that may be required are:

a. Missing Aircraft Report: It is the primary purpose of this report to determine how, where, when, and why our aircraft are lost to enemy action, so that facts will be learned from our losses which will reduce them in future operations. It is usually submitted in writing to the next higher headquarters with appropriate diagrams.

b. Combat Report: This report is a detailed one of encounters with enemy aircraft. It is used to secure accurate data as to losses inflicted on the enemy aircraft by our fire; to prove or disprove effectiveness of our fire; to secure information on enemy tactics; and to evaluate claims on enemy aircraft shot down or damaged.

c. Group Combat Report: This report is designed to prevent duplication of combat claims and is sent in after all combat reports have been evaluated and checked for duplication.

d. Enemy Tactics Report: This subject was considered of such importance in certain air forces that one intelligence officer in each group became a specialist in it. He was required to submit a weekly report to higher headquarters on enemy aircraft tactics covering the week's activities. Much of the information came from a study of the interrogation forms, but even more came from direct, informal talks with combat crews. Most combat crews have a vast accumulated store of information which does not come out at interrogation and which would never be put in writing unless such a report were written.

e. Shipping Report: This is a more complete and detailed report of such information as is included in the "Hot News" Report under enemy shipping.

f. Special reports prepared by officers other than intelligence officers include a Flak Report, a Photo and Bomb Plot Report, and a Mission Camera Report.

REPORT FORMS

Data covered in the preliminary and in the final mission reports after a bombing mission and initiated at group level are as follows:

Preliminary Report—(Name of Target)

a. Group.
b. A/C dispatched.
c. A/C failing to bomb.
d. A/C attacking.
e. A/C lost.
f. Bombing results (good, fair, poor, etc.).
g. Casualties (KIA, MIA, WIA).
b. Enemy air opposition (considerable, moderate, slight, nil).
i. Estimate of enemy aircraft (destroyed, probable damaged).
j. Flak (intense, moderate, meagre, nil).
k. Flash observations of outstanding importance.
l. Observed fighter support.
m. Battle damage.

Final Mission Report

a. Statistical Report.
  1. Unit.
  2. Time of take-off.
  3. Time of return.
  4. Number of aircraft dispatched.
  5. Number of aircraft attacking primary target.
  6. Number of aircraft attacking secondary target.
  7. Number of aircraft attacking last resort target.
  8. Number of aircraft attacking target of opportunity.
  9. Number of aircraft failing to bomb target.
  10. Number of aircraft lost to flak.
  11. Number of aircraft lost to enemy aircraft.
  12. Number of aircraft lost by accident.
  13. Number of aircraft lost by reasons unknown.
  14. Time of attack.
  15. Altitude of attack.
  16. Bomb disposition.
    (*a*) Bombs on target—number, size, type.
    (*b*) Bombs unaccounted for—number, size, type.
    (*c*) Bombs jettisoned—number, size, type.
    (*d*) Bombs brought back—number, size, type.
  17. Personnel casualties.
    (*a*) Number killed.
    (*b*) Number seriously wounded.
    (*c*) Number slightly wounded.
    (*d*) Number missing.
  18. Number enemy aircraft destroyed, probably destroyed, damaged.

b. Narrative Report.

1. Detailed description of fighter opposition giving times, places, intensity, tactics and unusual maneuvers.

2. General description of flak encountered giving type, intensity and accuracy.

3. Details on missing aircraft, probable fate of crews, time, place, etc.

4. Information on aircraft seriously damaged or crashed on return.

5. Elaboration on such items as enemy troop activity, new construction, highway and railroad activity, smoke screens, camouflage and dummies, etc.

6. General results of bombing attack with any items of note as seen by crews such as explosions, fires, etc.

7. Comments of crews if of particular note.

8. Preliminary photo interpretation report.

9. Brief summary of mission covering time of take-off, whether or not briefed course was followed, position of group in flight and attack, heading on bomb run, second runs, etc. If any part of the report cannot be submitted at the proper time, the reason for the nonsubmission will be given, and the information will be furnished by teletype when it becomes available. Similar mission reports may be SOP for fighter units performing support missions for bombardment. For some fighter units a daily report may be SOP which will include all unit operations for the 24 hour period including sorties flown, results of enemy encounters, and summaries of enemy activities such as bombing or strafing attacks against the airdrome.

Questions and Leads for Classroom Discussion

1. What are the major factors governing the writing of reports?
2. What is the disposition of the various reports?
3. What is a preliminary report?
4. What should be presented by a final mission report?
5. What are supplementary reports?

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IMMEDIATE PRIORITY

The following information is to be telephoned at once to Duty Intelligence Officer at wing. No delays in procuring or transmitting it can be permitted.

1. FRIENDLY A/C DOWN OR IN DISTRESS AT SEA ✓) Check
FRIENDLY A/C DOWN OR IN DISTRESS OVER ENEMY TERRITORY ____) Which
FRIENDLY A/C DOWN OR IN DISTRESS ELSEWHERE ____)
DINGHIES, LIFE RAFTS OR PERSONS IN DISTRESS ____)

OBSERVING AIRCRAFT:

GROUP 100 NO. OR LETTER 43860 HEIGHT 26,000'

AIRCRAFT IN DISTRESS:

NO. OR LETTER 43412 △D TIME SEEN 11:15
HEADING 78°
APPROXIMATE POSITION over target CONDITION Fire
HEIGHT 26,000 DINGHY SEEN no
PARACHUTES SEEN six

ANY OTHER REMARKS: none

2. ENEMY SHIPPING, NAVAL UNITS OR CONVOYS AT SEA:

2 Flak ships — Stationary
(Number and type of ships) (Course of ships)

11:10 — Belle Isle - St. Nazaire — 26,000'
(Time seen) (Place) (Altitude of reporting A/C)

none
(Other information)

3. OTHER FLASH NEWS: none

4-7-43 (date) 1435 (time) D.C. Initials of interrogating Officer

Phoned to Wing by Shaw Time 1440

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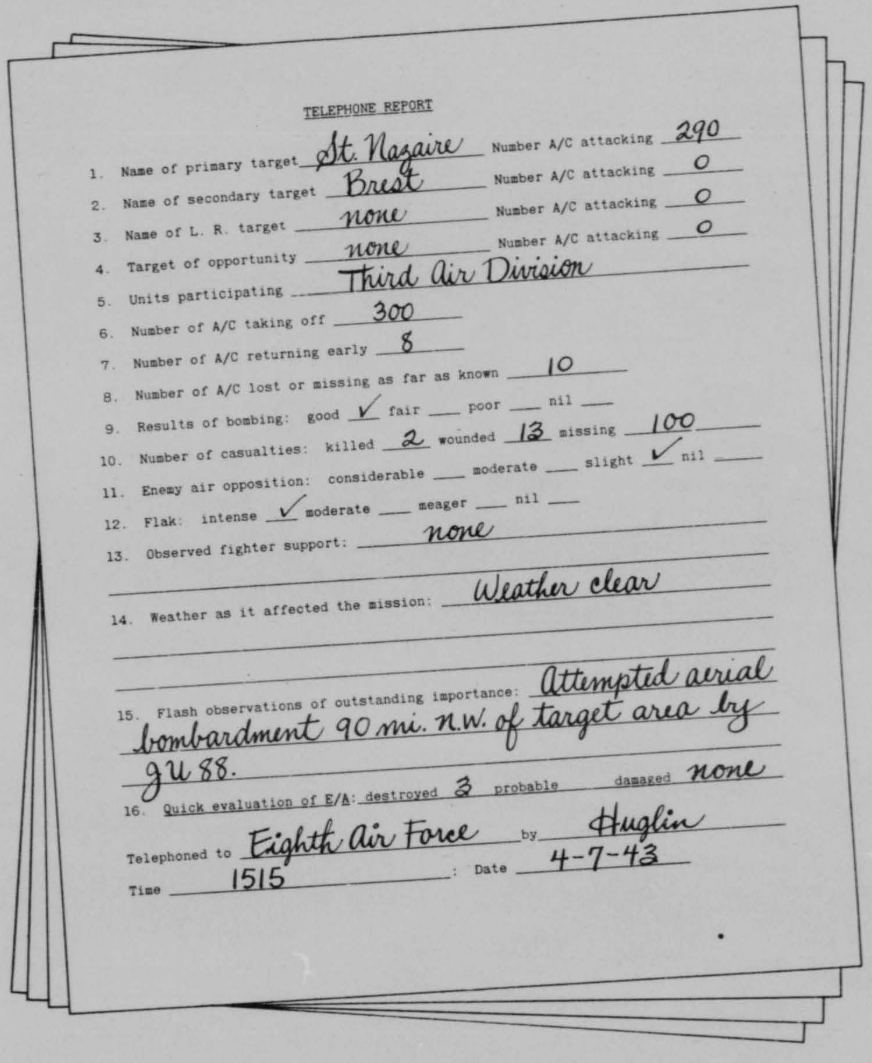
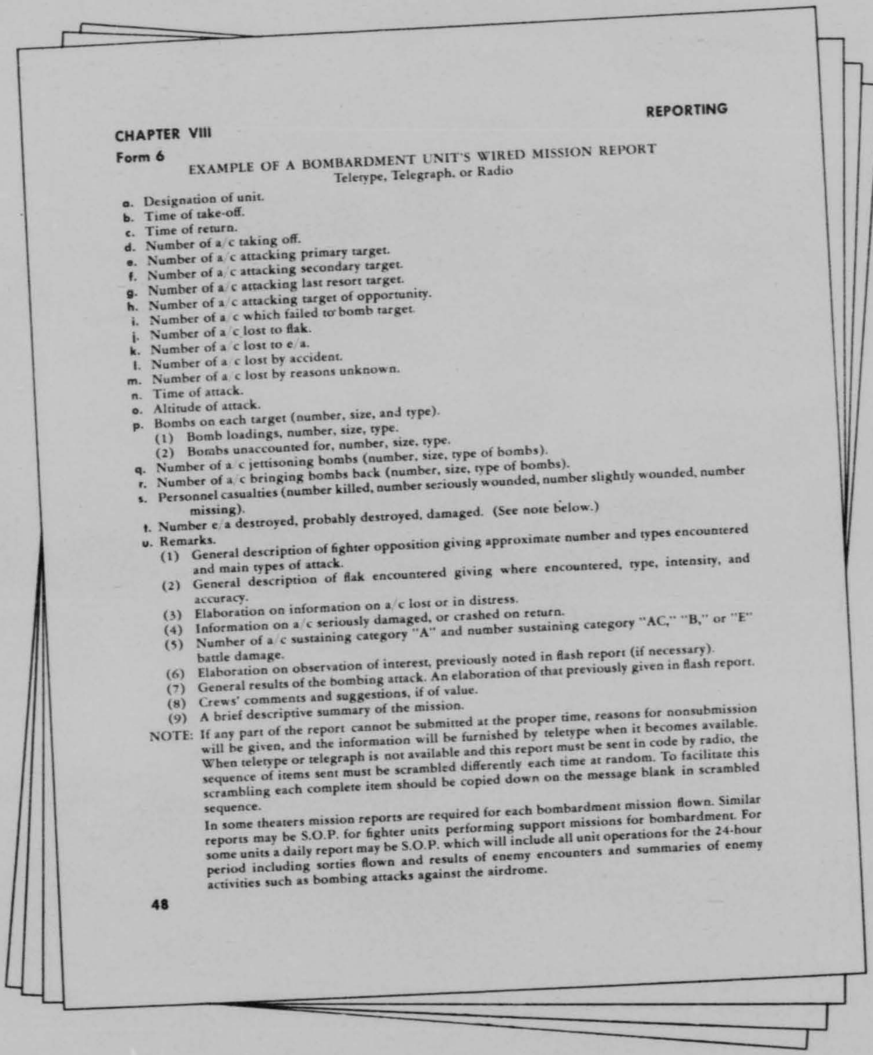


TELEPHONE REPORT

1. Name of primary target St. Nazaire Number A/C attacking 290
2. Name of secondary target Brest Number A/C attacking 0
3. Name of L. R. target none Number A/C attacking 0
4. Target of opportunity none Number A/C attacking 0
5. Units participating Third Air Division
6. Number of A/C taking off 300
7. Number of A/C returning early 8
8. Number of A/C lost or missing as far as known 10
9. Results of bombing: good ✓ fair ___ poor ___ nil ___
10. Number of casualties: killed 2 wounded 13 missing 100
11. Enemy air opposition: considerable ___ moderate ___ slight ✓ nil ___
12. Flak: intense ✓ moderate ___ meager ___ nil ___
13. Observed fighter support: none
14. Weather as it affected the mission: Weather clear
15. Flash observations of outstanding importance: Attempted aerial bombardment 90 mi. N.W. of target area by JU 88.
16. Quick evaluation of E/A: destroyed 3 probable damaged none

Telephoned to Eighth Air Force by Huglin

Time 1515 : Date 4-7-43



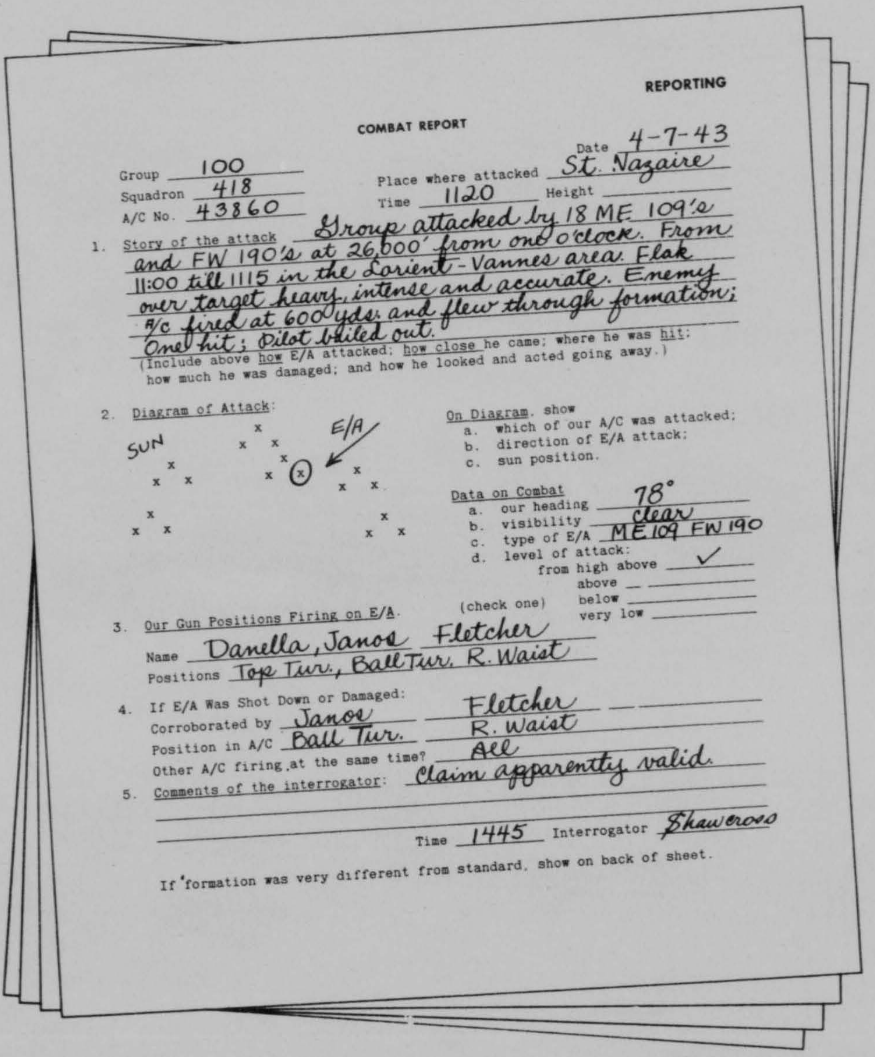
Form 6

EXAMPLE OF A BOMBARDMENT UNIT'S WIRED MISSION REPORT
Teletype, Telegraph, or Radio

a. Designation of unit.
b. Time of take-off.
c. Time of return.
d. Number of a/c taking off.
e. Number of a/c attacking primary target.
f. Number of a/c attacking secondary target.
g. Number of a/c attacking last resort target.
h. Number of a/c attacking target of opportunity.
i. Number of a/c which failed to bomb target.
j. Number of a/c lost to flak.
k. Number of a/c lost to e/a.
l. Number of a/c lost by accident.
m. Number of a/c lost by reasons unknown.
n. Time of attack.
o. Altitude of attack.
p. Bombs on each target (number, size, and type).
  (1) Bomb loadings, number, size, type.
  (2) Bombs unaccounted for, number, size, type.
q. Number of a/c jettisoning bombs (number, size, type of bombs).
r. Number of a/c bringing bombs back (number, size, type of bombs).
s. Personnel casualties (number killed, number seriously wounded, number slightly wounded, number missing).
t. Number e/a destroyed, probably destroyed, damaged. (See note below.)
u. Remarks.
  (1) General description of fighter opposition giving approximate number and types encountered and main types of attack.
  (2) General description of flak encountered giving where encountered, type, intensity, and accuracy.
  (3) Elaboration on information on a/c lost or in distress.
  (4) Information on a/c seriously damaged, or crashed on return.
  (5) Number of a/c sustaining category "A" and number sustaining category "AC," "B," or "E" battle damage.
  (6) Elaboration on observation of interest, previously noted in flash report (if necessary).
  (7) General results of the bombing attack. An elaboration of that previously given in flash report.
  (8) Crews' comments and suggestions, if of value.
  (9) A brief descriptive summary of the mission.

NOTE: If any part of the report cannot be submitted at the proper time, reasons for nonsubmission will be given, and the information will be furnished by teletype when it becomes available. When teletype or telegraph is not available and this report must be sent in code by radio, the sequence of items sent must be scrambled differently each time at random. To facilitate this scrambling each complete item should be copied down on the message blank in scrambled sequence.

In some theaters mission reports are required for each bombardment mission flown. Similar reports may be S.O.P. for fighter units performing support missions for bombardment. For some units a daily report may be S.O.P. which will include all unit operations for the 24-hour period including sorties flown and results of enemy encounters and summaries of enemy activities such as bombing attacks against the airdrome.



REPORTING

COMBAT REPORT

Date 4-7-43
Group 100
Squadron 418
A/C No. 43860
Place where attacked St. Nazaire
Time 1120 Height

1. Story of the attack Group attacked by 18 ME 109's and FW 190's at 26,000' from one o'clock. From 11:00 till 1115 in the Lorient-Vannes area. Flak over target heavy, intense and accurate. Enemy A/c fired at 600 yds. and flew through formation; One hit; Pilot bailed out.
(Include above how E/A attacked; how close he came; where he was hit; how much he was damaged; and how he looked and acted going away.)

2. Diagram of Attack:

On Diagram. show
a. which of our A/C was attacked;
b. direction of E/A attack;
c. sun position.

Data on Combat
a. our heading 78°
b. visibility clear
c. type of E/A ME109 FW190
d. level of attack:
from high above ✓
above
below
very low
(check one)

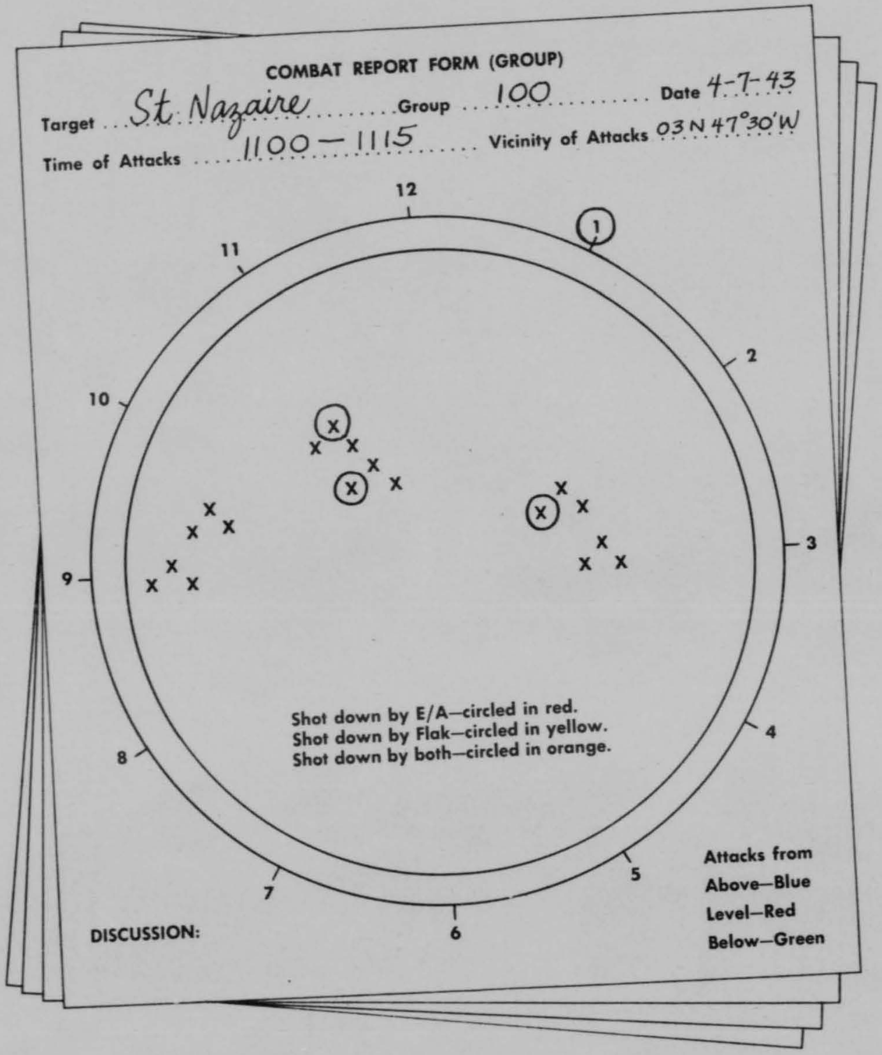
3. Our Gun Positions Firing on E/A.
Name Danella, Janos Fletcher
Positions Top Tur., Ball Tur. R. Waist

4. If E/A Was Shot Down or Damaged:
Corroborated by Janos Fletcher
Position in A/C Ball Tur. R. Waist
Other A/C firing at the same time? All

5. Comments of the interrogator: Claim apparently valid.

Time 1445 Interrogator Shawcross

If formation was very different from standard, show on back of sheet.



COMBAT REPORT FORM (GROUP)

Target St. Nazaire .... Group 100 .... Date 4-7-43

Time of Attacks 1100—1115 .... Vicinity of Attacks 03N 47°30'W

12
①
2
3
4
5
6
7
8
9
10
11
x

Shot down by E/A—circled in red.
Shot down by Flak—circled in yellow.
Shot down by both—circled in orange.

Attacks from
Above—Blue
Level—Red
Below—Green

DISCUSSION:

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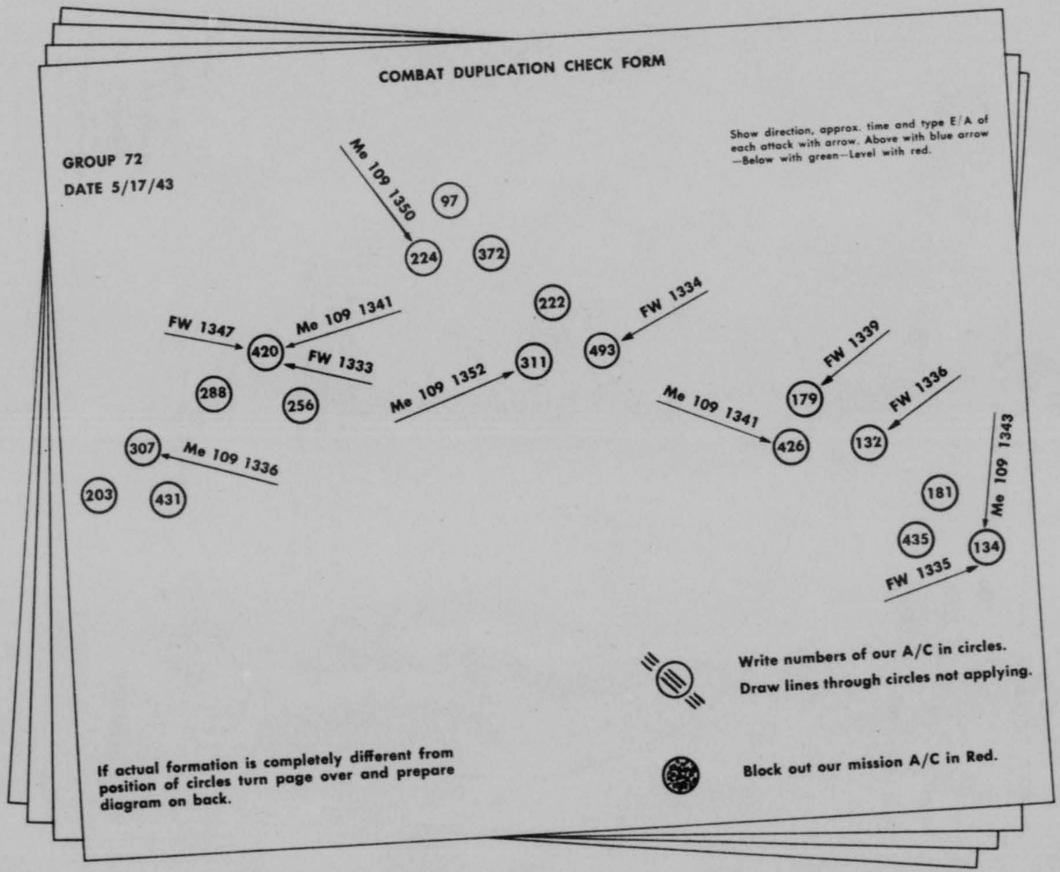
COMBAT DUPLICATION CHECK FORM

GROUP 72
DATE 5/17/43

Show direction, approx. time and type E/A of each attack with arrow. Above with blue arrow —Below with green—Level with red.


Me 109 1350
97
224
372
222
FW 1334
493
FW 1347
Me 109 1341
420
FW 1333
Me 109 1352
311
288
256
307
Me 109 1336
203
431
FW 1339
179
FW 1336
Me 109 1341
426
132
181
Me 109 1343
435
134
FW 1335

Write numbers of our A/C in circles.
Draw lines through circles not applying.

If actual formation is completely different from position of circles turn page over and prepare diagram on back.

Block out our mission A/C in Red.

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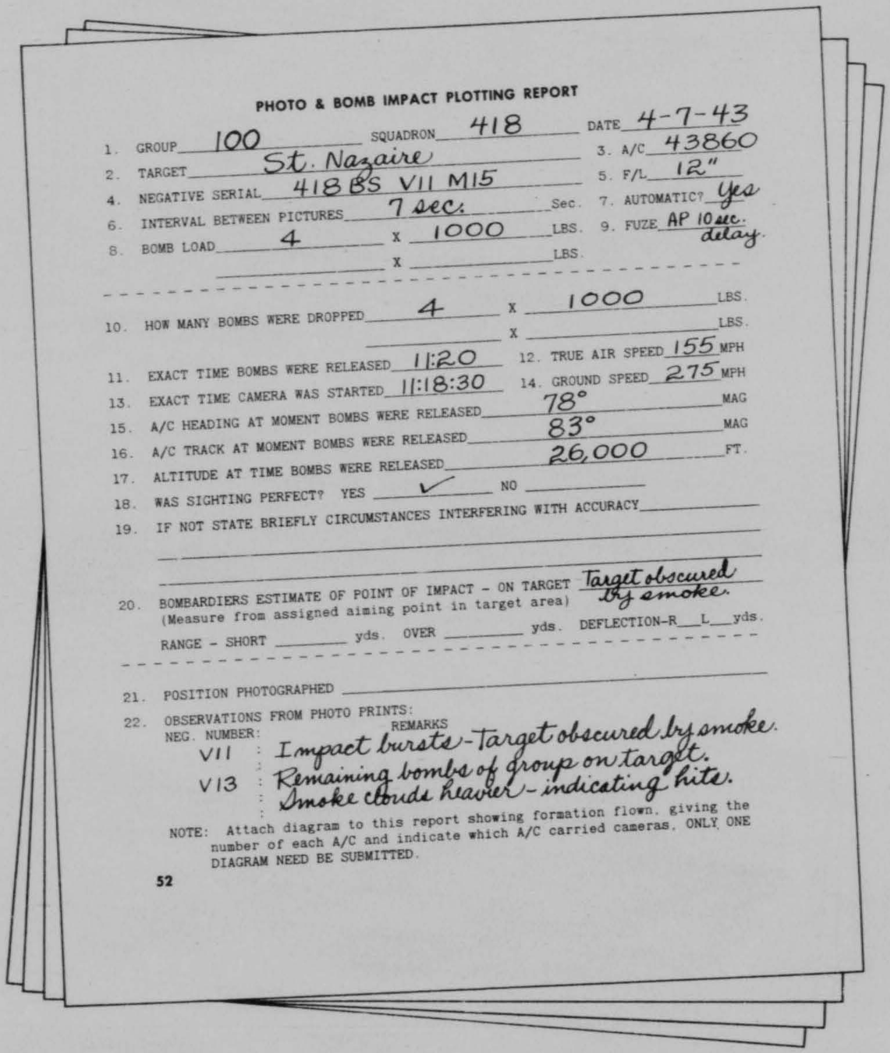


PHOTO & BOMB IMPACT PLOTTING REPORT

1. GROUP 100 SQUADRON 418 DATE 4-7-43
2. TARGET St. Nazaire 3. A/C 43860
4. NEGATIVE SERIAL 418 BS V11 M15 5. F/L 12"
6. INTERVAL BETWEEN PICTURES 7 sec. Sec. 7. AUTOMATIC? Yes
8. BOMB LOAD 4 x 1000 LBS. 9. FUZE AP 10 sec. delay.
________ x ________ LBS.

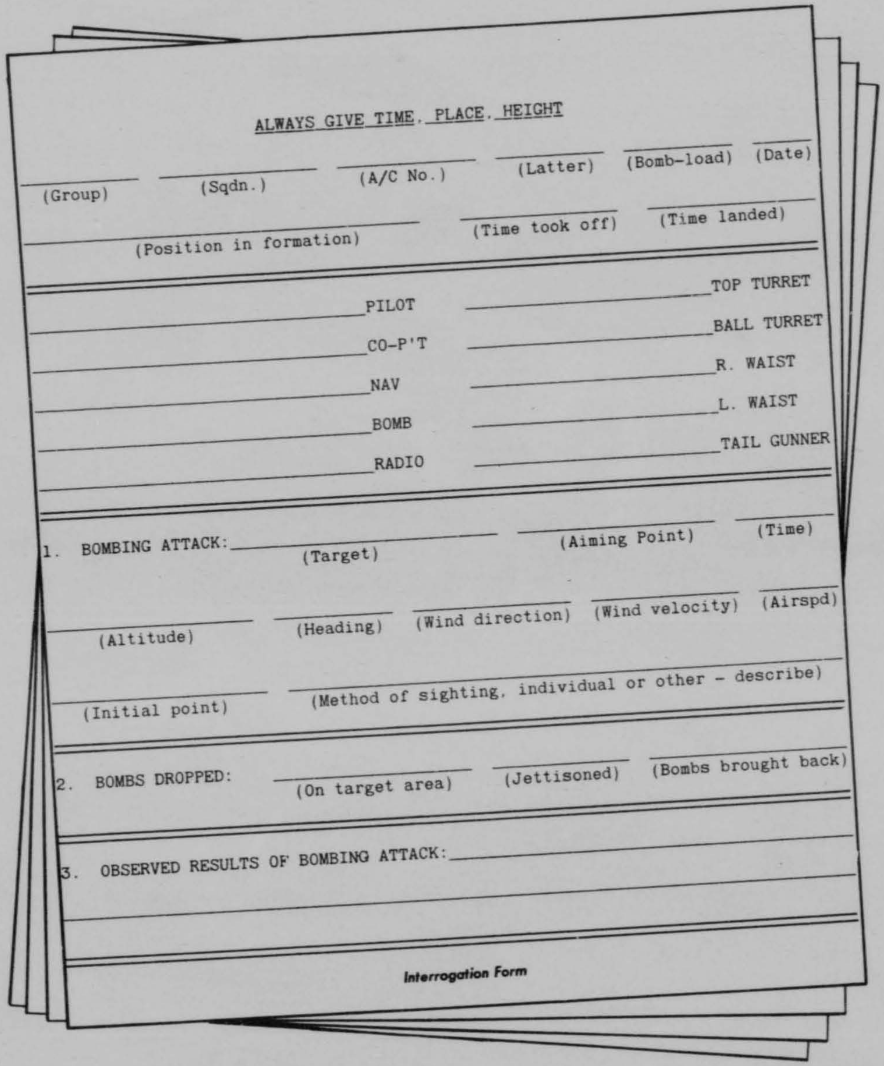
10. HOW MANY BOMBS WERE DROPPED 4 x 1000 LBS.
________ x ________ LBS.
11. EXACT TIME BOMBS WERE RELEASED 11:20 12. TRUE AIR SPEED 155 MPH
13. EXACT TIME CAMERA WAS STARTED 11:18:30 14. GROUND SPEED 275 MPH
15. A/C HEADING AT MOMENT BOMBS WERE RELEASED 78° MAG
16. A/C TRACK AT MOMENT BOMBS WERE RELEASED 83° MAG
17. ALTITUDE AT TIME BOMBS WERE RELEASED 26,000 FT.
18. WAS SIGHTING PERFECT? YES ✓ NO ________
19. IF NOT STATE BRIEFLY CIRCUMSTANCES INTERFERING WITH ACCURACY ________
20. BOMBARDIERS ESTIMATE OF POINT OF IMPACT - ON TARGET Target obscured by smoke.
(Measure from assigned aiming point in target area)
RANGE - SHORT ____ yds. OVER ____ yds. DEFLECTION-R__L__yds.

21. POSITION PHOTOGRAPHED ________
22. OBSERVATIONS FROM PHOTO PRINTS:

NEG. NUMBER:	REMARKS
V11	Impact bursts - Target obscured by smoke.
	Remaining bombs of group on target.
V13	Smoke clouds heavier - indicating hits.

NOTE: Attach diagram to this report showing formation flown, giving the number of each A/C and indicate which A/C carried cameras. ONLY ONE DIAGRAM NEED BE SUBMITTED.

52



ALWAYS GIVE TIME, PLACE, HEIGHT

(Group) (Sqdn.) (A/C No.) (Latter) (Bomb-load) (Date)

(Position in formation) (Time took off) (Time landed)

PILOT TOP TURRET

CO-P'T BALL TURRET

NAV R. WAIST

BOMB L. WAIST

RADIO TAIL GUNNER

1. BOMBING ATTACK: (Target) (Aiming Point) (Time)

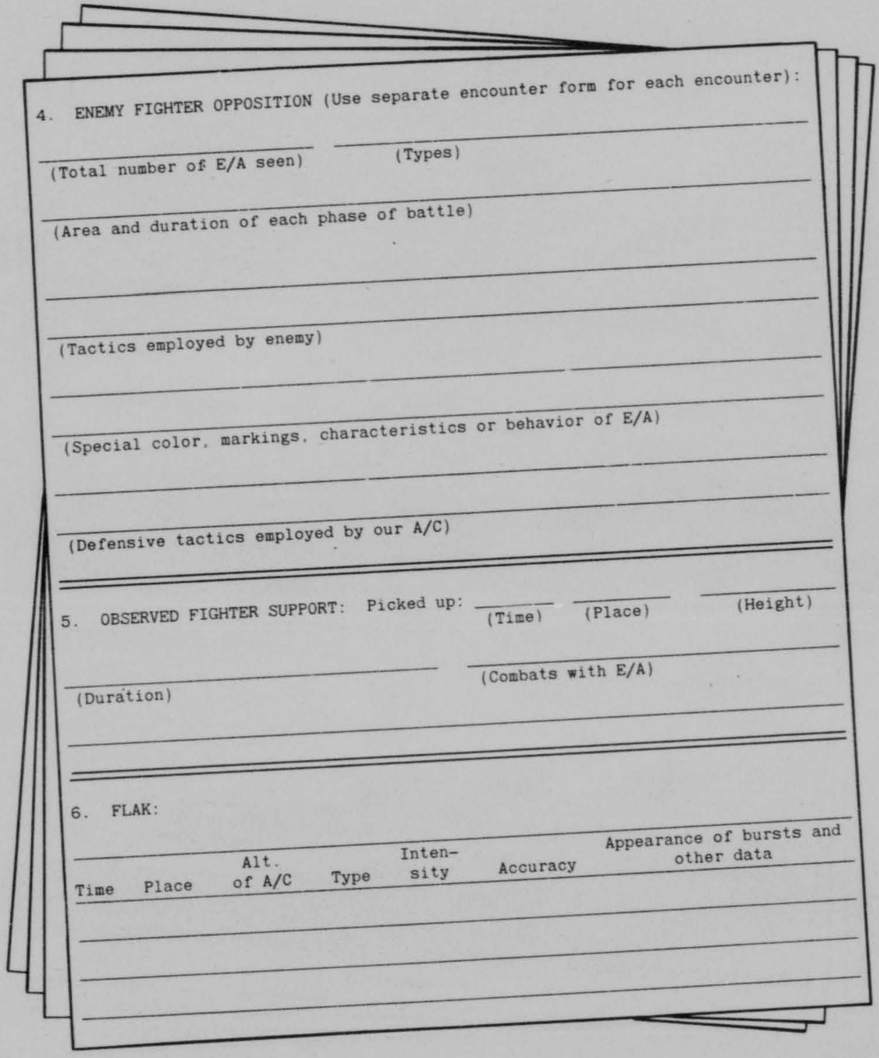
(Altitude) (Heading) (Wind direction) (Wind velocity) (Airspd)

(Initial point) (Method of sighting, individual or other - describe)

2. BOMBS DROPPED: (On target area) (Jettisoned) (Bombs brought back)

3. OBSERVED RESULTS OF BOMBING ATTACK:

Interrogation Form



4. ENEMY FIGHTER OPPOSITION (Use separate encounter form for each encounter):

(Total number of E/A seen) (Types)

(Area and duration of each phase of battle)

(Tactics employed by enemy)

(Special color, markings, characteristics or behavior of E/A)

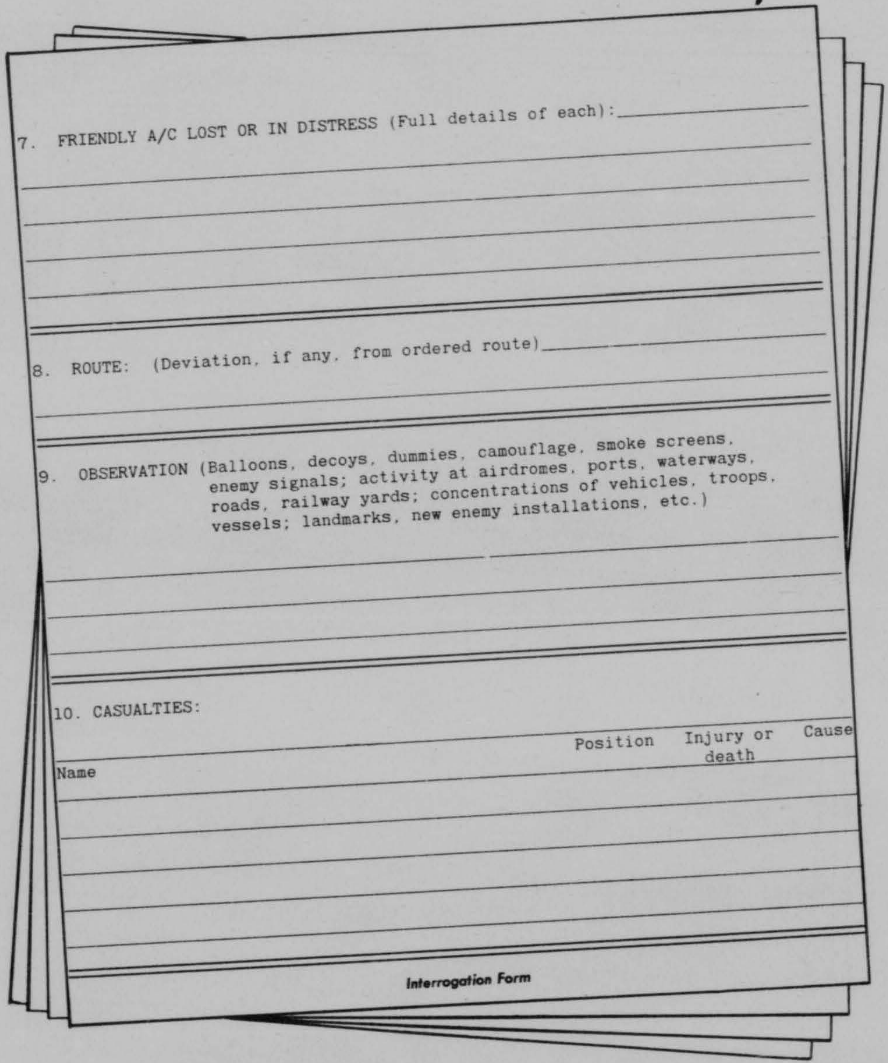
(Defensive tactics employed by our A/C)

5. OBSERVED FIGHTER SUPPORT: Picked up: (Time) (Place) (Height)

(Duration) (Combats with E/A)

6. FLAK:

Time	Place	Alt. of A/C	Type	Intensity	Accuracy	Appearance of bursts and other data



7. FRIENDLY A/C LOST OR IN DISTRESS (Full details of each):

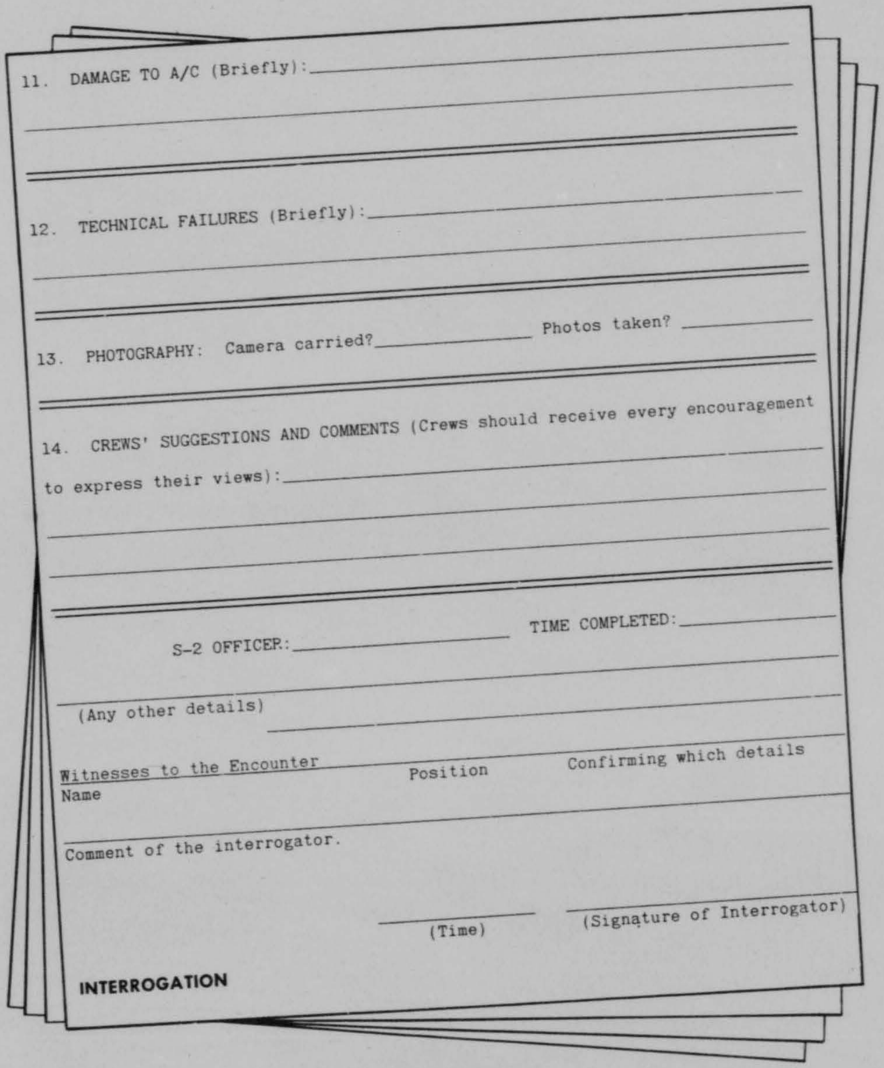
8. ROUTE: (Deviation, if any, from ordered route)

9. OBSERVATION (Balloons, decoys, dummies, camouflage, smoke screens, enemy signals; activity at airdromes, ports, waterways, roads, railway yards; concentrations of vehicles, troops, vessels; landmarks, new enemy installations, etc.)

10. CASUALTIES:

Name	Position	Injury or death	Cause

Interrogation Form



11. DAMAGE TO A/C (Briefly):

12. TECHNICAL FAILURES (Briefly):

13. PHOTOGRAPHY: Camera carried?________ Photos taken? ________

14. CREWS' SUGGESTIONS AND COMMENTS (Crews should receive every encouragement to express their views):

S-2 OFFICER:________ TIME COMPLETED:________

(Any other details)

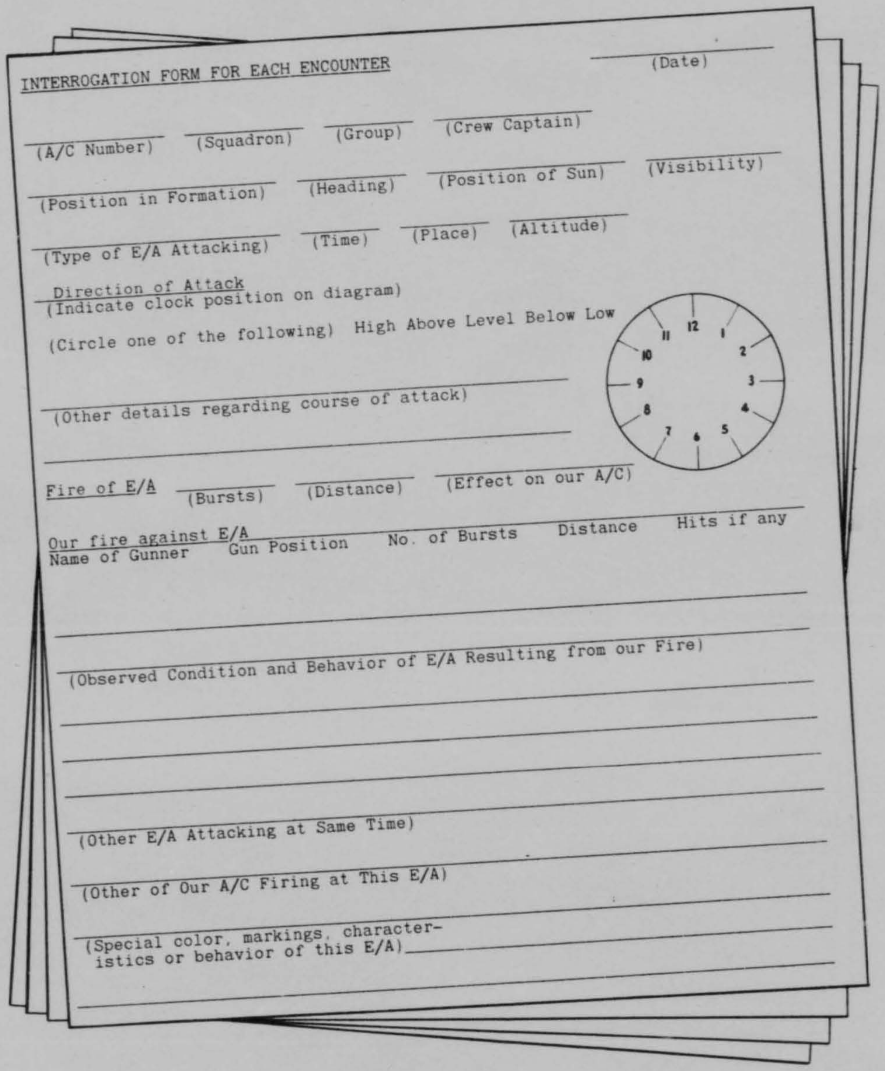
Witnesses to the Encounter

Name	Position	Confirming which details

Comment of the interrogator.

________ (Time) ________ (Signature of Interrogator)

INTERROGATION


12
1
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9
10
11

INTERROGATION FORM FOR EACH ENCOUNTER

(Date)

(A/C Number) (Squadron) (Group) (Crew Captain)

(Position in Formation) (Heading) (Position of Sun) (Visibility)

(Type of E/A Attacking) (Time) (Place) (Altitude)

Direction of Attack
(Indicate clock position on diagram)

(Circle one of the following) High Above Level Below Low

(Other details regarding course of attack)

Fire of E/A (Bursts) (Distance) (Effect on our A/C)

Our fire against E/A

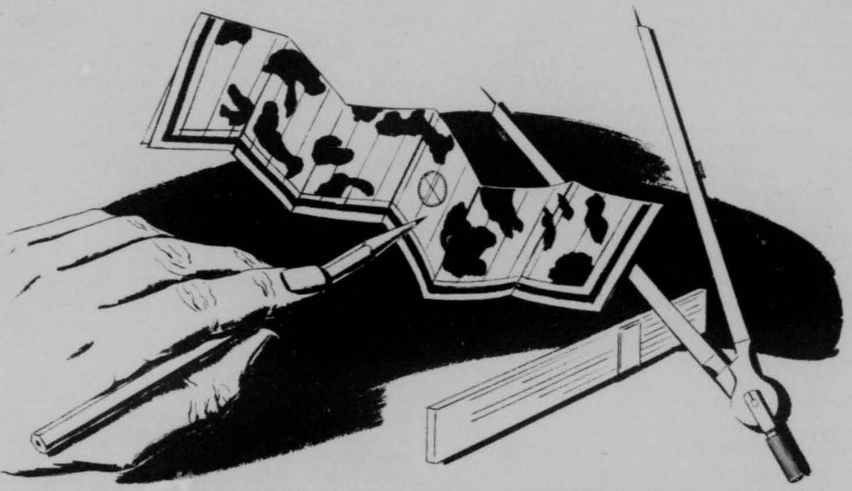
Name of Gunner	Gun Position	No. of Bursts	Distance	Hits if any

(Observed Condition and Behavior of E/A Resulting from our Fire)

(Other E/A Attacking at Same Time)

(Other of Our A/C Firing at This E/A)

(Special color, markings, characteristics or behavior of this E/A)



CHAPTER XXIV

MAPS AND DIAGRAMS

SCOPE

This Chapter assumes the intelligence officer's knowledge of the basic principles and practice of military mapping and map reading (as outlined in FM's 21-25, 21-26, 21-30 and 30-22), and discusses only special maps and diagrams whose preparation and maintenance are peculiar to intelligence. The more common types of graphic representations prepared by intelligence sections are:

a. Situation Map.
b. Theater Map.
c. Enemy Air Order of Battle.
d. Geographic Flak and Enemy Defense Map.
e. Flak Diagrams.
f. Bomb Impact Plots.
g. Track Charts.
  1. Air Combat.
  2. Proposed Route.
h. Target Charts and strips.

SITUATION MAPS

Situation maps portray enemy, friendly, or enemy and friendly, operations and positions at a specific time. In ground units, a map showing enemy positions is known as an *intelligence* situation map; showing friendly positions, it is known as an *operations* situation map. In air units a combined, or joint operations-intelligence, situation map is recommended because intelligence is required to have knowledge of both friendly and enemy situation. Usually information is posted on an overlay so that changes can be made quickly, and the map maintained constantly up to date.

The overlay should never be cluttered with material that will obscure the basic information, or with data already available on the underlying map.

Any transparent hard-surfaced material, such as tracing paper, tracing cloth, vellum, cellophane, plasticele, plexiglas or cellulose acetate can be used for an overlay. Depending on the surface of the overlay material, markings can be made with colored inks. (Camera film with the emulsion washed off in warm water, with sodium carbonate added to aid in the removal, makes a satisfactory substitute for plasticele. The film should be so overlapped that grease pencil rubbings will not work through to the map surface.)

Where overlays are not used, postings may be made directly on the basic map; using cardboard, push-pins and flags as symbols. Some situation maps, particularly in anti-submarine units, are laid over an iron sheet and magnetized metal markers are placed at will on the surface.

To facilitate the measuring of distances, handy map scales made in the form of wooden rulers can be hung near the appropriate maps.

The usual information posted on a situation map is presented in the "shorthand" form of military symbols prescribed in FM 21-30. *Every item posted should be dated.*

THEATER MAPS

A theater map is a display or "current events" map. An effective theater map can be created by posting typed information around the border of the map which relates to events at specific points and connecting such data to the location by use of colored yarns or lines drawn with colored grease pencils. Aerial photographs, detail maps, statistical tables, news clippings, etc., are used to add interest to the display.

ENEMY AIR ORDER OF BATTLE

Enemy Air Order of Battle is most effectively presented on a map by use of push-pins to indicate enemy air units. Different shapes, colors and markings on pins can be used to distinguish type and strength of units represented. In advanced field conditions, data is best marked by grease pencil on an overlay.

FLAK AND ENEMY DEFENSE MAPS

Flak and enemy defense maps show the location and type of anti-aircraft weapons, searchlights, balloon barrages, etc. Locations may be indicated with pins, flags, or markings on an overlay or on the map itself.

A geographic flak map shows by means of circles and variety of colors the enemy anti-aircraft defenses of an area, indicating location, type, density and ranges of guns.

FLAK DIAGRAMS

While a flak map shows the location of enemy anti-aircraft guns, a flak diagram is a representation of the volume of probable fire at a given altitude over a specified target. Density of fire is often illustrated by the use of light-colored circular discs to show the field of fire. These can be printed on a chart, or made of translucent plastic material and hung on pins which indicate gun positions. The varying density of color, resulting from the overlapping of the discs, is a gauge of the intensity of the fire. The more accurate clock density charts showing the number of units of fire to be expected along the different radii or headings from a target can be used to show the paths in and out which are most free of flak.

COMPOSITE MAPS

At times, especially when the unit is moving rapidly, a single map presenting all information may be preferable.

BOMB IMPACT PLOTS

A bomb impact plot is an annotated print which shows the location of each bomb impact in the target area. These plots are made by using every photograph taken by the attacking aircraft during any one mission. With the aid of a stereoscope all bursts visible on the photograph are plotted on the bomb impact overlay or photograph. A report stating what areas or buildings appear to have been hit always accompanies the Bomb Impact Plot.

TRACK CHARTS

There are two types of track charts: Air combat and route. Track charts of air combat locate attacks by enemy aircraft and anti-aircraft artillery on the track made by our aircraft. Track charts of routes show the routes proposed for each mission and those actually flown by each aircraft or group of aircraft. Information necessary for the preparation of both these charts is obtained through interrogation, navigators' logs and photographs of enemy aircraft.

TARGET CHARTS AND STRIPS

Target charts and strips are described in Chapter XVIII. Usually they are available to intelligence from higher echelons; if not, intelligence can prepare substitutes by drawing concentric circles at one-mile intervals on a map of the target area.

Questions and Leads for Classroom Discussion

1. What is a situation map?
2. What is a theater map?
3. Discuss flak and enemy defense maps.
4. What is a bomb impact plot?
5. What are target charts and strips?

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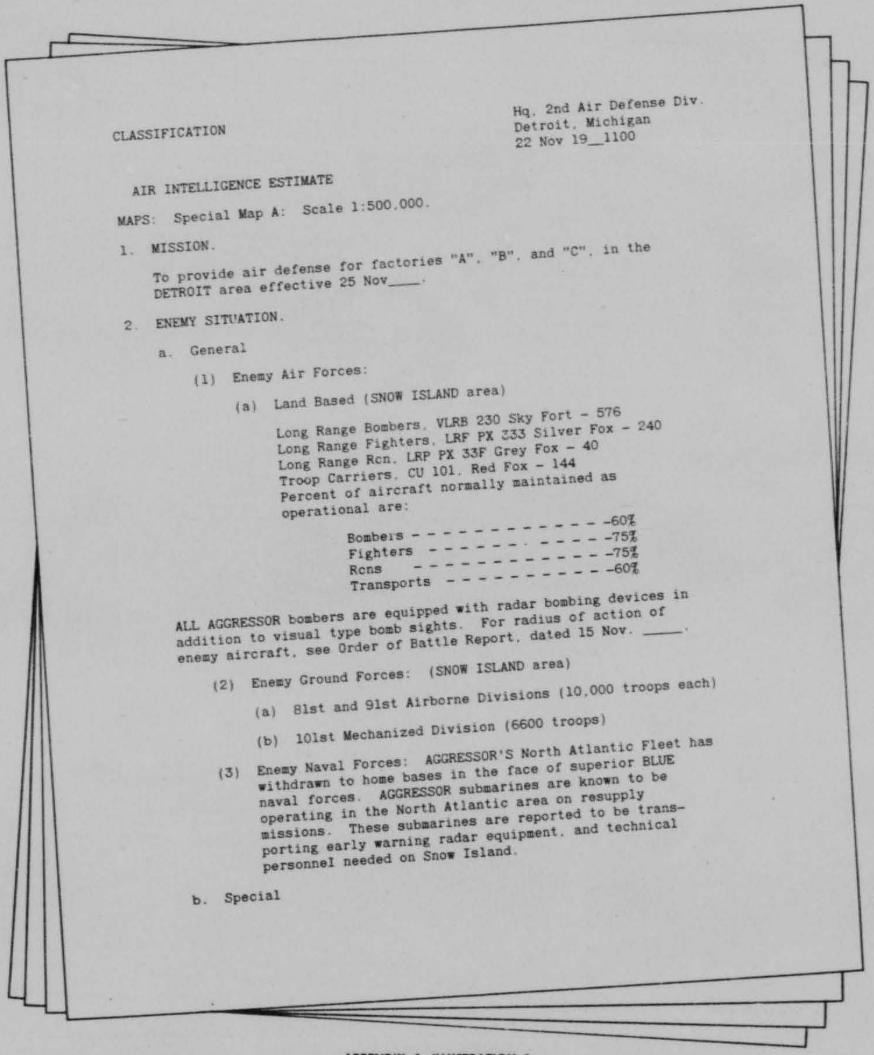

CLASSIFICATION

Hq. 2nd Air Defense Div.
Detroit, Michigan
22 Nov 19__1100

AIR INTELLIGENCE ESTIMATE

MAPS: Special Map A: Scale 1:500,000.

1. MISSION.

To provide air defense for factories "A", "B", and "C", in the DETROIT area effective 25 Nov____.

2. ENEMY SITUATION.

a. General

(1) Enemy Air Forces:

(a) Land Based (SNOW ISLAND area)

Long Range Bombers, VLRB 230 Sky Fort - 576
Long Range Fighters, LRF PX 333 Silver Fox - 240
Long Range Rcn, LRP PX 33F Grey Fox - 40
Troop Carriers, CU 101, Red Fox - 144
Percent of aircraft normally maintained as
operational are:

-60%
Bombers - - - - - - - - - - - - - - - -75%
Fighters - - - - - - - - - - - - - - -75%
Rcns - - - - - - - - - - - - - - - -60%
Transports - - - - - - - - - - - -

ALL AGGRESSOR bombers are equipped with radar bombing devices in addition to visual type bomb sights. For radius of action of enemy aircraft, see Order of Battle Report, dated 15 Nov. _____.

(2) Enemy Ground Forces: (SNOW ISLAND area)

(a) 81st and 91st Airborne Divisions (10,000 troops each)

(b) 101st Mechanized Division (6600 troops)

(3) Enemy Naval Forces: AGGRESSOR'S North Atlantic Fleet has withdrawn to home bases in the face of superior BLUE naval forces. AGGRESSOR submarines are known to be operating in the North Atlantic area on resupply missions. These submarines are reported to be transporting early warning radar equipment, and technical personnel needed on Snow Island.

b. Special

APPENDIX A—ILLUSTRATION 1

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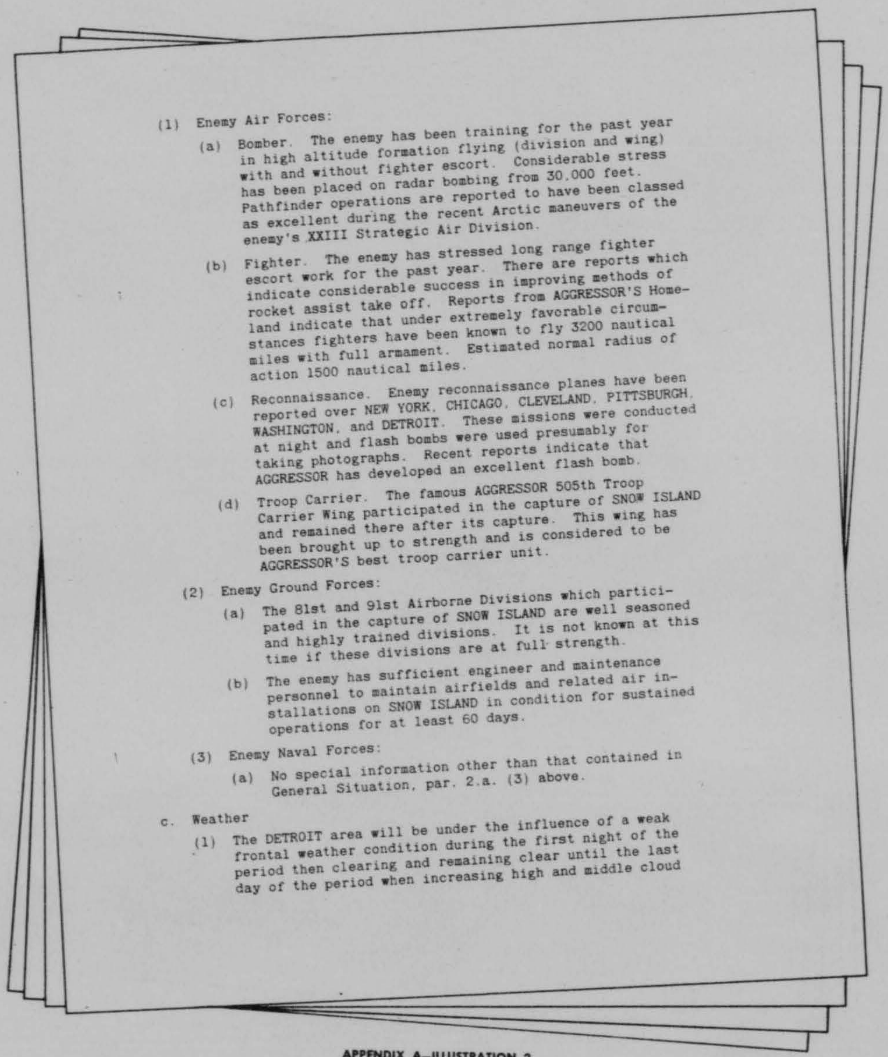

(1) Enemy Air Forces:
(a) Bomber. The enemy has been training for the past year
in high altitude formation flying (division and wing)
with and without fighter escort. Considerable stress
has been placed on radar bombing from 30,000 feet.
Pathfinder operations are reported to have been classed
as excellent during the recent Arctic maneuvers of the
enemy's XXIII Strategic Air Division.
(b) Fighter. The enemy has stressed long range fighter
escort work for the past year. There are reports which
indicate considerable success in improving methods of
rocket assist take off. Reports from AGGRESSOR'S Home-
land indicate that under extremely favorable circum-
stances fighters have been known to fly 3200 nautical
miles with full armament. Estimated normal radius of
action 1500 nautical miles.
(c) Reconnaissance. Enemy reconnaissance planes have been
reported over NEW YORK, CHICAGO, CLEVELAND, PITTSBURGH,
WASHINGTON, and DETROIT. These missions were conducted
at night and flash bombs were used presumably for
taking photographs. Recent reports indicate that
AGGRESSOR has developed an excellent flash bomb.
(d) Troop Carrier. The famous AGGRESSOR 505th Troop
Carrier Wing participated in the capture of SNOW ISLAND
and remained there after its capture. This wing has
been brought up to strength and is considered to be
AGGRESSOR'S best troop carrier unit.

(2) Enemy Ground Forces:
(a) The 81st and 91st Airborne Divisions which partici-
pated in the capture of SNOW ISLAND are well seasoned
and highly trained divisions. It is not known at this
time if these divisions are at full strength.
(b) The enemy has sufficient engineer and maintenance
personnel to maintain airfields and related air in-
stallations on SNOW ISLAND in condition for sustained
operations for at least 60 days.

(3) Enemy Naval Forces:
(a) No special information other than that contained in
General Situation, par. 2.a. (3) above.

c. Weather
(1) The DETROIT area will be under the influence of a weak
frontal weather condition during the first night of the
period then clearing and remaining clear until the last
day of the period when increasing high and middle cloud

APPENDIX A—ILLUSTRATION 2

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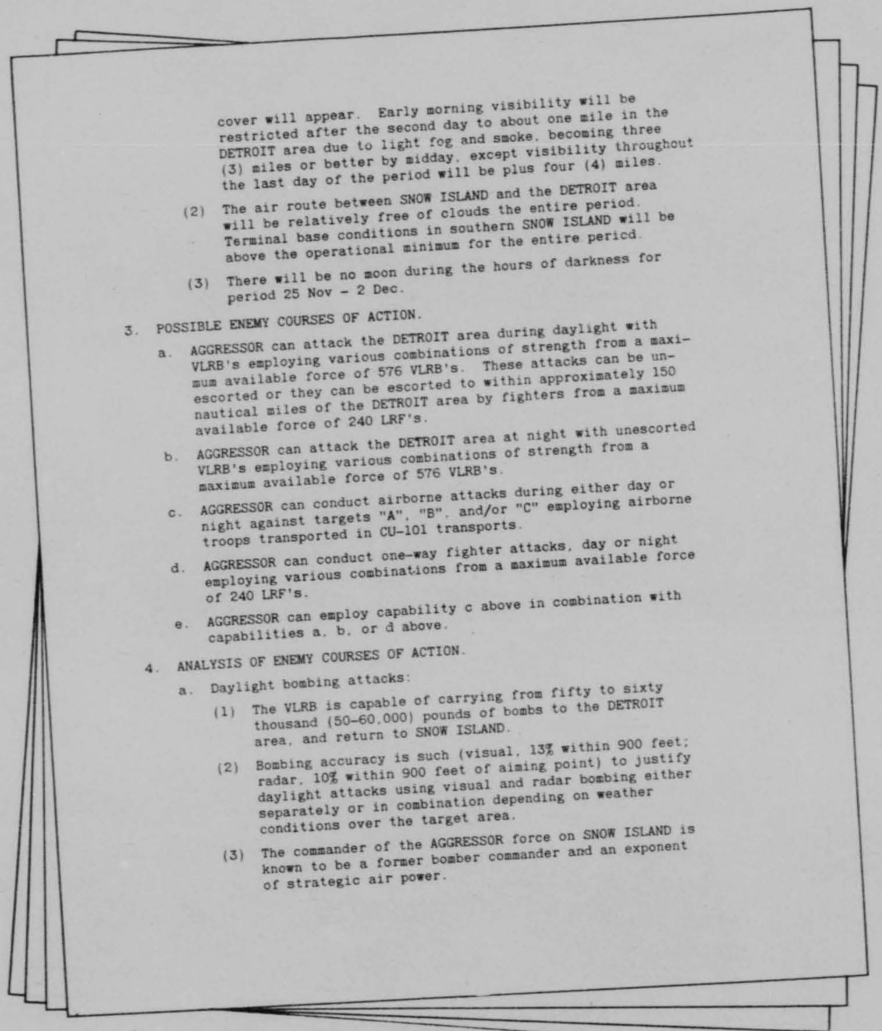


cover will appear. Early morning visibility will be restricted after the second day to about one mile in the DETROIT area due to light fog and smoke, becoming three (3) miles or better by midday, except visibility throughout the last day of the period will be plus four (4) miles.

(2) The air route between SNOW ISLAND and the DETROIT area will be relatively free of clouds the entire period. Terminal base conditions in southern SNOW ISLAND will be above the operational minimum for the entire pericd.

(3) There will be no moon during the hours of darkness for period 25 Nov - 2 Dec.

3. POSSIBLE ENEMY COURSES OF ACTION.

a. AGGRESSOR can attack the DETROIT area during daylight with VLRB's employing various combinations of strength from a maximum available force of 576 VLRB's. These attacks can be unescorted or they can be escorted to within approximately 150 nautical miles of the DETROIT area by fighters from a maximum available force of 240 LRF's.

b. AGGRESSOR can attack the DETROIT area at night with unescorted VLRB's employing various combinations of strength from a maximum available force of 576 VLRB's.

c. AGGRESSOR can conduct airborne attacks during either day or night against targets "A", "B", and/or "C" employing airborne troops transported in CU-101 transports.

d. AGGRESSOR can conduct one-way fighter attacks, day or night employing various combinations from a maximum available force of 240 LRF's.

e. AGGRESSOR can employ capability c above in combination with capabilities a, b, or d above.

4. ANALYSIS OF ENEMY COURSES OF ACTION.

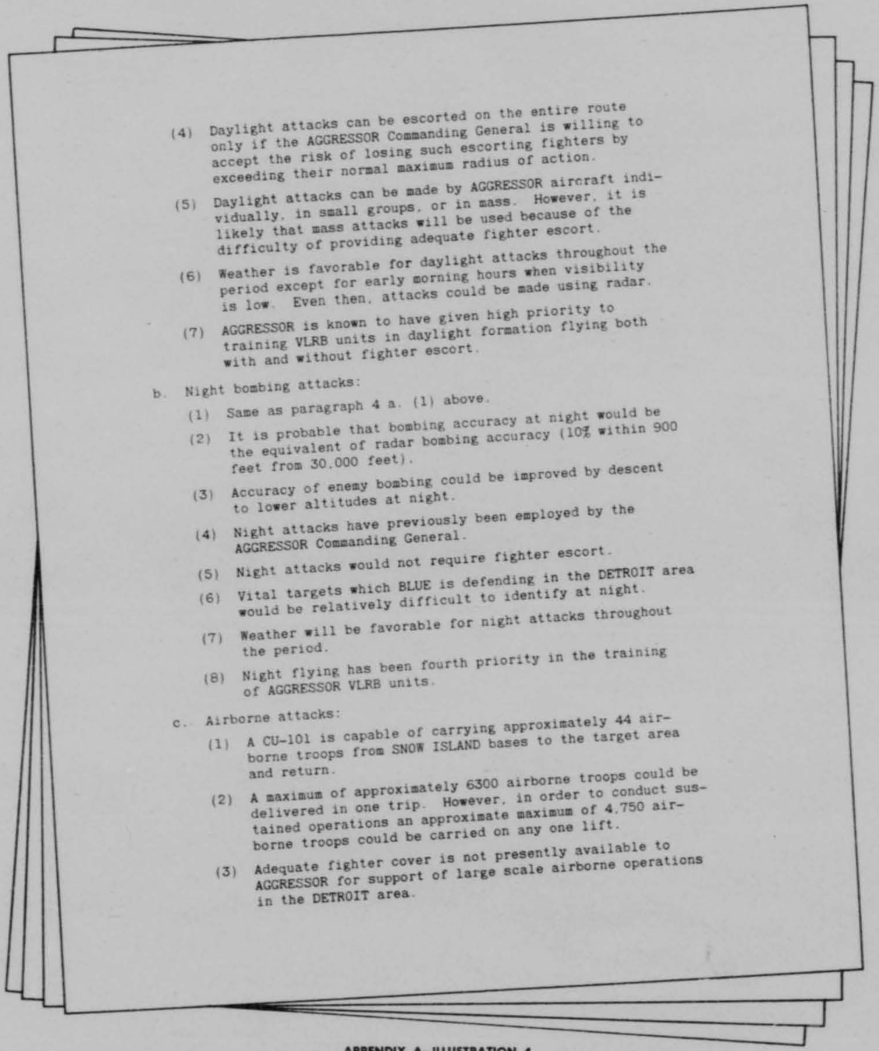
a. Daylight bombing attacks:

(1) The VLRB is capable of carrying from fifty to sixty thousand (50-60,000) pounds of bombs to the DETROIT area, and return to SNOW ISLAND.

(2) Bombing accuracy is such (visual, 13% within 900 feet; radar, 10% within 900 feet of aiming point) to justify daylight attacks using visual and radar bombing either separately or in combination depending on weather conditions over the target area.

(3) The commander of the AGGRESSOR force on SNOW ISLAND is known to be a former bomber commander and an exponent of strategic air power.

APPENDIX A—ILLUSTRATION 3



(4) Daylight attacks can be escorted on the entire route only if the AGGRESSOR Commanding General is willing to accept the risk of losing such escorting fighters by exceeding their normal maximum radius of action.

(5) Daylight attacks can be made by AGGRESSOR aircraft individually, in small groups, or in mass. However, it is likely that mass attacks will be used because of the difficulty of providing adequate fighter escort.

(6) Weather is favorable for daylight attacks throughout the period except for early morning hours when visibility is low. Even then, attacks could be made using radar.

(7) AGGRESSOR is known to have given high priority to training VLRB units in daylight formation flying both with and without fighter escort.

b. Night bombing attacks:

(1) Same as paragraph 4 a. (1) above.

(2) It is probable that bombing accuracy at night would be the equivalent of radar bombing accuracy (10% within 900 feet from 30,000 feet).

(3) Accuracy of enemy bombing could be improved by descent to lower altitudes at night.

(4) Night attacks have previously been employed by the AGGRESSOR Commanding General.

(5) Night attacks would not require fighter escort.

(6) Vital targets which BLUE is defending in the DETROIT area would be relatively difficult to identify at night.

(7) Weather will be favorable for night attacks throughout the period.

(8) Night flying has been fourth priority in the training of AGGRESSOR VLRB units.

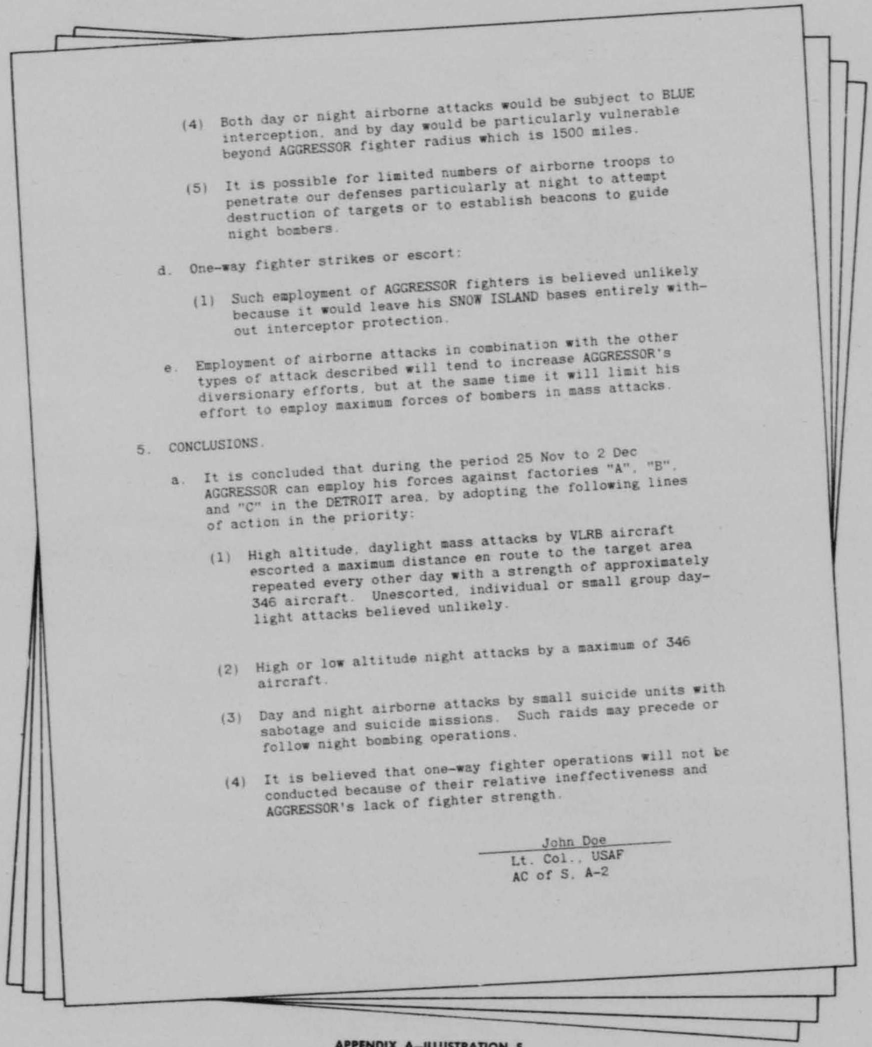
c. Airborne attacks:

(1) A CU-101 is capable of carrying approximately 44 airborne troops from SNOW ISLAND bases to the target area and return.

(2) A maximum of approximately 6300 airborne troops could be delivered in one trip. However, in order to conduct sustained operations an approximate maximum of 4,750 airborne troops could be carried on any one lift.

(3) Adequate fighter cover is not presently available to AGGRESSOR for support of large scale airborne operations in the DETROIT area.

APPENDIX A—ILLUSTRATION 4



(4) Both day or night airborne attacks would be subject to BLUE interception, and by day would be particularly vulnerable beyond AGGRESSOR fighter radius which is 1500 miles.

(5) It is possible for limited numbers of airborne troops to penetrate our defenses particularly at night to attempt destruction of targets or to establish beacons to guide night bombers.

d. One-way fighter strikes or escort:

(1) Such employment of AGGRESSOR fighters is believed unlikely because it would leave his SNOW ISLAND bases entirely without interceptor protection.

e. Employment of airborne attacks in combination with the other types of attack described will tend to increase AGGRESSOR's diversionary efforts, but at the same time it will limit his effort to employ maximum forces of bombers in mass attacks.

5. CONCLUSIONS.

a. It is concluded that during the period 25 Nov to 2 Dec AGGRESSOR can employ his forces against factories "A", "B", and "C" in the DETROIT area, by adopting the following lines of action in the priority:

(1) High altitude, daylight mass attacks by VLRB aircraft escorted a maximum distance en route to the target area repeated every other day with a strength of approximately 346 aircraft. Unescorted, individual or small group daylight attacks believed unlikely.

(2) High or low altitude night attacks by a maximum of 346 aircraft.

(3) Day and night airborne attacks by small suicide units with sabotage and suicide missions. Such raids may precede or follow night bombing operations.

(4) It is believed that one-way fighter operations will not be conducted because of their relative ineffectiveness and AGGRESSOR's lack of fighter strength.

John Doe
Lt. Col., USAF
AC of S, A-2

APPENDIX A—ILLUSTRATION 5

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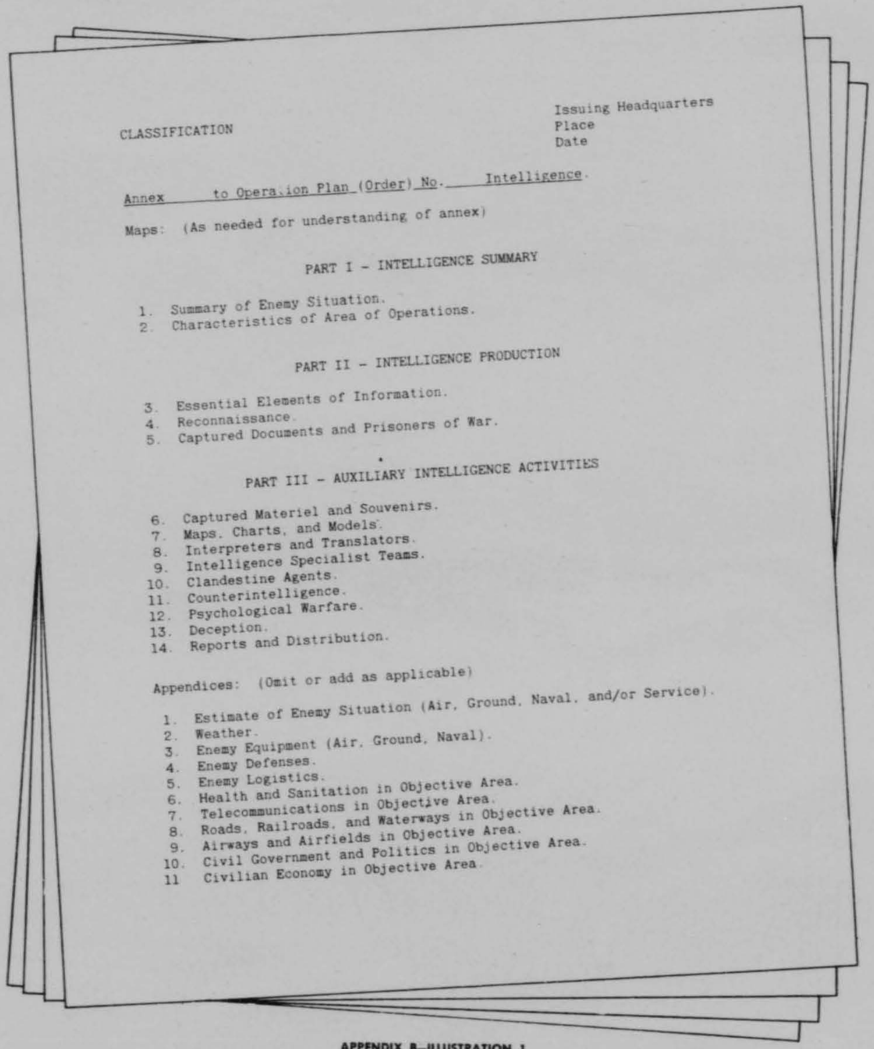


CLASSIFICATION

Issuing Headquarters
Place
Date

Annex ___ to Operation Plan (Order) No. ___ Intelligence.

Maps: (As needed for understanding of annex)

PART I – INTELLIGENCE SUMMARY

1. Summary of Enemy Situation.
2. Characteristics of Area of Operations.

PART II – INTELLIGENCE PRODUCTION

3. Essential Elements of Information.
4. Reconnaissance.
5. Captured Documents and Prisoners of War.

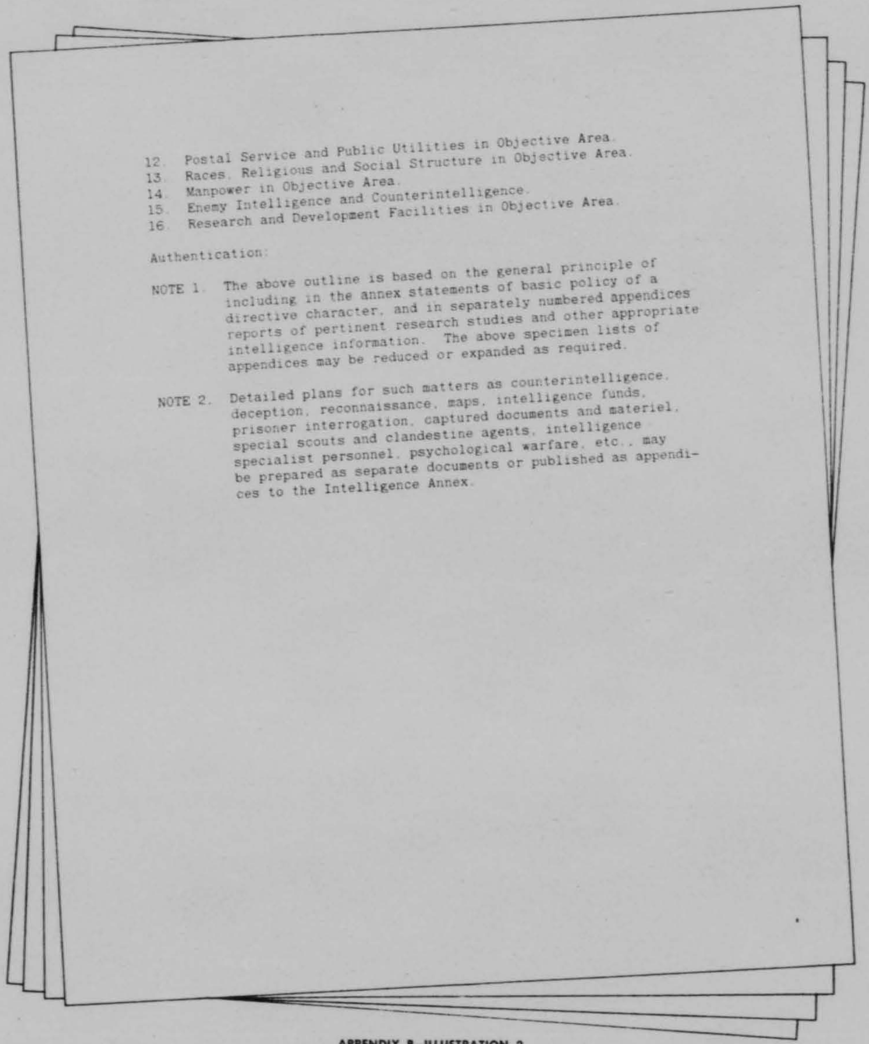
PART III – AUXILIARY INTELLIGENCE ACTIVITIES

6. Captured Materiel and Souvenirs.
7. Maps, Charts, and Models.
8. Interpreters and Translators.
9. Intelligence Specialist Teams.
10. Clandestine Agents.
11. Counterintelligence.
12. Psychological Warfare.
13. Deception.
14. Reports and Distribution.

Appendices: (Omit or add as applicable)

1. Estimate of Enemy Situation (Air, Ground, Naval, and/or Service).
2. Weather.
3. Enemy Equipment (Air, Ground, Naval).
4. Enemy Defenses.
5. Enemy Logistics.
6. Health and Sanitation in Objective Area.
7. Telecommunications in Objective Area.
8. Roads, Railroads, and Waterways in Objective Area.
9. Airways and Airfields in Objective Area.
10. Civil Government and Politics in Objective Area.
11 Civilian Economy in Objective Area.

APPENDIX B—ILLUSTRATION 1



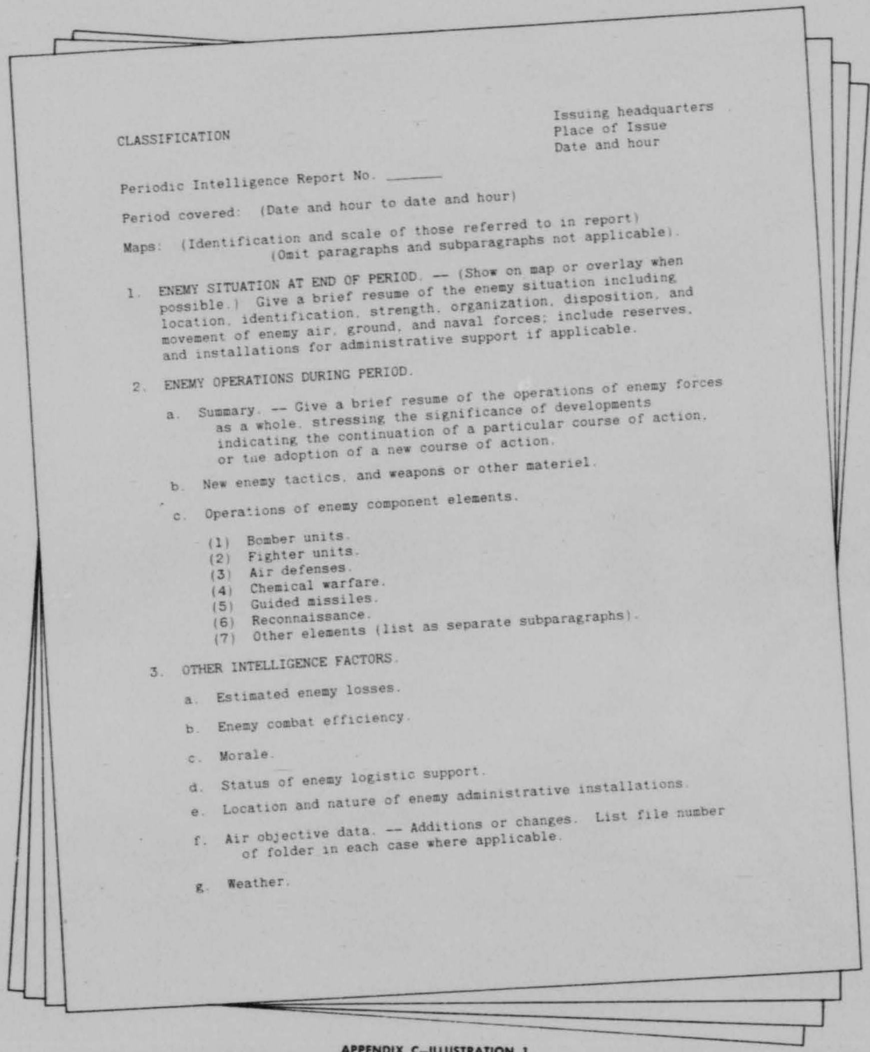
12. Postal Service and Public Utilities in Objective Area.
13. Races. Religious and Social Structure in Objective Area.
14. Manpower in Objective Area.
15. Enemy Intelligence and Counterintelligence.
16. Research and Development Facilities in Objective Area.

Authentication:

NOTE 1. The above outline is based on the general principle of including in the annex statements of basic policy of a directive character, and in separately numbered appendices reports of pertinent research studies and other appropriate intelligence information. The above specimen lists of appendices may be reduced or expanded as required.

NOTE 2. Detailed plans for such matters as counterintelligence. deception. reconnaissance. maps. intelligence funds. prisoner interrogation. captured documents and materiel. special scouts and clandestine agents. intelligence specialist personnel. psychological warfare. etc.. may be prepared as separate documents or published as appendices to the Intelligence Annex.

APPENDIX B—ILLUSTRATION 2



CLASSIFICATION

Issuing headquarters
Place of Issue
Date and hour

Periodic Intelligence Report No. _______

Period covered: (Date and hour to date and hour)

Maps: (Identification and scale of those referred to in report)
(Omit paragraphs and subparagraphs not applicable).

1. ENEMY SITUATION AT END OF PERIOD. -- (Show on map or overlay when possible.) Give a brief resume of the enemy situation including location, identification, strength, organization, disposition, and movement of enemy air, ground, and naval forces; include reserves, and installations for administrative support if applicable.

2. ENEMY OPERATIONS DURING PERIOD.

a. Summary. -- Give a brief resume of the operations of enemy forces as a whole, stressing the significance of developments indicating the continuation of a particular course of action, or the adoption of a new course of action.

b. New enemy tactics, and weapons or other materiel.

c. Operations of enemy component elements.

(1) Bomber units.
(2) Fighter units.
(3) Air defenses.
(4) Chemical warfare.
(5) Guided missiles.
(6) Reconnaissance.
(7) Other elements (list as separate subparagraphs).

3. OTHER INTELLIGENCE FACTORS.

a. Estimated enemy losses.

b. Enemy combat efficiency.

c. Morale.

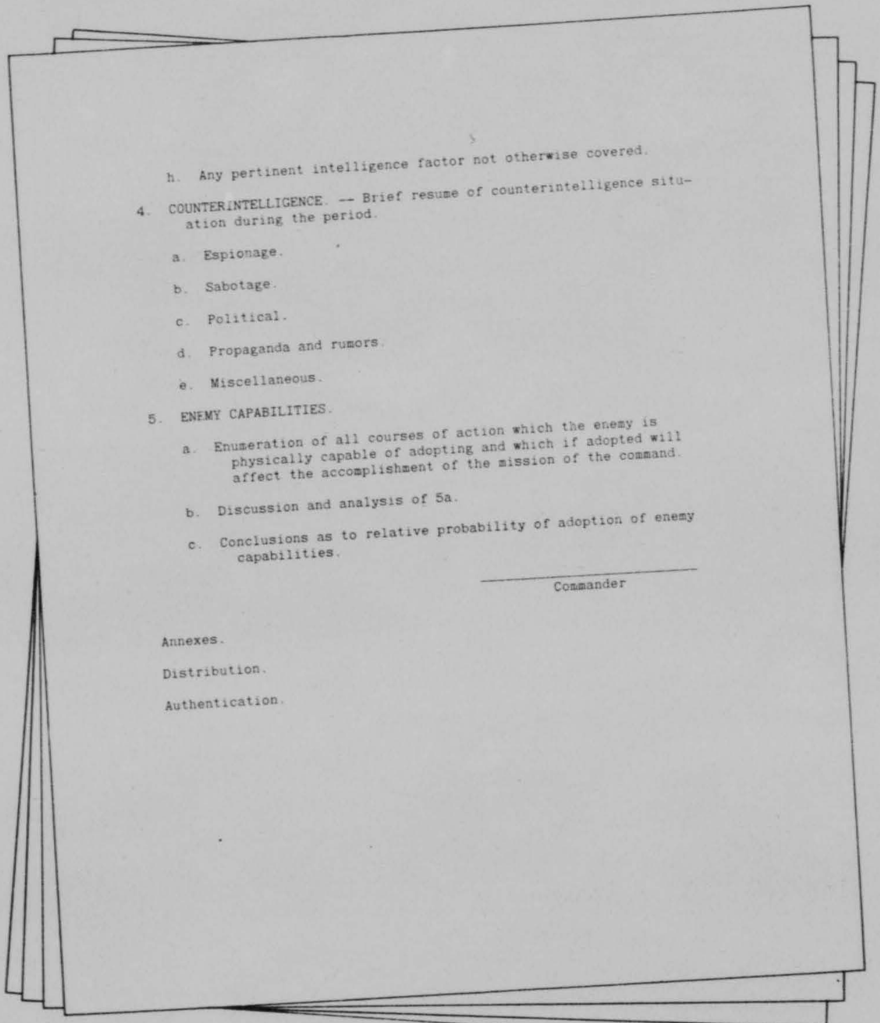
d. Status of enemy logistic support.

e. Location and nature of enemy administrative installations.

f. Air objective data. -- Additions or changes. List file number of folder in each case where applicable.

g. Weather.

APPENDIX C--ILLUSTRATION 1



h. Any pertinent intelligence factor not otherwise covered.

4. COUNTERINTELLIGENCE. -- Brief resume of counterintelligence situation during the period.

a. Espionage.

b. Sabotage.

c. Political.

d. Propaganda and rumors.

e. Miscellaneous.

5. ENEMY CAPABILITIES.

a. Enumeration of all courses of action which the enemy is physically capable of adopting and which if adopted will affect the accomplishment of the mission of the command.

b. Discussion and analysis of 5a.

c. Conclusions as to relative probability of adoption of enemy capabilities.

____

Commander

Annexes.

Distribution.

Authentication.

APPENDIX C—ILLUSTRATION 2

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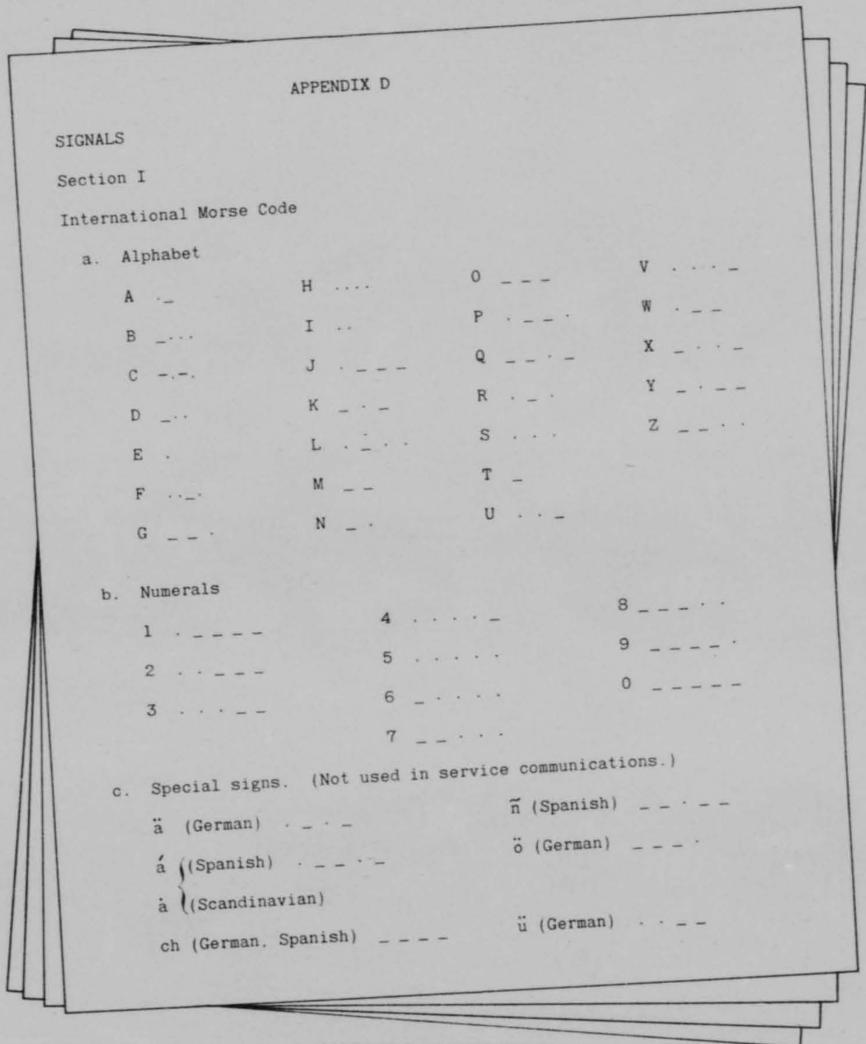

APPENDIX D

SIGNALS

Section I

International Morse Code

a. Alphabet

A . _
B _ . . .
C _ . _ .
D _ . .
E .
F . . _ .
G _ _ .
H . . . .
I . .
J . _ _ _
K _ . _
L . _ . .
M _ _
N _ .
O _ _ _
P . _ _ .
Q _ _ . _
R . _ .
S . . .
T _
U . . _
V . . . _
W . _ _
X _ . . _
Y _ . _ _
Z _ _ . .

b. Numerals

1 . _ _ _ _
2 . . _ _ _
3 . . . _ _
4 . . . . _
5 . . . . .
6 _ . . . .
7 _ _ . . .
8 _ _ _ . .
9 _ _ _ _ .
0 _ _ _ _ _

c. Special signs. (Not used in service communications.)

ä (German) . _ . _
á {(Spanish) . _ _ . _
à {(Scandinavian)
ch (German, Spanish) _ _ _ _
ñ (Spanish) _ _ . _ _
ö (German) _ _ _ .
ü (German) . . _ _

APPENDIX D—ILLUSTRATION 1

1372

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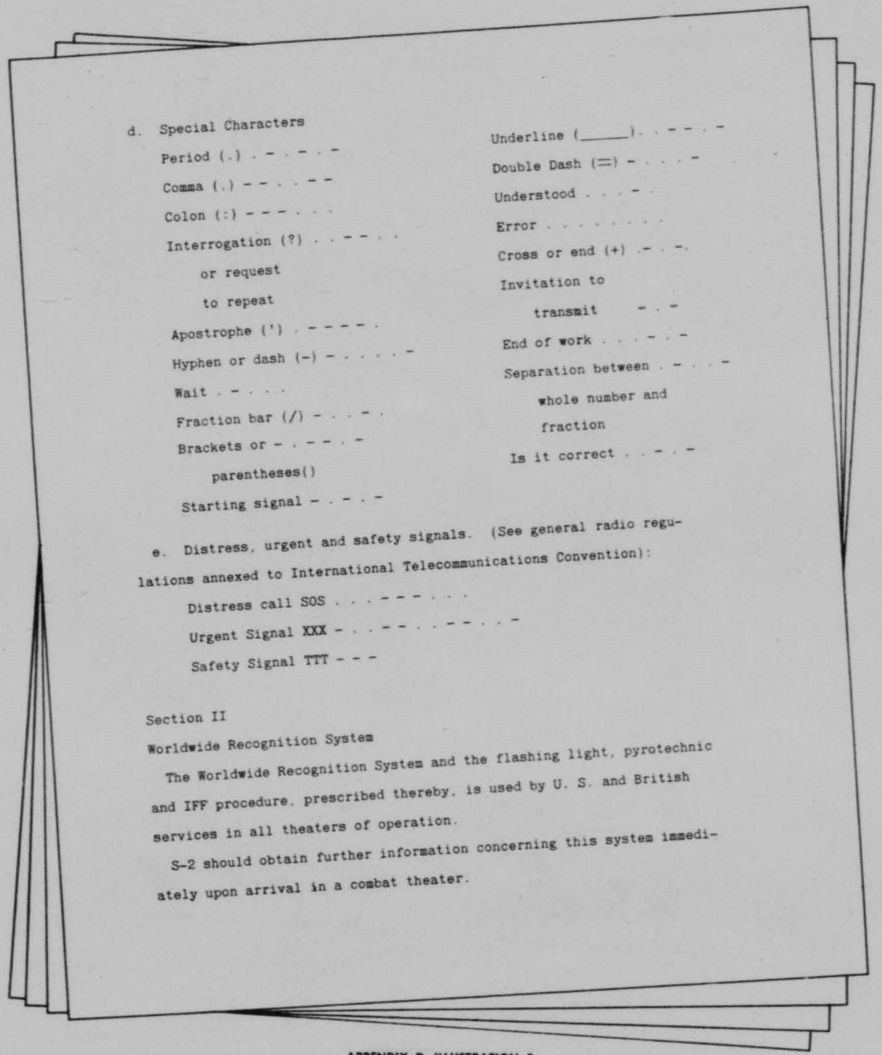


d. Special Characters

Period (.) . - . - . -
Comma (,) - - . . - -
Colon (:) - - - . . .
Interrogation (?) . . - - . .
or request
to repeat
Apostrophe (') . - - - - .
Hyphen or dash (-) - . . . . -
Wait . - . . .
Fraction bar (/) - . . - .
Brackets or - . - - . -
parentheses()
Starting signal - . - . -

Underline (______). . - - . -
Double Dash (=) - . . . -
Understood . . . - .
Error . . . .
Cross or end (+) . - . - .
Invitation to
transmit - . -
End of work . . . - . -
Separation between . - . . -
whole number and
fraction
Is it correct . . - . -

e. Distress, urgent and safety signals. (See general radio regulations annexed to International Telecommunications Convention):

Distress call SOS . . . - - - . . .
Urgent Signal XXX - . . - - . . - - . . -
Safety Signal TTT - - -

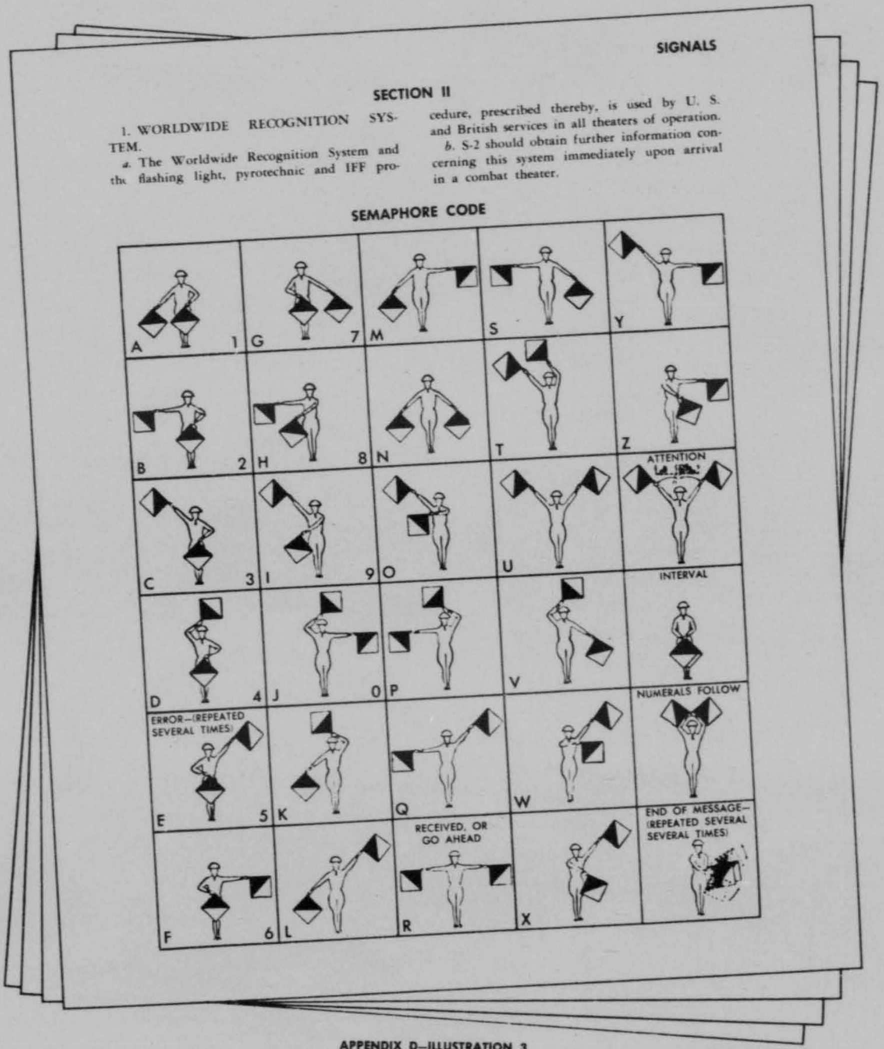
Section II

Worldwide Recognition System

The Worldwide Recognition System and the flashing light, pyrotechnic and IFF procedure, prescribed thereby, is used by U. S. and British services in all theaters of operation.

S-2 should obtain further information concerning this system immediately upon arrival in a combat theater.

APPENDIX D—ILLUSTRATION 2



SIGNALS

SECTION II

1. WORLDWIDE RECOGNITION SYSTEM.

a. The Worldwide Recognition System and the flashing light, pyrotechnic and IFF procedure, prescribed thereby, is used by U. S. and British services in all theaters of operation.

b. S-2 should obtain further information concerning this system immediately upon arrival in a combat theater.

SEMAPHORE CODE

A 1
G 7
M
S
Y
B 2
H 8
N
T
Z
C 3
I 9
O
U
ATTENTION
D 4
J 0
P
V
INTERVAL
ERROR—(REPEATED SEVERAL TIMES)
E 5
K
Q
W
NUMERALS FOLLOW
F 6
L
RECEIVED, OR GO AHEAD
R
X
END OF MESSAGE—(REPEATED SEVERAL SEVERAL TIMES)

APPENDIX D—ILLUSTRATION 3

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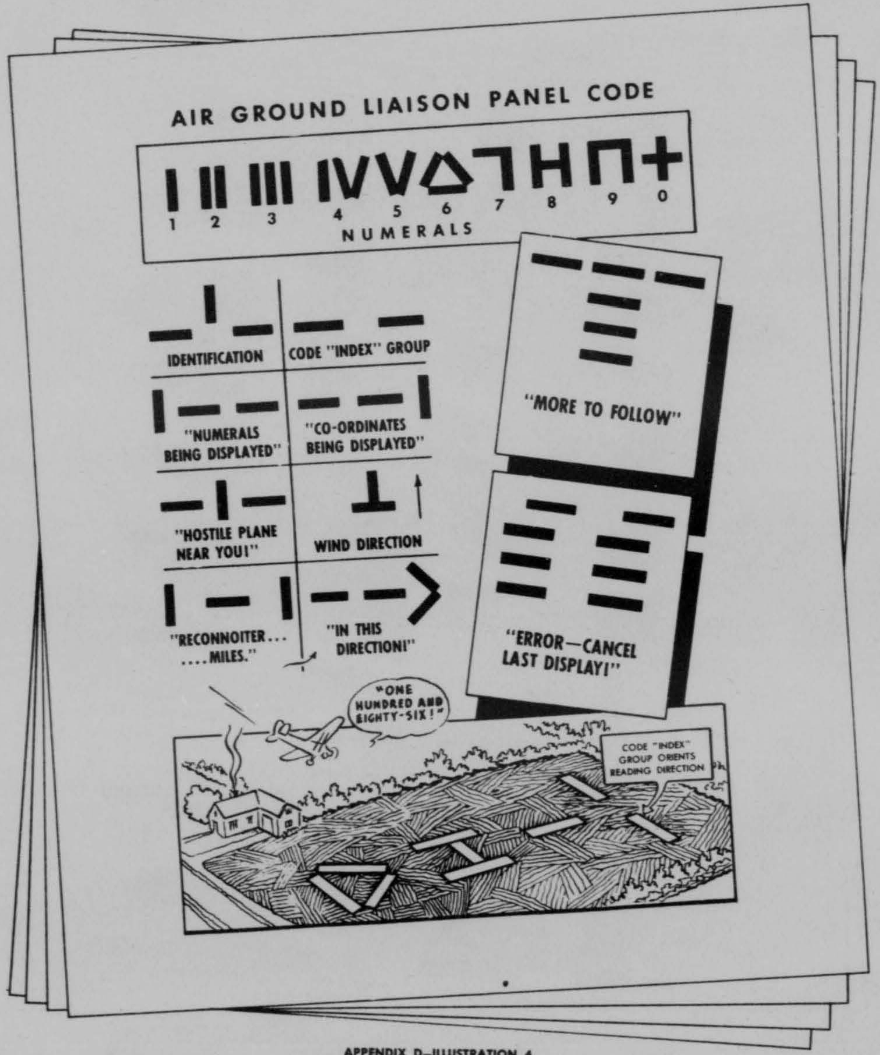
AIR GROUND LIAISON PANEL CODE
1 2 3 4 5 6 7 8 9 0
NUMERALS
IDENTIFICATION
CODE "INDEX" GROUP
"NUMERALS BEING DISPLAYED"
"CO-ORDINATES BEING DISPLAYED"
"HOSTILE PLANE NEAR YOU!"
WIND DIRECTION
"RECONNOITER... ....MILES."
"IN THIS DIRECTION!"
"MORE TO FOLLOW"
"ERROR—CANCEL LAST DISPLAY!"
"ONE HUNDRED AND EIGHTY-SIX!"
CODE "INDEX" GROUP ORIENTS READING DIRECTION

APPENDIX D—ILLUSTRATION 4

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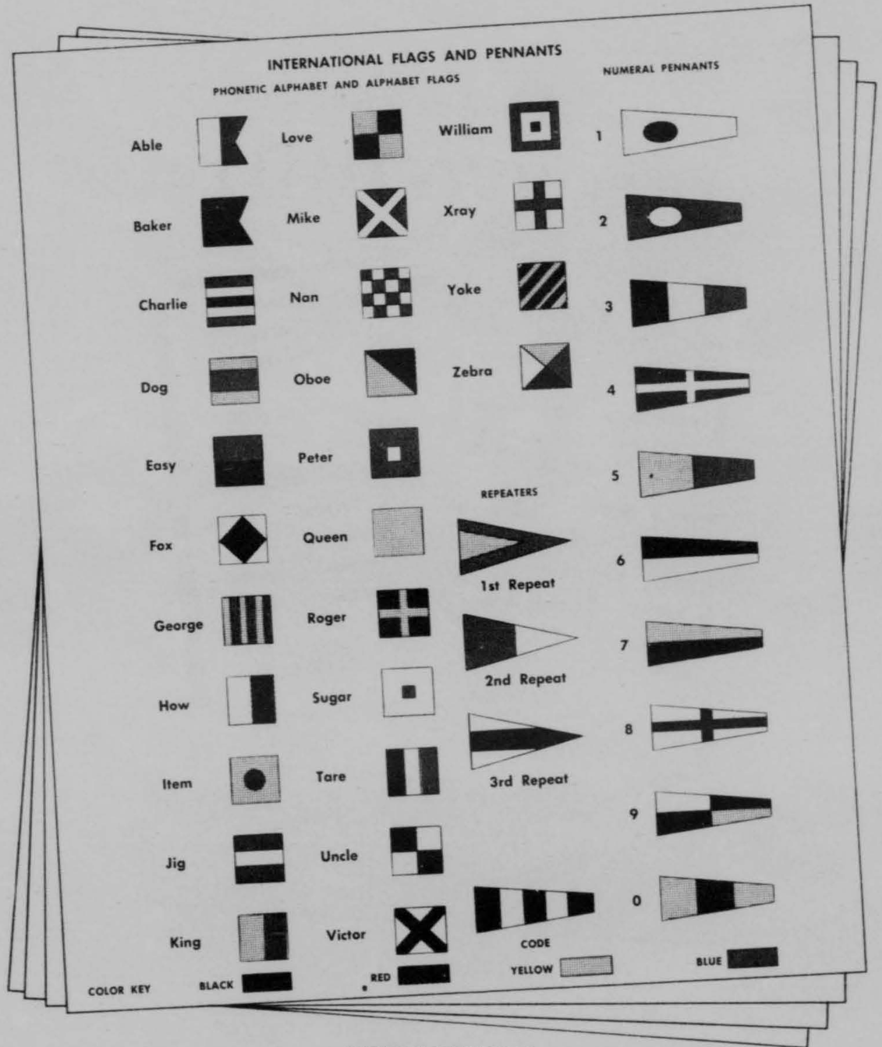
INTERNATIONAL FLAGS AND PENNANTS
PHONETIC ALPHABET AND ALPHABET FLAGS
NUMERAL PENNANTS
Able
Baker
Charlie
Dog
Easy
Fox
George
How
Item
Jig
King
Love
Mike
Nan
Oboe
Peter
Queen
Roger
Sugar
Tare
Uncle
Victor
William
Xray
Yoke
Zebra
REPEATERS
1st Repeat
2nd Repeat
3rd Repeat
CODE
1
2
3
4
5
6
7
8
9
0
COLOR KEY
BLACK
RED
YELLOW
BLUE

APPENDIX D—ILLUSTRATION 5

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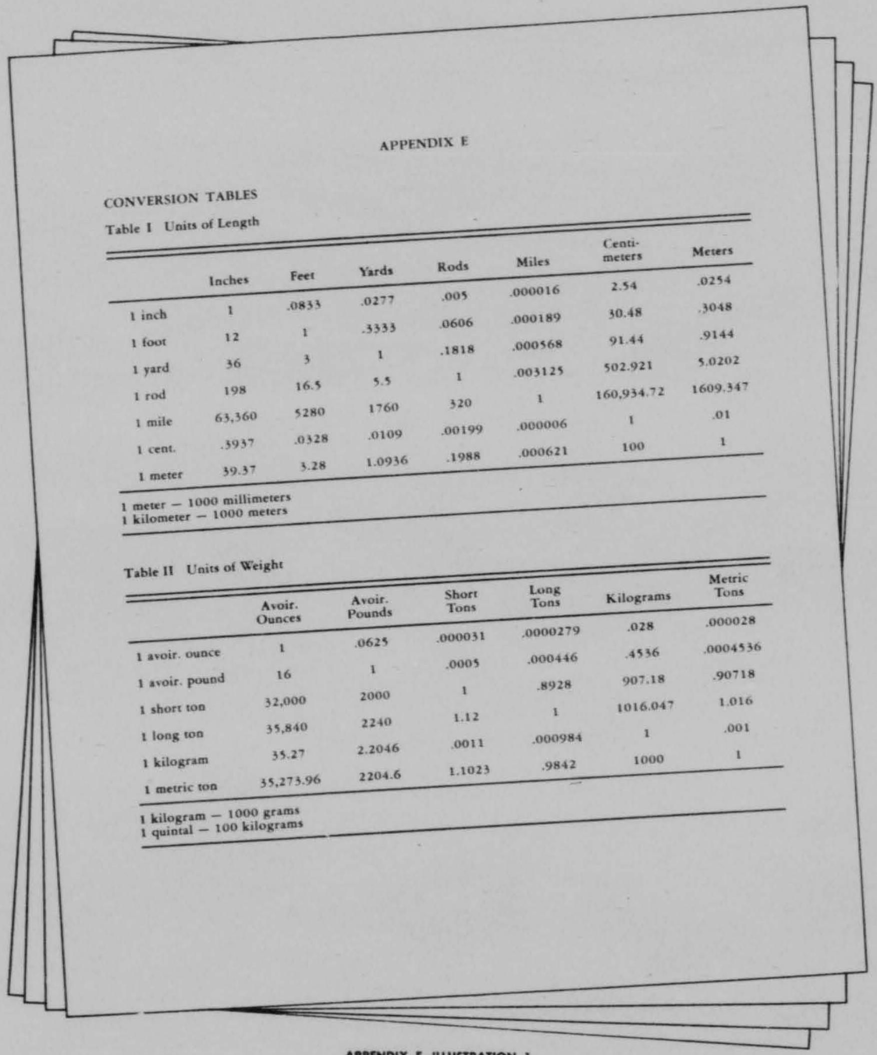

APPENDIX E

CONVERSION TABLES

Table I Units of Length

	Inches	Feet	Yards	Rods	Miles	Centi-meters	Meters
1 inch	1	.0833	.0277	.005	.000016	2.54	.0254
1 foot	12	1	.3333	.0606	.000189	30.48	.3048
1 yard	36	3	1	.1818	.000568	91.44	.9144
1 rod	198	16.5	5.5	1	.003125	502.921	5.0202
1 mile	63,360	5280	1760	320	1	160,934.72	1609.347
1 cent.	.3937	.0328	.0109	.00199	.000006	1	.01
1 meter	39.37	3.28	1.0936	.1988	.000621	100	1

1 meter — 1000 millimeters
1 kilometer — 1000 meters

Table II Units of Weight

	Avoir. Ounces	Avoir. Pounds	Short Tons	Long Tons	Kilograms	Metric Tons
1 avoir. ounce	1	.0625	.000031	.0000279	.028	.000028
1 avoir. pound	16	1	.0005	.000446	.4536	.0004536
1 short ton	32,000	2000	1	.8928	907.18	.90718
1 long ton	35,840	2240	1.12	1	1016.047	1.016
1 kilogram	35.27	2.2046	.0011	.000984	1	.001
1 metric ton	35,273.96	2204.6	1.1023	.9842	1000	1

1 kilogram — 1000 grams
1 quintal — 100 kilograms

APPENDIX E—ILLUSTRATION 1

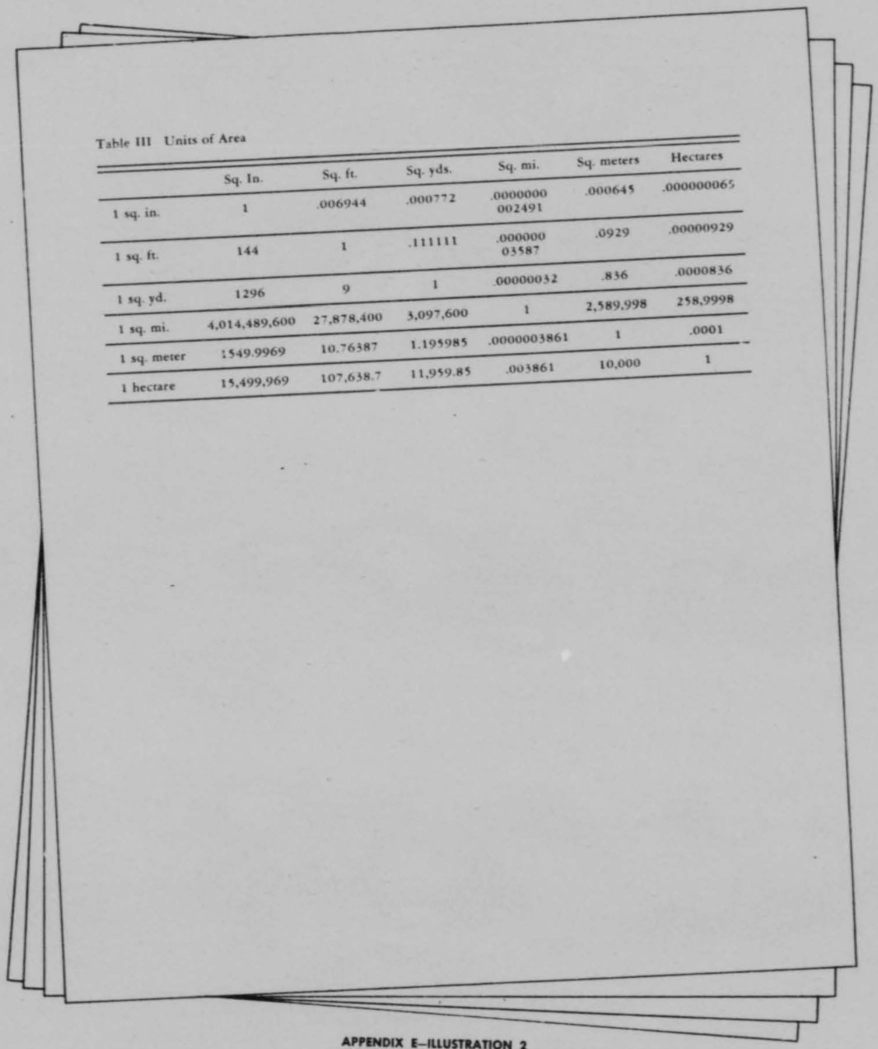

Table III Units of Area

	Sq. In.	Sq. ft.	Sq. yds.	Sq. mi.	Sq. meters	Hectares
1 sq. in.	1	.006944	.000772	.0000000 002491	.000645	.000000065
1 sq. ft.	144	1	.111111	.000000 03587	.0929	.00000929
1 sq. yd.	1296	9	1	.00000032	.836	.0000836
1 sq. mi.	4,014,489,600	27,878,400	3,097,600	1	2,589,998	258,9998
1 sq. meter	1549.9969	10.76387	1.195985	.0000003861	1	.0001
1 hectare	15,499,969	107,638.7	11,959.85	.003861	10,000	1

APPENDIX E—ILLUSTRATION 2

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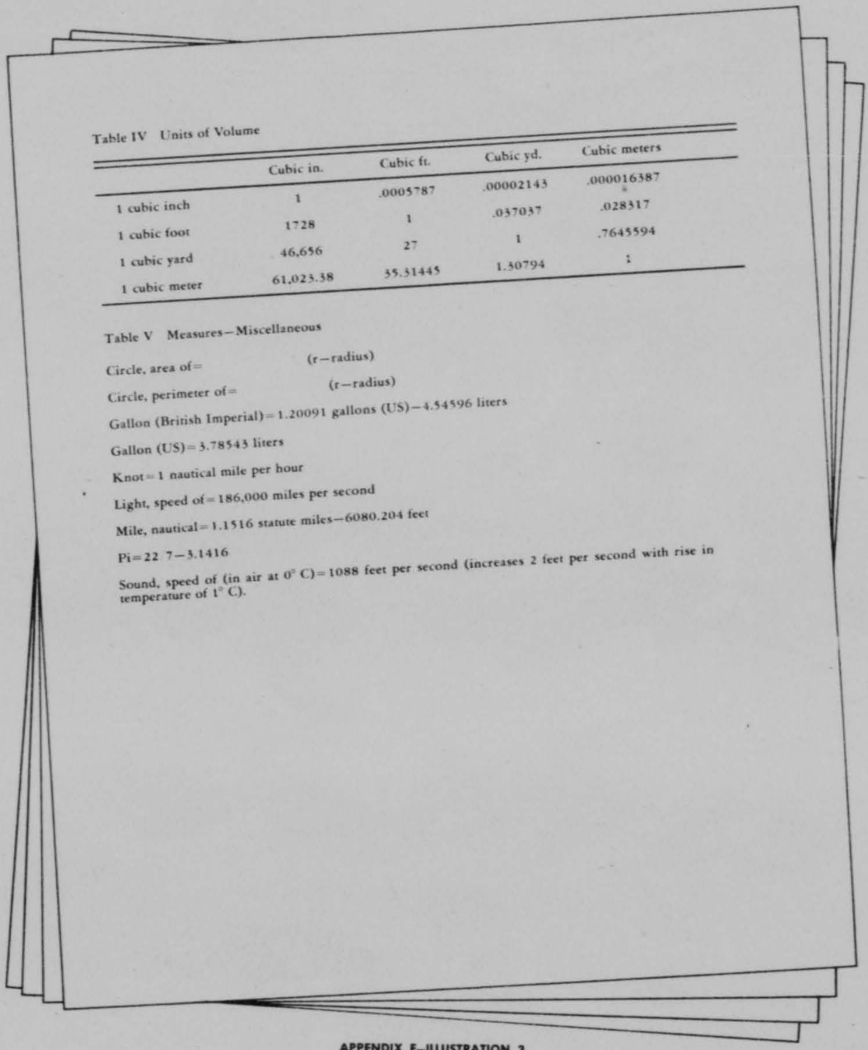

Table IV Units of Volume

	Cubic in.	Cubic ft.	Cubic yd.	Cubic meters
1 cubic inch	1	.0005787	.00002143	.000016387
1 cubic foot	1728	1	.037037	.028317
1 cubic yard	46,656	27	1	.7645594
1 cubic meter	61,023.38	35.31445	1.30794	1

Table V Measures—Miscellaneous

Circle, area of= (r—radius)

Circle, perimeter of= (r—radius)

Gallon (British Imperial)=1.20091 gallons (US)—4.54596 liters

Gallon (US)=3.78543 liters

Knot=1 nautical mile per hour

Light, speed of=186,000 miles per second

Mile, nautical=1.1516 statute miles—6080.204 feet

Pi=22 7—3.1416

Sound, speed of (in air at 0° C)=1088 feet per second (increases 2 feet per second with rise in temperature of 1° C).

APPENDIX E—ILLUSTRATION 3

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AIR INTELLIGENCE Review

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Vol.2 No.1 5 January 1950

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Special USAF AIRCRAFT FAMILIARIZATION Issue

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4A	2	20AF	10
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AIR INTELLIGENCE Review

This "Review" is published for three reasons:
1. To provide timely data regarding new techniques, practices and general information whereby intelligence personnel can maintain proficiency.
2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

Two types of material are solicited for publication:
1. Stories and pictures relating to the intelligence activities being conducted within an organization.
2. Original articles of a noncontroversial but informative nature.

Material submitted must include sources utilized and the authors name, rank and present military affiliation. Mail stories to: The Editor, "Air Intelligence Review," ConAC, Mitchel Air Force Base, New York.

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This issue of the Air Intelligence Review has been especially prepared to *FAMILIARIZE* Reserve as well as Regular members of the Air Force with the operational characteristics of current USAF aircraft and their immediate experimental successors.

In addition to a brief history of the USAF, the text recounts the progress that has been made by aircraft designers in overcoming material, structural and aerodynamic obstacles since 1903. The glossary contained in the last four pages of the Review is provided to acquaint the reader with commonly used AF terminology.

It will be noted that in certain cases operational figures have been approximated and in others, left out entirely. Such approximations and omissions were made necessary for obvious security reasons. It may be expected, however, that as the production stage of presently classified equipment is reached, the operational performance data will be generally released.

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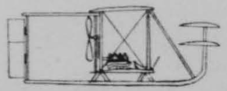
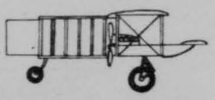
USAF MOVES FORWARD

At approximately half past ten o'clock on the morning of December 17, 1903, Orville Wright piloted the famous Wright powered biplane a distance of a little over 120 feet in 12 seconds, at a maximum altitude of 10 feet and at a speed of slightly over 31 miles per hour. That flight, which has gone down in history as man's first successful attempt to stay aloft in a heavier-than-air craft, was one of the four flights made that historic morning at Kitty Hawk, N. C., the longest of which was a distance of 852 feet in 59 seconds. During the 5 years following the first flight, no fundamental changes were made in the original airplane, which controlled lateral stability by warping the after portion of the wing tip section in such a way as to vary the camber of the tips.



1903



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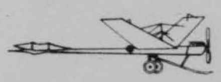

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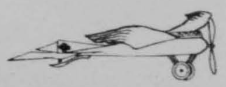


1914

Until the outbreak of World War I, aircraft design and construction had very little scientific or engineering data to use as a basis. Stresses in flight were largely unknown and the aerodynamics of balance and control were only vaguely understood. The theory of stability was quite unappreciated and wing sections in use were inefficient. Great strides, however, were made in experimentation. Important patents were taken out. The industrial field was scoured for suitable materials, and familiar structural principles were gradually applied to this new field. In this early period the records of failure and of achievement in aeronautical activity served as the backbone of the science rather than the supporting theory, which later was quickly built up as a result of wind tunnel investigations, flight tests, and application of physical laws.

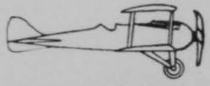
The academic interest evinced by scientists in aeronautical problems was supplemented by energetic application shortly after the outbreak of World War I. The employment of airplanes in warfare made accessible resources that private interests, stimulated by pioneering enthusiasm or the hope of ultimate financial profit, could never have effected.

In 1917, the AAF, then known as the Aviation Section, S.C., consisted of only about 65 officers actually detailed for duty and a little more than 1,000 enlisted men. The plane strength was 55, but, these were all of the training type, and were totally unsuited for combat work. No flying officer had had actual combat experience, and practically none had any knowledge of aircraft guns or bombing devices.

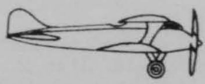
American industry went to work to build an air force. Up to 1916, the aircraft industry had delivered a total of 142 aircraft to the Army, in the ten years of the existence of Army aeronautics. Now it was called upon to produce over 22,000 planes in a single year. Congress appropriated $640,667,000 to build these planes and to train the flyers to pilot them.

The war lasted only a few months insofar as the Aviation Section was concerned, but in those months America's air arm proved its combat worth. American pilots flew nearly 36,000 hours behind enemy lines, or approximately 3,600,000 miles; they made about 13,000 pursuit flights, 6,600 observation flights and 1,100 bombing missions. Despite inexperience, and, at first inferior equipment, American airplane losses were less than half that of the confirmed enemy loss - the Air Service losing 357 as against 755 for the enemy.

In the final months of the war, the Air Service, as it was redesignated during this period, bombed the enemy at every stage of his retreat, striking at railroad centers, troop concentrations and communications. In 150 organized missions, 255,000 lbs of explosives were dropped.



1920



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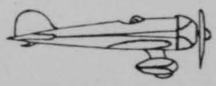
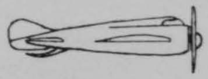


1934



194—

Peak strength of personnel reached over 195,000 in 1918, while a total of 13,901 planes were produced from April 6, 1917 until the end of the war; 5,151 more were bought in Europe.

The war had proved that the Air Service had a definite place in army operations, and, in 1920, Congress passed an Army reorganization act which raised the air arm to branch level and gave it an authorized strength of 1,516 officers and 16,000 enlisted men.

The "Twenties" were years of readjustment and experimentation for the Air Service. Research was conducted into the possibilities of lighter-than-air craft but later abandoned. The de Havillands and Curtiss "Jennies", which had been the war-time mainstay, lasted well into the latter part of the decade, but were gradually replaced by new planes.

The designation Air Service was eliminated on July 2, 1926, when an act of Congress created the Air Corps, with General Mason M. Patrick continuing as Chief.

Randolph Field, "West Point of the Air", was dedicated on June 20, 1930, as the home for future AAF training.

The early thirties produced two important developments in aircraft design. One was the new mono-plane design, the other the growing use of all-metal construction. In 1931 Boeing brought out the Air Corps' first all-metal bomber, the B-9, a mid-wing mono-plane with retractable landing gear. The same year, the Curtiss Company introduced the first all-metal attack mono-plane, the A-8. Throughout the thirties new and improved aircraft continued to appear.

It was natural that in the ensuing 23 years the AAF would undergo considerable expansion, since aviation itself was growing up. But a comparison of statistics between World Wars I and II reveals that the AAF grew out of all proportion.

In World War II, the AAF flew 13,500,000 hours in overseas theaters, making more than 2,362,000 combat sorties, and dropping over 2,000,000 tons of bombs. Although the AAF lost 11,687 planes on combat missions, it also destroyed 40,259. Peak/ personnel strength was 2,411,294 in March 1944, while plane strength reached 79,908 in July 1944.

The achievements of any single air force in WW II dwarf the total air effort of the first world conflict. Taking the Twentieth Air Force as an example, since it was neither the largest nor the smallest of the air forces, the tremendous strides in air power become evident. The Twentieth alone flew 35,790 effective sorties, almost twice that of the entire Air Service in World War I. The Twentieth alone dropped more than 170,000 tons of bombs and lost three less planes than the Air Service in World War I, while destroying 1,225, more than half again the World War I total.

AIRCRAFT DESIGN

A successful airplane will be at best a compromise,owing to conflicting requirements. Thus, an airplane designed for ease of overhaul must offer parasite resistance greater than that occurring where this feature is neglected. Again visibility must be sacrificed for aerodynamic efficiency. On the whole then, the successful airplane must meet the requirements which are listed below in the order of their relative importance:

a. The design must be such that the airplane will best perform the functions for which it is built.

b. Repair and maintenance in the field must require a minimum of time and expense.

c. The airplane must be built as cheaply and simply as possible consistent with other requirements.

d. The airplane must be aerodynamically efficient or must have a maximum of speed and climbing ability with a minimum of power.

Vital Characteristics: The designer of an airplane, having available an engine of given power to carry a specified weight, does his best to embody the following characteristics in the completed airplane:

a. Lowest feasible landing speed for a given area of wings.

b. Greatest possible high speed.

c. Best possible maneuverability.

d. Best rate of climb.

e. Desirable amount of stability.

f. Maximum visibility.

g. Minimum structural weight for adequate strength.

h. Minimum profile resistance.

i. Lowest cost.

The first four characteristics mentioned hinge primarily on the selection of the airfoil or airfoil combinations. Stability and visibility depend largely on the arrangement of the structure or lay-out. The remaining characteristics are associated with the selection and fabrication of structural materials.

Structural qualities — In addition to the characteristics vital to performance,there are certain structural qualities essential to successful operation. These are —

a. Sufficient rigidity to prevent vibration and distortion.

b. Enough flexibility to absorb

and distribute sudden shocks and uneven strains.

c. Fabricated parts of type such as to show definite signs of deterioration prior to absolute failure.

d. Material of high strength ---- weight factor to insure lightness.

e. Material which is homogeneous, resistant to fatigue, shock, stress reversal, etc.

f. Maximum resistance to deterioration due to corrosion,decay, etc.

g. Structure readily accessible for inspection and repair and also designed for ease of overhaul of power plant and equipment.

Of the aircraft classified as heavier-than-air, the airplane is most common, most successful and the most highly developed type of flying machine. It is supported by dynamic forces caused by air being passed over its wings. The relative motion of the air is effected by having the craft forced through the air by an engine-propeller unit.

HIGH SPEED FLIGHT

Since the first flight by the Wright brothers the progress of aviation has exceeded all other modes of transportation. This progress is tempered by the sobering fact that the record speeds of inhabited aircraft have progressed at the rate of only about 15 miles per hour per year. (This does not consider the speeds obtained by the XS-1.)

It is proper to predict equally good or better future progress in aviation but it must be pointed out that development problems are becoming increasingly greater. Because of the high cost involved, future development will be to some degree proportional to the financial appropriations made available.

Comparing the progress of aviation with other speed record histories, the airplane is far ahead. The official airplane record was established by an F-86 at 710 miles per hour. The automobile has a record set up in 1939 of 390 miles per hour and the railroad's speed record in 1943 was 135 miles per hour.

To give you an idea of the problem of power requirements in increasing the speeds of airplanes it would require at least eight times the thrust horsepower to increase the speed of an airplane from 500 mph to 1,000 mph.

Discussions of present day flying require frequent reference to the speed of sound and the mach number. These references are very important to present day flight studies of compressibility effects, which are perhaps among our greatest problems, and bear a direct relationship to the speed of sound. The speed of sound varies with temperature and consequently with altitude; i.e.; between 761 mph at sea level and 633 mph at 35,000 feet. It is constant above that point to about 150,000 feet. For example a compressibility characteristic that may occur at a mach number of .9 or approximately 685 mph at sea level, will also occur very much the same at a mach number of .9 at a 35,000 foot altitude, but at that altitude has a true speed of only approximtely 595 mph.

Contrary to common belief, the speed of sound in air is proportional to temperature variations only, not density (altitude).

As aircraft that are built for the Air Force must fly high and fast, they must be built to withstand high temperature, low temperature, shock loads and high G-forces. These cause many problems of design.

The airplane must be designed to avoid the effects of compressibility, be able to give the pilot comfort at high altitudes and still have fighting equipment aboard. Airfoils are now thin. The engines use terrific amounts of fuel. The fuselage is full of miscellaneous equipment and still the airplane must be able to take off and land in a reasonable area.

FACTORS AFFECTING AIRCRAFT PERFORMANCE AND NEW AIRCRAFT

From a conclusion on the part of an individual or individuals concerned that a particular type aircraft is desirable, action can take two general forms.

a. Setting forth in writing a set of very broad requirements.

b. Submit a rigid specification prepared by an outside body and giving little overall freedom of design.

This rigid outline seldom results in the most satisfactory design to do the job because too many things are required of the aircraft at the same time.

Aircraft can be classified by general functional fields as:

a. Offensive and defensive weapons.

b. Transport.

c. Liaison.

d. Training

From a military point of view, the final aircraft will be judged upon the extent to which it excels in the following design considerations:

MILITARY SUITABILITY is constituted in the ability of the aircraft to perform the mission for which it was primarily designed. It is the dominating consideration in the design of the aircraft and encompasses the ability of the aircraft to perform and successfully accomplish a specific task. It usually comprises such factors as range, maneuverability, speed, stability, take-off and landing characteristics, rate of climb, dependability, comfort and useful load and equilibrium as an armament platform.

TACTICAL VERSATILITY is the ability of the aircraft to perform missions other than that for which it was primarily designed. This involves adapability to the installation of auxilliary fuel provisions, armament, and the flexibility of its interior arrangement to accomodate different categories of useful load. The fluctuating demands of warfare require that missions be flown under circumstances not anticipated in formulating plans under theoretical conditions.

RAPIDITY OF PRODUCTION, (Producability). Design for rapid production is essential and an obligation of aircraft designers. Simple designs with few complicated structures and parts are most rapidly and economically fabricated. During periods of national emergency, designs involving extremely complex mechanisms and processes requiring long manufacturing cycles and utilizing scarce materials, must be sacrificed in favor of simpler designs in order to allow maximum usage of existing facilities, labor and materials.

CLIMATIC VERSATILITY. The existance of extreme temperatures and atmospheric humidity and their related phenomena must be acknowledged and the design must effectively prevent an inordinate reduction in operability. Factors such as ice accretion, differential contraction and expansion, improper lubrication, and the development of corrosion and fungi, may cause the aircraft to be unserviceable without prohibitive maintenance measures.

EASE OF MAINTENANCE. The objective from the standpoint of field service is to maintain the maximum number of aircraft operational with a minimum expenditure of maintenance facilities and crews. In order to achieve this goal, definite consideration must be attributed in the fundamental design towards producing a practical and serviceable aircraft.

HUMAN FACTORS. A consideration of increasing importance in aircraft design, where the aircraft is inhabited by a human crew, is the relation of human capabilities and limitations to the unnatural environment of flight.

SAFETY AND DEPENDABILITY. This characteristic determines to a large degree the efficiency of the aircraft as suitable equipment for sound military operation. Confidence in the superiority and dependability of his weapon inspires the individual soldier, and thus contributes heavily to the most efficient performance of the combined military establishment.

This intangible quality determines absolutely the success or failure of any aircraft and cannot be emphasized too strongly. The safety and dependability of an aircraft will be judged by the factors of power plant reliability, strictural integrity, emergency escape provisions, flight path controllability, and landing and take-off characteristics.

The preparation of this initial design is the kernel of the whole success of the project. The decisions to be made include such matters as aeroplane shape, wing loading and high lift devices, the choice of a power plant and a final estimation of the all up weight.

The military man, who is to use the fighter aircraft, has used similar weapons before and has valuable experience. This person is in a position to know what performance qualities he thinks are desirable and necessary. If he can define and classify these flying qualities in order of importance to the mission and in quantitative terms, he has the criteria for a successful design.

The great problem of designing for military aircraft with fighter type performance is to define what is really wanted in terms of maneuverability. Here is where the tactical man must decide on what factors he needs in maneuverability. He must then arrange them in order of their importance to the job to be done, such as: G load, rate of climb, radius of turn, rate of turn, rate of roll, ceiling, range, rate of acceleration or deceleration, maximum speed, and other qualities he may need.

From a design standpoint the above factors are greatly influenced by altitude and in order to meet the various requirements with satisfaction, due consideration must be given to the altitude at which these aircraft are to perform best.

The more understanding the tactical man can have of the fundamental general relationships involved in aircraft design, the more able he is to cooperate to the fullest in conveying his ideas into the design requirements.

The extreme requirements of military aircraft, i.e., speed, range, altitude, rate of climb, etc. necessitate that the scope and realm of operation be broken into smaller regions, in order to allow for optimum performance. The future will, undoubtedly, see specialization of design and purpose to a much greater degree than before.

In commencing a design for the Air Force, a designer would take perhaps as a first step, the study of the requirements of that type as outlined by the written desired characteristics in order to be familiar with the order of importance of each characteristic.

Next, with the time and resources element in mind, he would investigate the new developments in aeronautics and incorporate in the new design any and all improvements and innovations which qualify as practical under the above considerations. This, of course, involves an estimation of the development time required on any new untried component.

A study should be made of existing aircraft having one or more similar performance characteristics to the ones desired. This will establish the degree and field of development which must be concentrated on in order to achieve these qualities in the same airplane.

If development time is not available then the degree of compromise must be determined.

As a result of the above steps the design is assembled and a mock-up is built to assure that everything will fit. Wind tunnel tests and/or free flight tests are run on models to check initial design. Eventually the prototype is built and flown. From this point on, the detail and production design stage is in full swing.

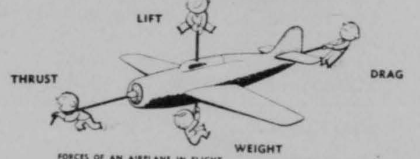
NEW AIRCRAFT DESIGN

In the past we have been satisfied with comparative slow speeds, but we found in the last war that often our enemies were able to travel faster in the air than we were. A good example of this is the German Heinkel fighter powered by a 2,400 pound thrust turbo jet on which was superimposed a liquid fueled rocket capable of delivering 2,700 lbs thrust for two (2) minutes. With this aircraft they were able to cut through our slower bomber formations and out distance our fighters. Then came the Guided Missile, the V-1 and the V-2 traveling at high speeds, powered by pulse jet and rocket engines respectively.

One can easily conclude from these facts that we must attain high speeds if we are to keep abreast or ahead of our potential enemies. To do this, our aircraft must be redesigned to withstand the effects of high speeds and altitudes, and our propulsive methods have to be improved in such a way as to make available much more thrust.

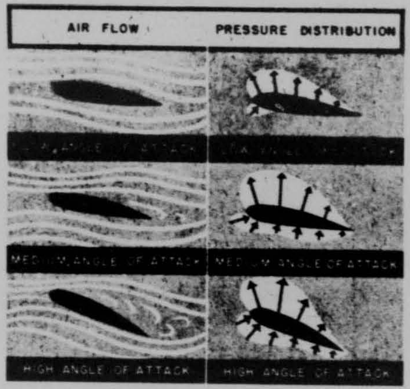
AERODYNAMICS PHASE

FORCES IN SUBSONIC FLOW. Of the four forces acting on an airplane in flight ---- lift, weight, drag, and thrust -- lift and drag are our primary concern as aerodynamic forces.



FORCES OF AN AIRPLANE IN FLIGHT

The method by which lift is obtained is broken into two parts, both of which concern change in pressure. The first part is the negative pressure on the top of the wing. When there is an increase in velocity over the top of the airfoil due to the shape of the airfoil there must be a corresponding decrease in pressure or a negative pressure. This negative pressure area on the top contributes about 70% of the total lift at subsonic speeds. On the bottom of the wing there is a high pressure area, (with respect to the surrounding air). This is caused by the angle of attack of the wing.



Effects of Changing the Angle of Attack.

Air strikes the bottom of the wing and is deflected down. This force is transmitted through the surrounding air and causes the high pressure area. This gives us approximately 30% of the lift. The high pressure area seeks the low pressure area and there is a force exerted to give lift.

The drag of an airfoil is also broken into two parts - induced drag and profile drag. Induced drag is caused by the high pressure area tending to flow around the wing tips to the low pressure area on the top of the wing. This gives us turbulent flow patterns which we call trailing vortices. Induced drag may be minimized by elliptical lift distribution over the wing and a high aspect ratio.

Profile drag includes the drag due to the shape of the body (form drag) and due to the friction of air (parasite drag). For example, a cylinder would have more form drag than a flat plate parallel to the air stream. The parasite drag is caused by the friction between air molecules. The thin layer of air adjacent to the wing is stationary, whereas the free stream velocity over the wing may be three hundred miles per hour. The friction between succeeding air layers moving at increasing velocities gives us parasite drag. Actually the transition from Zero velocity immediately adjacent to the wing to free stream velocity is accomplished in a thickness of a fraction of an inch. This is called the boundary layer effect.

SPEED RANGES OF AIR FLOW. There are three speeds of flow: Subsonic, transonic, and supersonic. In subsonic flow all velocities of flow over our airfoil are less than the speed of sound. In transonic flow some velocities are above and some are below the speed of sound. In supersonic flow all velocities over the airfoil are above the speed of sound. The speed of flow is generally expressed as a mach number which is the ratio of the speed of flow to the speed of sound for the particular temperature in which the flow is measured.

THEORY OF TRANSONIC FLOW. In transonic flow, part of the airflow over the airfoil section is subsonic and part is supersonic, consequently, there must be a transition from subsonic to supersonic. This transition takes place instantaneously through a shock wave, which gives additional drag and also destroys some of the lift of the wing due to the increase in pressure.

Since present knowledge is very limited and due to the unpredictable changes in lift, drag, and movement of center of pressure, this transonic range is causing the most trouble today both in actual flight and in design.

THEORY OF SUPERSONIC FLOW. In supersonic flow the air flow over the wing is completely supersonic, so that there is now an orderly and predictable flow. The shock waves have moved forward to the leading edge and back to the trailing edge and contribute less drag and interference. However, there is a major change in the method of obtaining lift. The airfoil shape no longer gives a negative pressure area on the top of the airfoil. The lift contributed by change in angle of attack resulting in a high pressure area on the bottom of the airfoil in subsonic flow now constitutes 100% of the lift in supersonic flow, rather than 30%.

FUTURE TRENDS OF AIRFOILS AND WING PLANFORMS. In subsonic airfoils, smooth streamlining is necessary to prevent turbulence and separation.

Subsonic Airfoil

Trans-Supersonic Airfoil

In supersonic flow, sharp edges and thin airfoils are desirable to reduce the drag due to the airfoil shape and shock waves. Therefore, the trend for higher speeds will be towards thinner, stronger airfoils with sharp rather than blunt edges.

It has also been determined that sweptback or sweptforward wings are very effective in delaying the formation of shock waves in the transonic speed range and hence give higher subsonic speeds.

AIRCRAFT STRUCTURES PHASE

NEED FOR NEW AIRCRAFT STRUCTURES.. Since it is necessary to change airfoil design for high speeds, it follows that our structures in aircraft must change to incorporate these aerodynamic requirements for increased strength, decreased drag and possibly decreased weight or better weight control.

EFFECTS OF HIGH SPEEDS AND ALTITUDES ON AIRCRAFT STRUCTURES. It is a fact that if we were to fly 800 mph at sea level on an average day without some form of refrigeration the aircraft skin temperature, due to aerodynamic friction, would exceed the temperature limitations of all structural and equipment design specifications. This results in a need for further development of structures and materials to overcome this temperature obstacle. Two possibilities are to fly at higher altitudes to decrease this critical temperature situation or to refrigerate the aircraft. If we go to higher altitudes to reduce the effects of aerodynamic friction, but not so high as to encounter solar radiation troubles, we meet the problems of low atmospheric pressure and lack of oxygen.

At 21,000 feet there is insufficient oxygen to support combustion of a candle flame, at 32,000 feet gasoline boils if unpressurized (-65°F).

At 63,000 feet blood will boil unless pressurized (body temperature 98.6°F). From this we can deduct that pressurization, air conditioning and refrigeration will have to be a part of every aircraft which will fly at these higher altitudes.

TYPES OF CONSTRUCTION. Heretofore aircraft structures have been designed to withstand comparatively steady loads, but if we intend to go faster these structures must be able to withstand heavier instantaneous loads and high skin temperature. Our experience in the past war presented the problems of erosion and corrosion which are very important factors affecting the life and reliability of structures.

Sandwich construction is just what the name implies, a sandwich. In general, it is a structural member consisting of a relatively thick, light weight core and a relatively thin, high density face. The most promising example of this type of construction is a laminated plastic, filled with glass fabric. Other types of filler have been used such as cotton, wood, nylon, paper and high strength rayon, but none are equal to glass fabric in strength per unit weight. Core materials may consist of balsa wood, extruded cellulose acetate containing 3% chopped glass fibers, and expanded hard synthetic rubber. This type of construction presents new but fairly easy problems of maintenance.

Honeycomb construction is actually a core for sandwich type construction. It consists of a substance such as a layer of thin (.003 inch) glass fabric, plastic-molded in the form of 3/15 and 1/4 inch cells, like a bee's honeycomb, and may be used as structural members in cargo floors, radar domes, shelves, etc., but will probably not be used in airfoil construction because of the difficulty in contouring.

Thick skin construction may be used to form thin, high strength airfoils having very little internal structure. This type of structure is formed by milling out a solid section, or by forming and fabricating from thick sheet stock. This type of structure presents complicated and costly maintenance. Further, the skin thickness may be tapered from wing root to wing tip.

Solid construction is also possible; a solid airfoil with the exception of possibly a few drilled holes for controls. This type of construction will meet all of the requirements except weight. The cost and complication of maintenance are even greater than in thick skin construction.

Methods of joining materials have always presented the problem of concentrated stress in all types of structures except those in which weight is not considered. Great improvements are being made in this field by improving methods of welding, by improving the weldability of metals and by the use of adhesives; the latter being very good in strength and weight but not so good in resistance to the effects of heat.

MATERIALS. Research in materials is limited by production requirements. In other words, it is fruitless to develop structures using materials that are scarce, because mass production would be impossible.

Ceramics are not as yet considered a structural material for aircraft but their use as protective coatings against corrosion, effects of heat and erosion show good possibilities.

Continued on page 44

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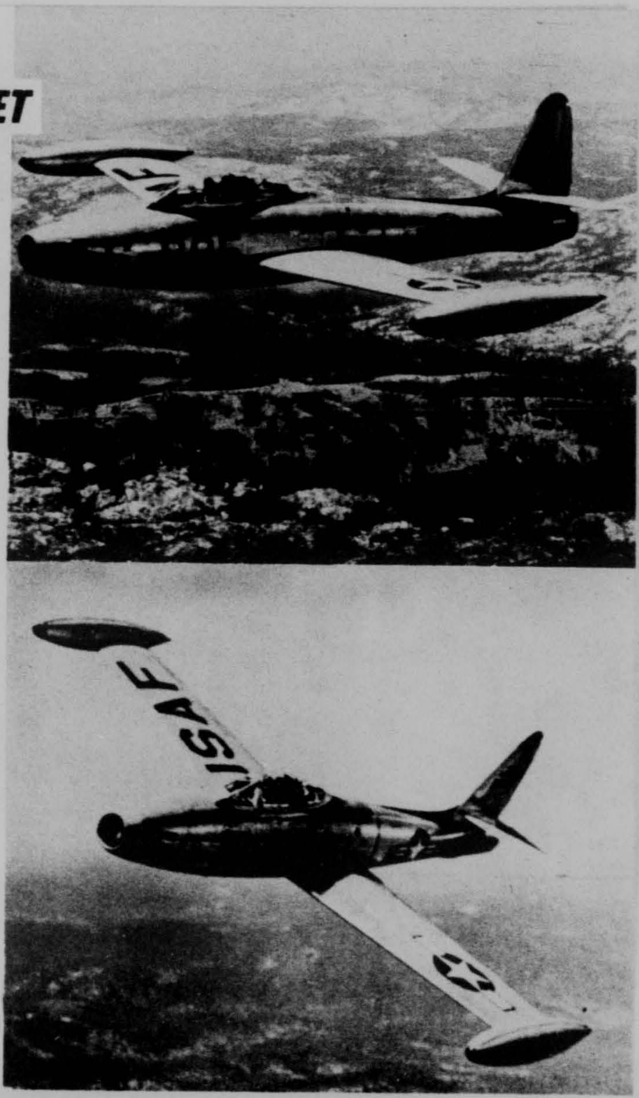
F-84E *THUNDERJET*



MANUFACTURER
Republic

DIMENSIONS
Span 36.4
Length 38.5

POWER PLANT
J-35-A-17/4900 lb thrust

TAKE-OFF RUN
4800 ft over 50' height

RATE OF CLIMB
9 mins from s.l. to 35,000 ft

COMBAT CEILING
42,800 ft

SPEED
544 knots

COMBAT RANGE
1580 naut. mi.

ARMAMENT
(6) 50 cal. guns - 1800 rounds
(2) 1,000 lb bombs
(12) 5" HVAR rockets

RADAR
AN/APG-30

FIRST FLIGHT
May 1949

FIRST ACCEPTANCE
May 1949

The latest version of Republic's "Thunderjet" fighter - F-84E, features many improvements over earlier models which have greatly increased its worthiness and capabilities. By installing an Allison J-35-A-17 turbojet engine, thrust has been increased by 25% - combat radius, service and maneuverability have likewise been improved. The nose section of the fighter has been lengthened 15 inches, in order that cabin pressurization and air conditioning might be incorporated for increased pilot room and comfort. Wing and tail sections have been strengthened to withstand greater stresses. In addition to "splitting" the fuselage to permit rapid engine change, which now can be accomplished in less than 50 minutes, 180 access doors have been provided to facilitate speedier servicing. F-84E's are now in production.

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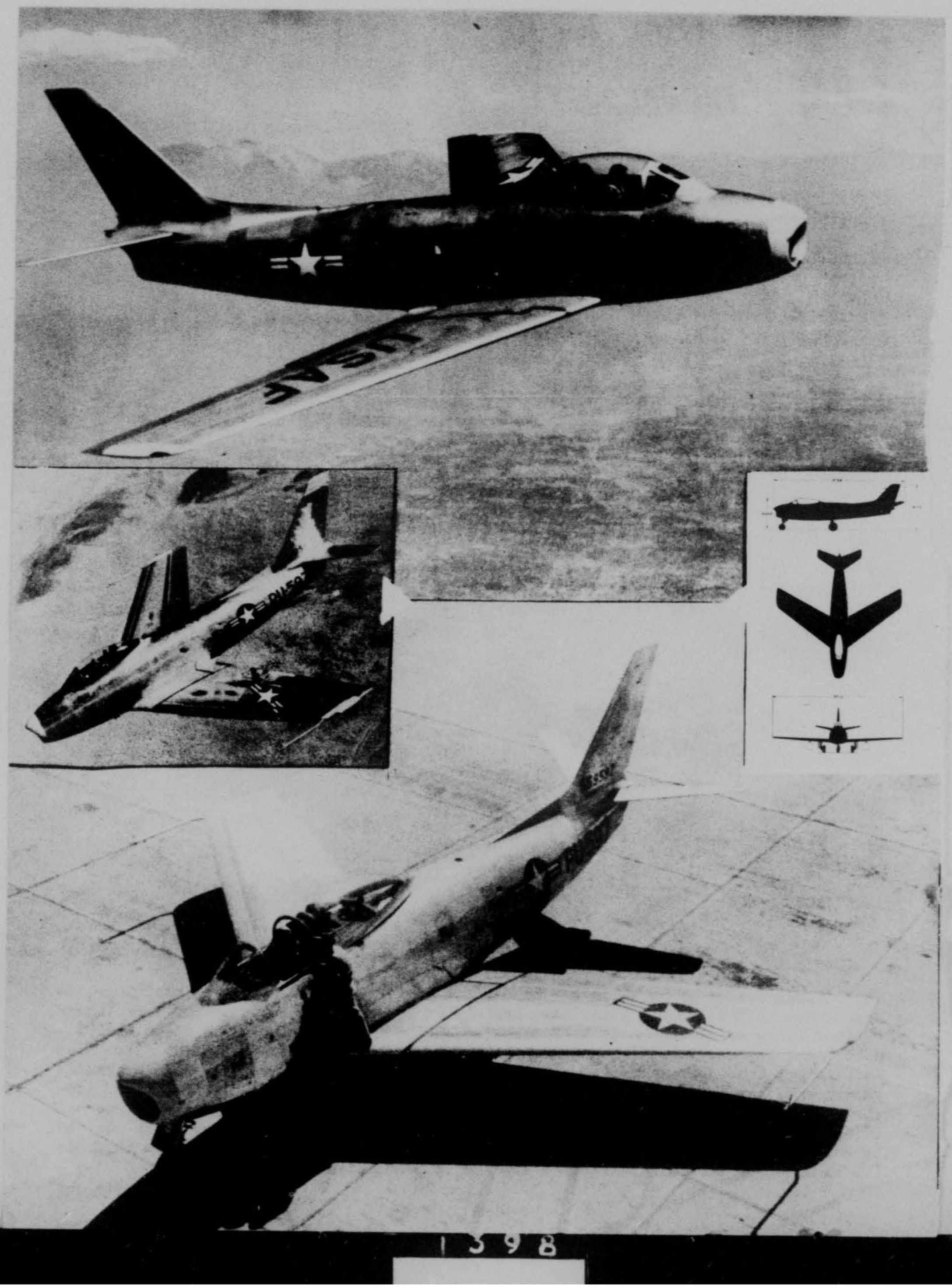

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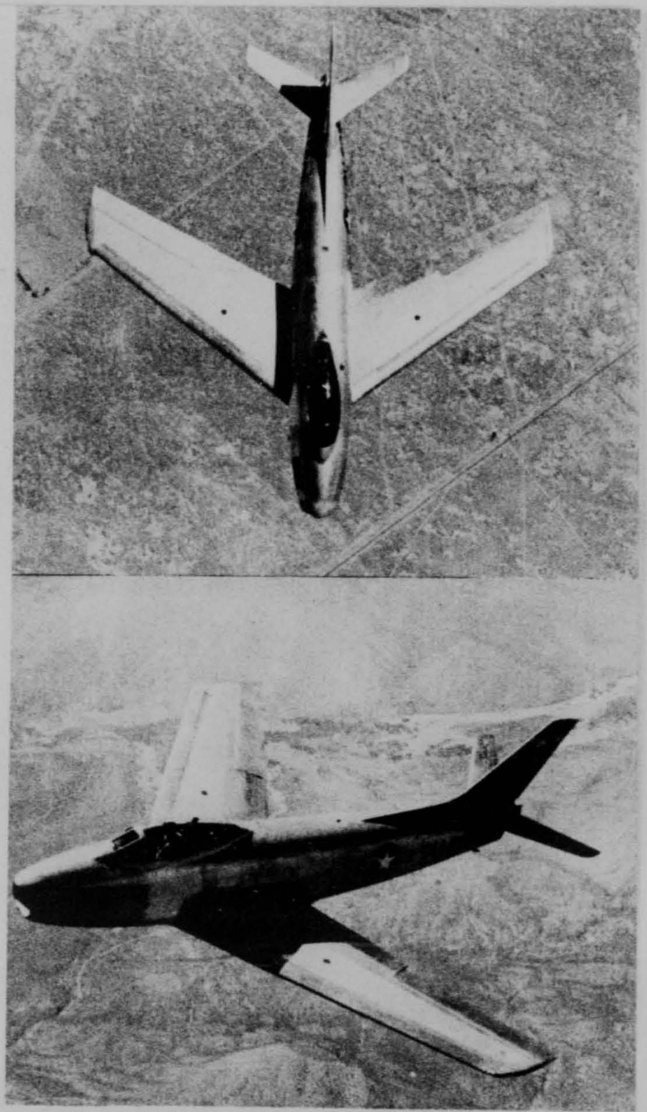
F-86A *SABRE*



MANUFACTURER
North American

DIMENSIONS
Span 37.1
Length 37.5

POWER PLANT
J-47-GE-1/5230 lb thrust

TAKE-OFF RUN
3750' over 50' height

RATE OF CLIMB
7.9 mins from s.l. to 35,000'

COMBAT CEILING
44,000

SPEED
596 knots

COMBAT RANGE
1212 naut. mi.

ARMAMENT
(6) 50 cal. guns - 1800 rds
(2) 1,000 lb bombs
(16) 5" HVAR rockets

RADAR
Ranging

FIRST FLIGHT
October 1947 (XF-86)

FIRST ACCEPTANCE
May 1948

Designed primarily as a high altitude fighter, the "Sabre" was the first supersonic combat aircraft to go into quantity production. Included in the features of the plane are swept back wing and empennage, electrically adjustable horizontal stabilizer, hydraulically operated speed brakes, automatic wing leading edge slats and hydraulic boost control for ailerons and elevators. Flush gun doors are incorporated in the design, and open when the guns are fired. A Type A-1B gun-bomb-rocket sight is provided and is used in conjunction with the radar ranging equipment. Provisions are made for carrying either bombs or rockets externally. In September 1949 the F-86 exceeded 710 miles per hour and 57,000 ft. in flight tests.

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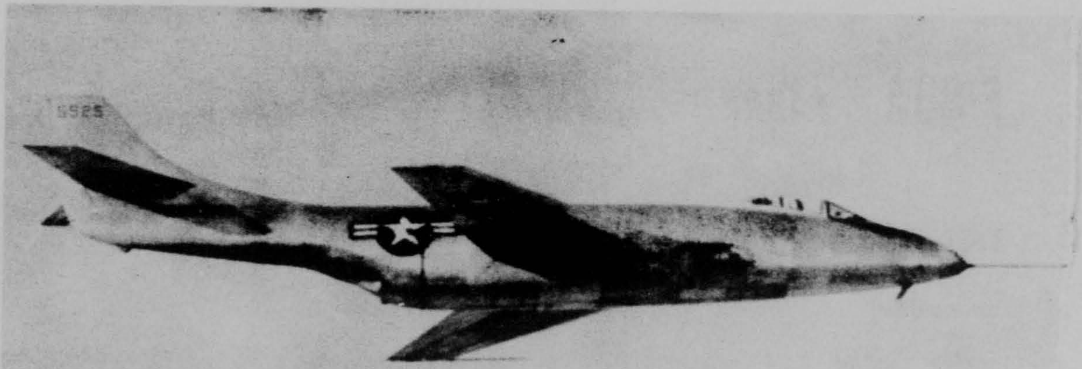
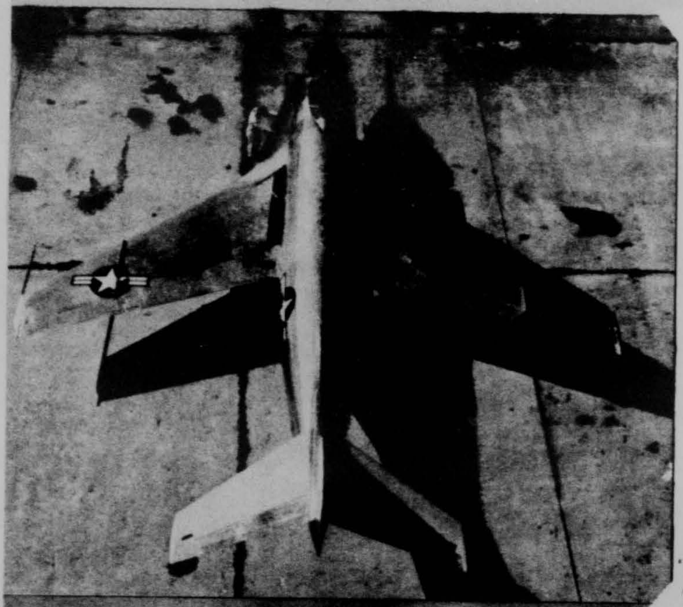
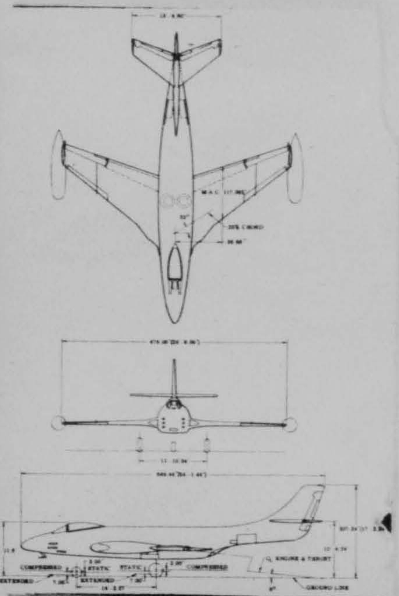
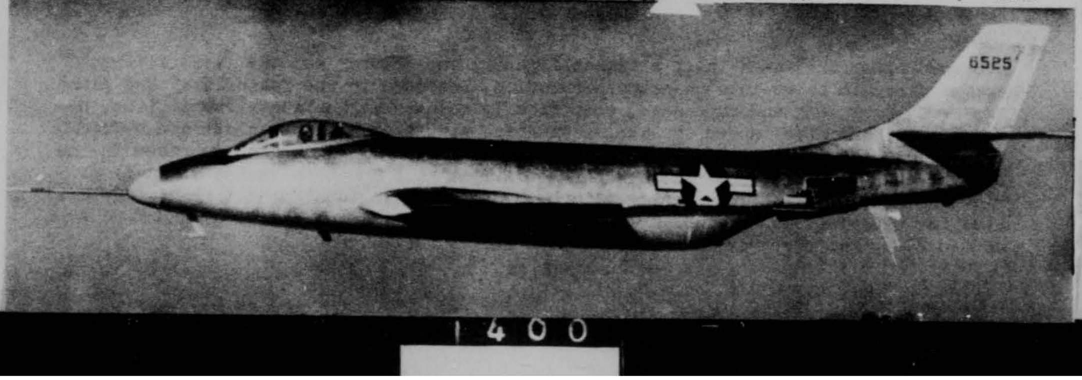





M.A.C.
35°
25% CHORD
COMPRESSED
STATIC
STATIC
COMPRESSED
EXTENDED
EXTENDED
ENGINE & THRUST
GROUND LINE



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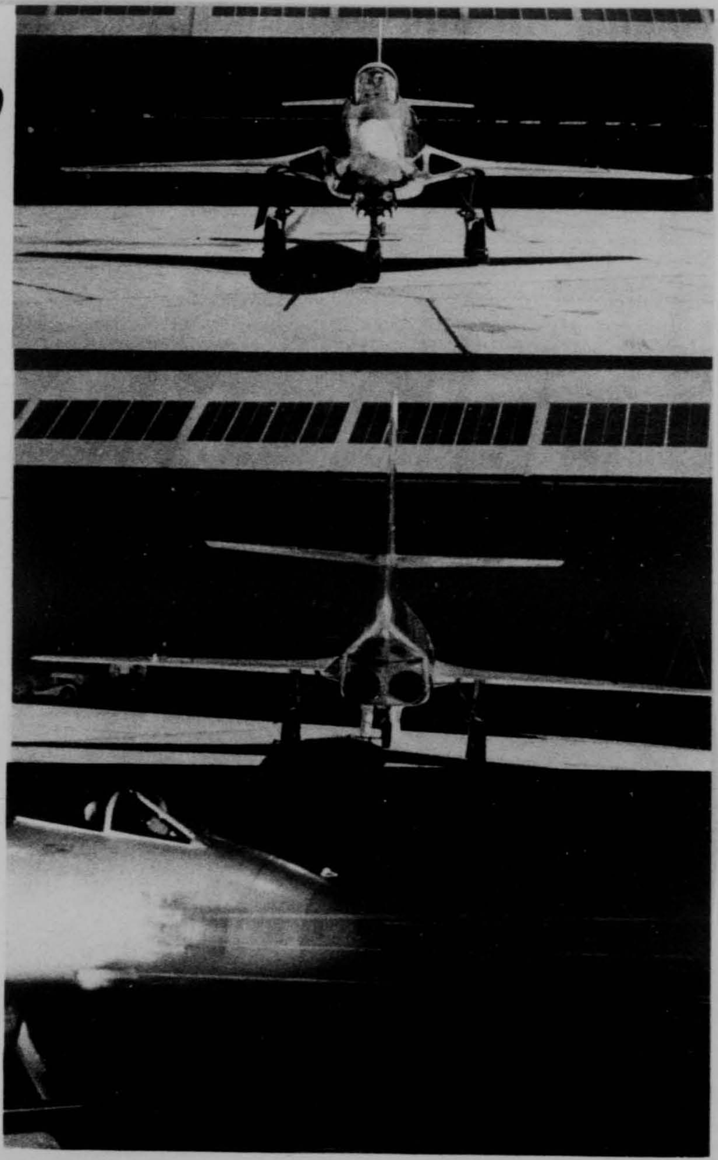
F-88 *VOODOO*



MANUFACTURER
McDonnell

DIMENSIONS
Span - approx 40'
Length - approx 58'

POWER PLANT
(2) Turbo-jet w/approx 6,000 lb thrust

TAKE-OFF RUN
under 4,000 ft

RATE OF CLIMB
under 3 mins from s.l. to 35,000'

COMBAT CEILING
over 49,000 ft.

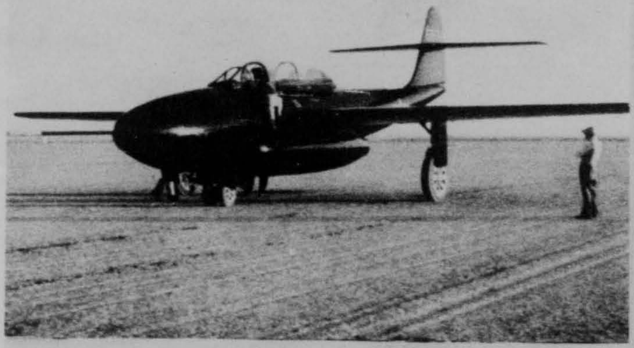
SPEED - 600 knot class

COMBAT RANGE
over 2,000 naut. mi.

FIRST FLIGHT
September 1948 (XF-88)

The McDonnell F-88, "Voodoo", is a penetration jet fighter for operation deep within enemy territory as a fighter-bomber or medium bomber escort. Design includes fuselage dive brakes just forward of the tail and a plastic nose which contains communications equipment. Two turbo-jet engines are located in the wing roots close to the fuselage, and the exhaust of the engines funnels out through turn tail pipes below the level of the tail.

XF-89 *SCORPION*



MANUFACTURER
Northrop

DIMENSIONS
Span approx 50'
Length approx 50'

POWER PLANT
(2) TJ-J-35-A-9/4000
lb thrust

TAKE-OFF RUN
10,200 JATO assist
6300'

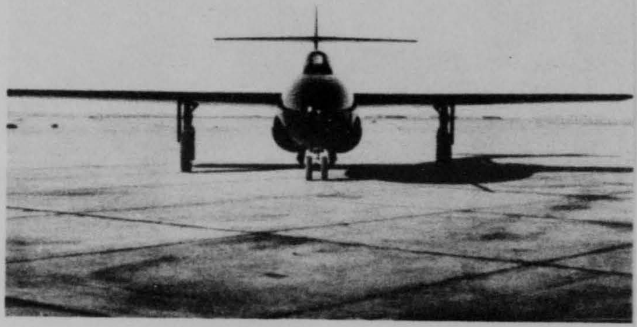
RATE OF CLIMB
21 min. from s.l. to 35,000'

COMBAT CEILING
over 40,000 ft

SPEED - over 500 knots

COMBAT RANGE
over 1500 naut. mi.

FIRST FLIGHT
August 1948



The Northrop XF-89 is an all-weather fighter designed for tactical operations at night or under unfavorable weather conditions. The reason for the stabilizer being placed so high is to keep it free from the hot gases from twin tail exhausts. This also diminishes the effect upon the stabilizer of the turbulence caused by the airflow over the plane's wing. It is equipped with remotely controlled turrets, pilot ejection seat as well as for thermal anti-icing.

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XF-90 ***PENETRATION FIGHTER***

MANUFACTURER
Lockheed

DIMENSIONS
Span - approx 46'
Length - approx 56'

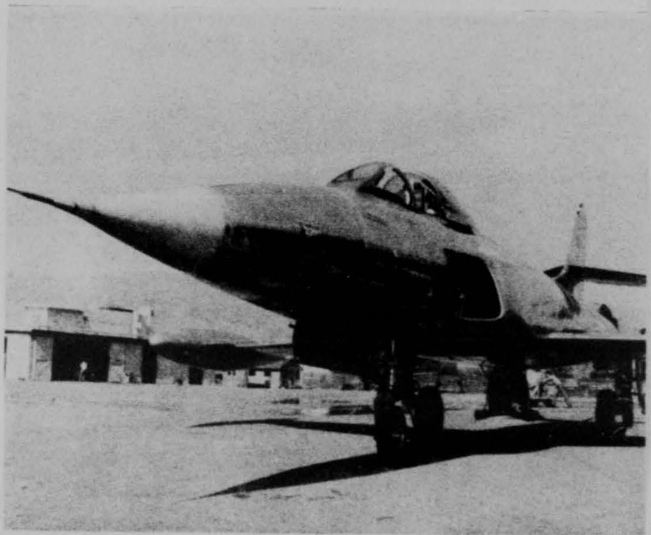
POWER PLANT
(2) J-34-WE-22 approx 12,000 lb thrust

COMBAT CEILING
over 50,000 ft

SPEED
over Mach I (600 mph)

COMBAT RANGE
more than 1500 naut. mi.

FIRST FLIGHT
June 1949



The Lockheed XF-90 is a 15 ton jet penetration fighter, combining speed, range and maneuverability. It readily lends itself to assembly-line production. It has conventional tricycle landing gear and a pilot ejection seat. The cabin is pressurized and air conditioned. Large (220-gal) wing tip tanks help to give the fighter unusually long range for a jet plane. This aircraft is powered by two (2) Westinghouse J-34 turbojet engines, with Solar afterburners. The XF-90 has now made more than 25 successful flights.

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U.S. AIR FORCE
6680
Republic XF-91
6680

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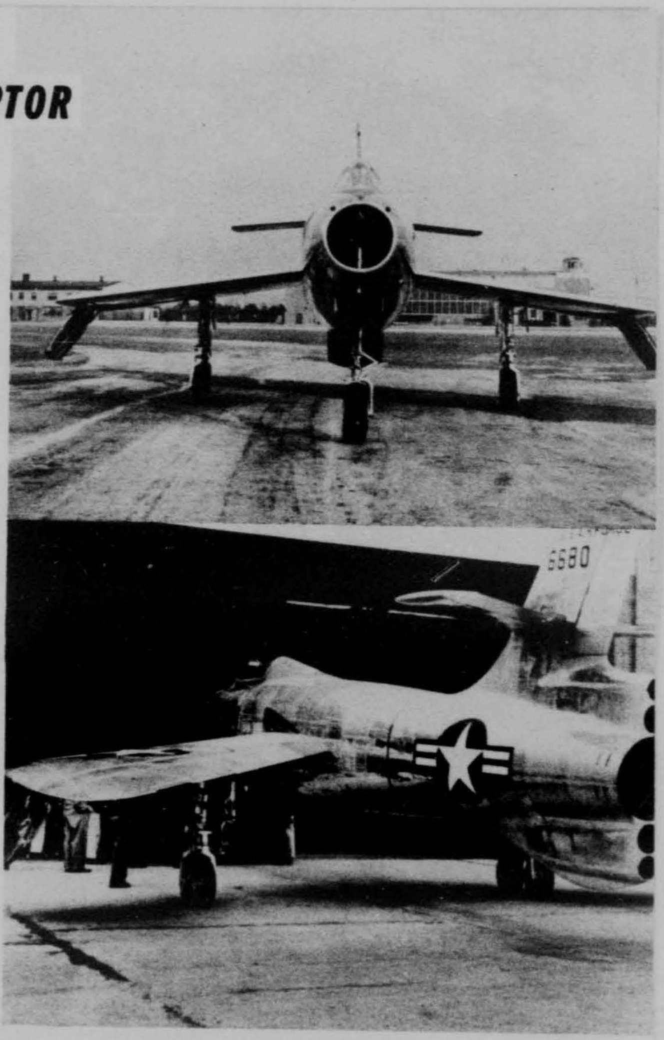
XF-91 *INTERCEPTOR*



MANUFACTURER
Republic

DIMENSIONS
Span approx 30'
Length approx 45'

POWER PLANT
J-47-GE-1/5000 lb thrust
plus rocket motors

RATE OF CLIMB
less than 3 mins. to 35,000'

SPEED
over Mach I

FIRST FLIGHT
imminent

The XF-91 is designed as a high altitude interceptor for local defense against long-range bombers and guided missiles. It is powered by a turbojet engine with rocket motors for accelerated take-off and climb and for operation at extreme altitudes. The main landing gear is composed of two wheels mounted in tandem, which fold up and out into the razor thin wings. The unique inverse tapering of the wing is designed to solve the problem of frequent wing tip stalling at low speed of the conventional swept wing. Taxi tests have been completed.

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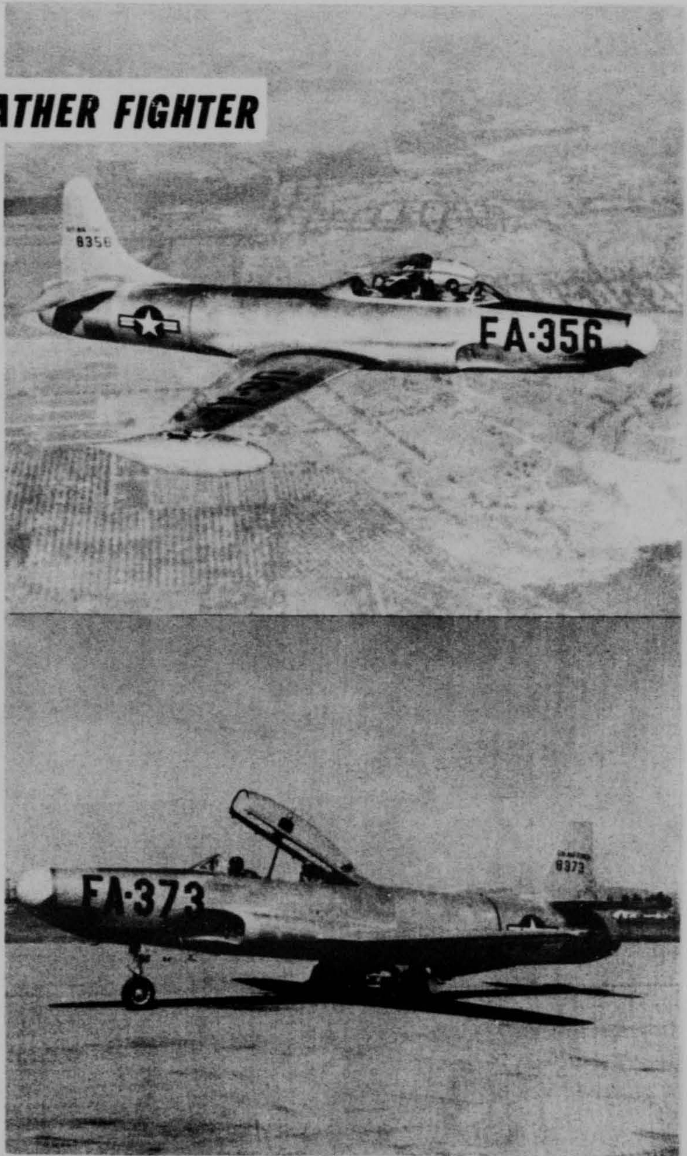
FA-356
8356
8356

F-94A ***ALL-WEATHER FIGHTER***



MANUFACTURER
Lockheed

DIMENSIONS
Span - over 38'
Length - approx 39'

POWER PLANT
J-33-A-8/over 5000 lb
thrust w/afterburner

TAKE-OFF RUN
approx 4500 - just over
3000 with JATO assist

RATE OF CLIMB
approx 12 min. to 35,000'

COMBAT CEILING
over 40,000 feet

SPEED
over 500 knots

COMBAT RANGE
over 1000 naut. mi.

FIRST FLIGHT
July 1949

Lockheed's F-94 is an all-weather fighter version of the F-80 "Shooting Star", designed to fly and fight in almost total darkness. Its mission will be high altitude interception especially under adverse weather and visibility conditions. The most striking difference between the F-94 and F-80 is the greatly extended nose section housing the ships new radar equipment wich is designed to search out and destroy enemy aircraft. All hydraulic, electric and control systems are the same as those used in the F-80, consequently men already trained in the maintenance of F-80's will experience little difficulty in servicing F-94's.

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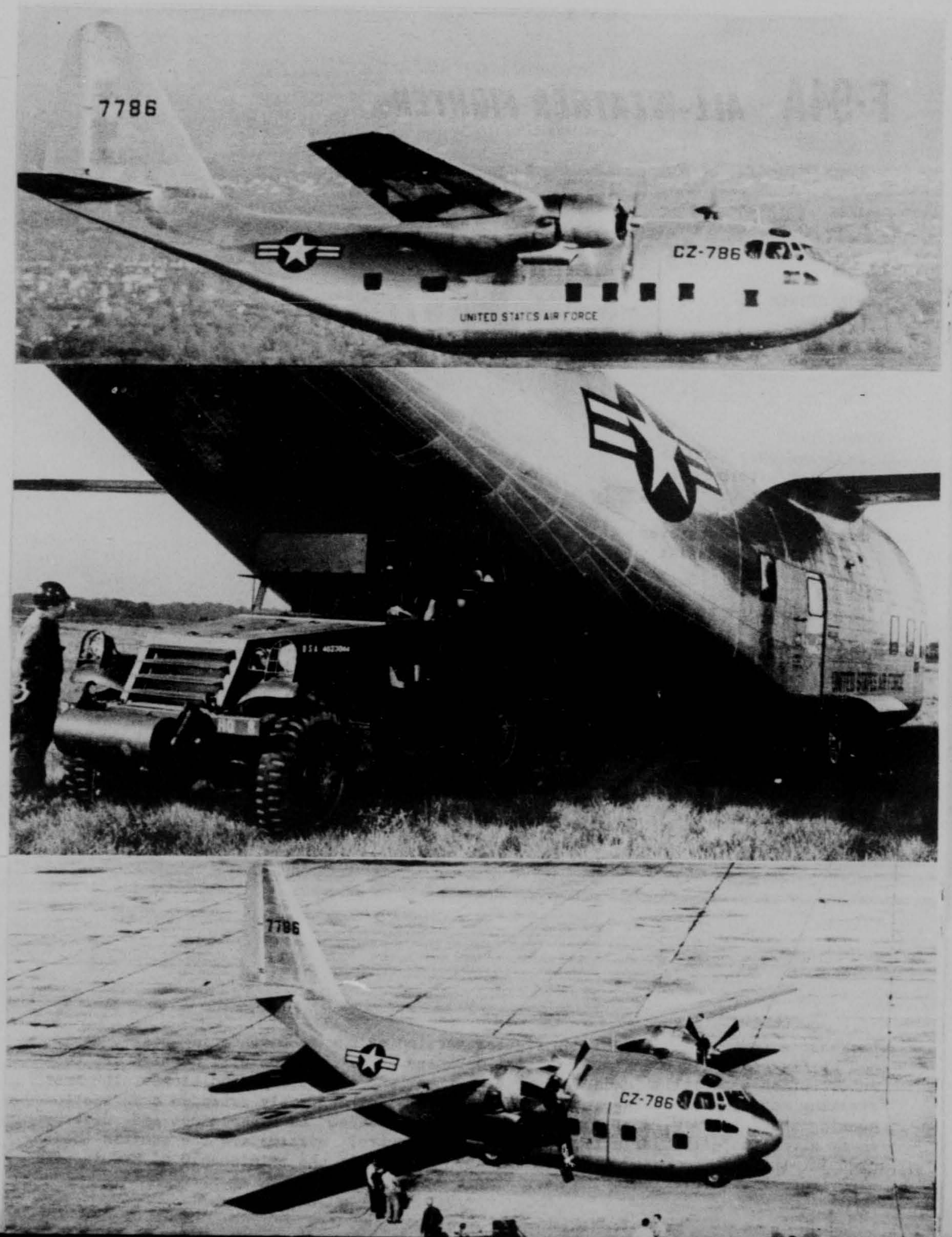
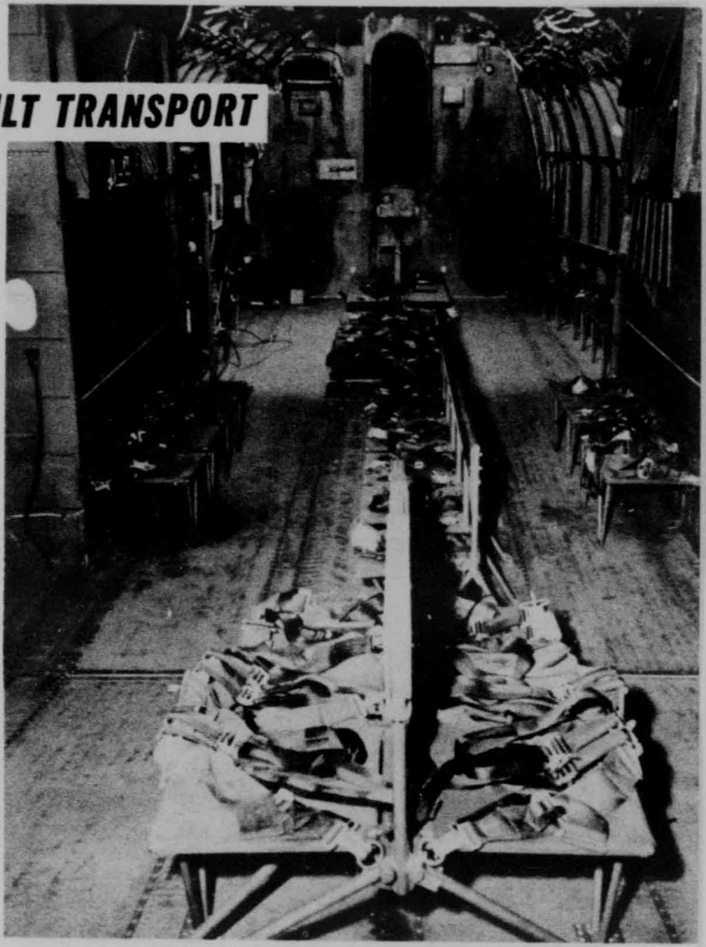

7786
CZ-786
UNITED STATES AIR FORCE
UNITED STATES AIR FORCE
7786
CZ-786

XC-123 ASSAULT TRANSPORT



MANUFACTURER
  Chase

DIMENSIONS

Span	110
Length	77.1
Height	32.6

POWER PLANT
  (2) R-2800-83 Pratt-Whitney (2400 hp)

CREW - two

LOAD -
  (60) troops
  (50-60) litters
  24,165 lb - cargo

TAKE-OFF
  750 ft over 50' height

COMBAT CEILING
  33,000 ft

COMBAT RANGE
  650 naut. mi. w/13,300 lb

SPEED - 233 knots

FIRST FLIGHT
  October 1949

The basic mission of the XC-123 is the transport of combat personnel and engineering equipment for airborne assault troops, particularly into small unprepared fields in forward combat areas. Tow-fitting capacity for a 30,000 lb glider is provided in the rear. Tow-fittings in the nose are provided for snatch pickup and towing. An integral power operated ramp provides for rear loading of heavy wheeled vehicles.No special provisions are required for vehicles up to 6500 lb per wheel. It can carry a 155 mm Howitzer Type M1A1. The ramp can be adjusted to any truck bed height for loading. All cargo tie-down fittings are of 10,000 lb capacity.

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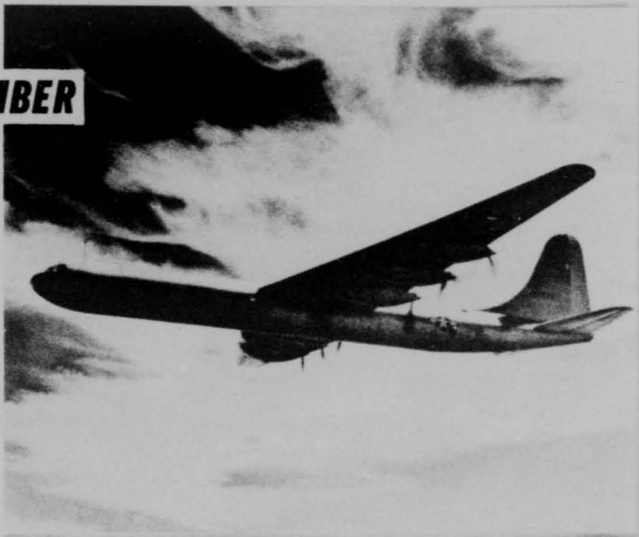
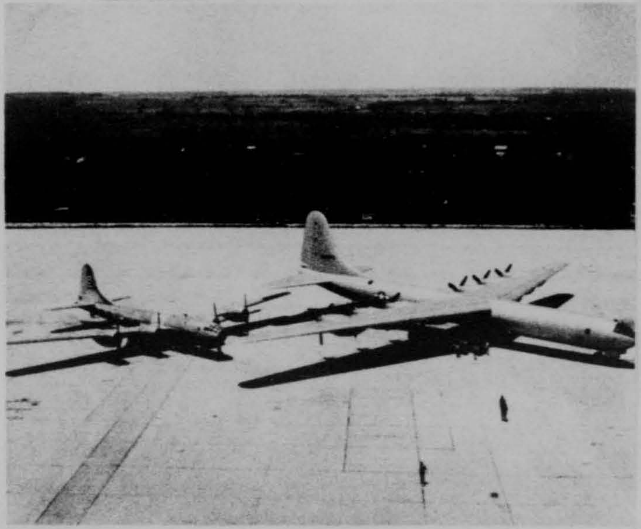
BM-032
213570

B-36B *HEAVY BOMBER*





MANUFACTURER
Consolidated-Vultee

DIMENSIONS

Span	230 ft
Length	162.1 ft
Height	46.8 ft

POWER PLANT
(6) R-4360-41 Pratt-Whitney
(3500 hp)

CREW - 15

TAKE-OFF RUN
8,000 ft, over 50' height

COMBAT CEILING - over 40,000'

COMBAT RANGE
6946 naut. mi. w/10,000 lb

SPEED - 327 knots

ARMAMENT
(8) turrets
(16) 20mm guns
9200 rounds
Max. Bomb Load - 86,000 lb
Max. Bomb Size - 43,000 lb

ELECTRONIC EQUIPMENT
IFF-SCR-695B
Blind Approach-RC-103A
Glide Path-AN/ARN-5A
Bombing Nav. Radar - AN/APQ-24
Loran- AN/APN-9
Gun Laying Radar-AN/APG-3

FIRST FLIGHT - July 1948

The B-36B is a long range, high altitude, heavy bomber. The fuselage consists of a forward pressurized cabin, one non-pressurized turret bay, four non-pressurized bomb bays, aft pressurized cabin and the non-pressurized rear fuselage section. Cabin heating, defrosting of blisters and enclosures; and anti-icing of propellers,wing and tail are accomplished by heated air. The defensive armament consists of eight remotely controlled turrets, six of which are retractable. The major differences between the B-36A and the B-36B include an increase in engine horsepower with fluid injection from 3000 to 3500 hp, provisions for larger bombs and additional radio equipment. In addition to its regular reciprocating engines, the B-36 will be equipped with four J-47 jet engines mounted in pairs beneath each outer wing, for added take-off power and speed over target.

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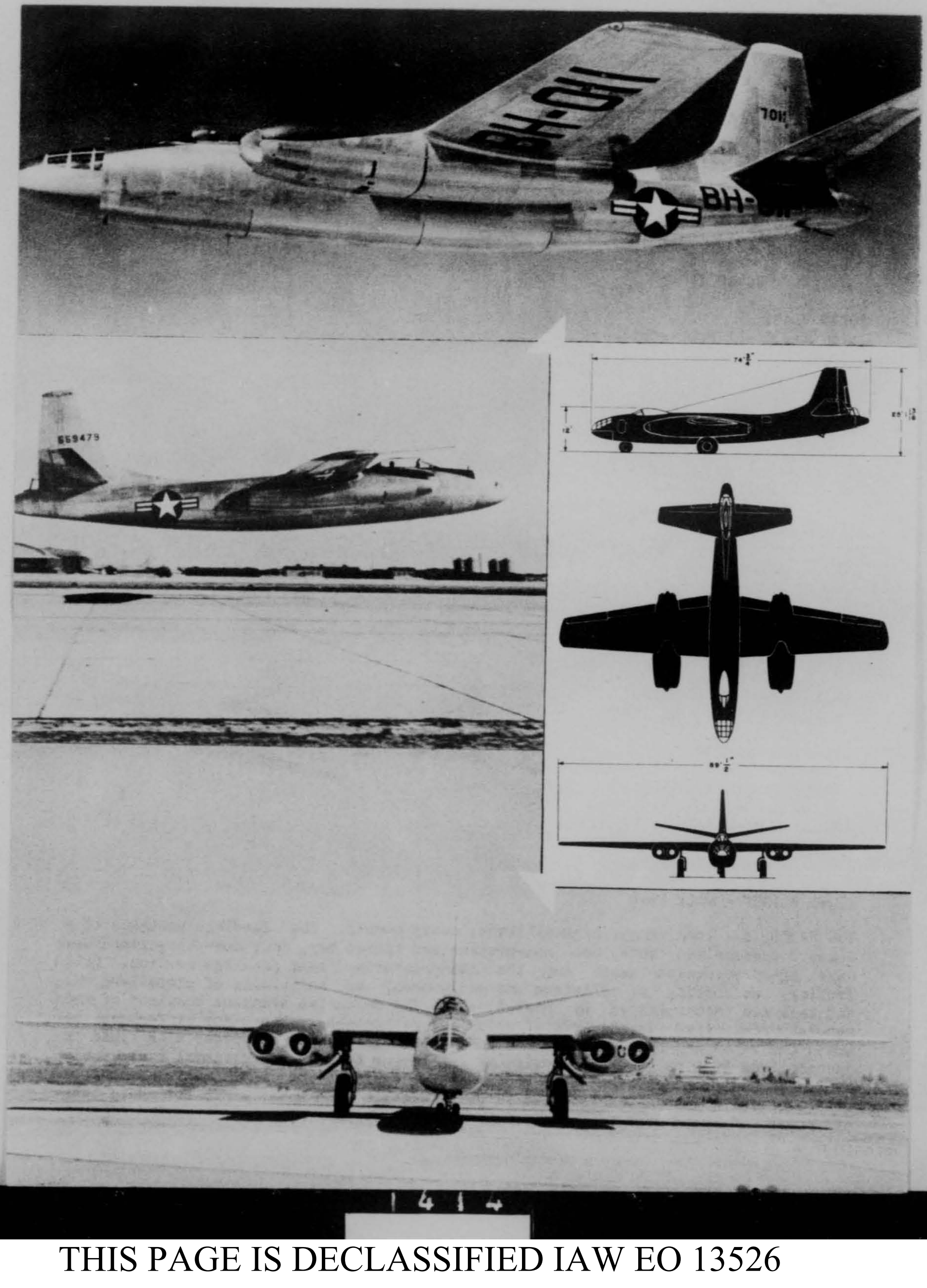
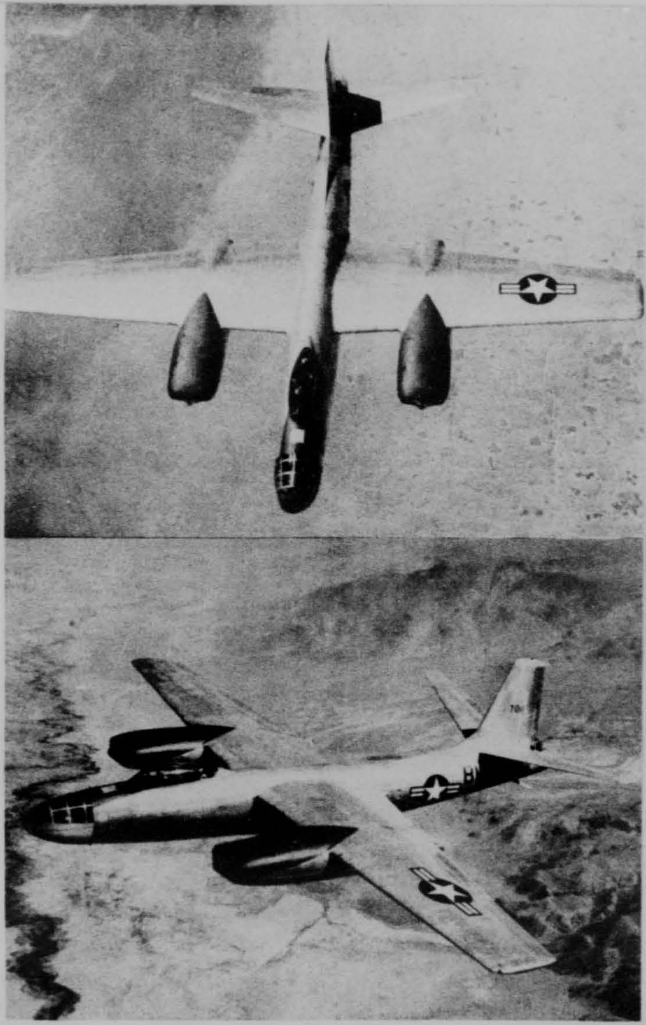

BH-011
701
BH-0
659479
74'$\frac{3}{4}$"
12'
25'1$\frac{13}{16}$"
89'$\frac{1}{2}$"

B-45A *TORNADO*



DIMENSIONS
Span 89.0 ft
Length 75.3 ft
Height 25.2 ft

POWER PLANT
(2) J 47-GE-1 and (2) J47-GE-3
w/5230 lb thrust

CREW - 4

TAKE-OFF RUN
5240 ft over 50 ft height

COMBAT CEILING - 42,100 ft

COMBAT RANGE
1439 naut. mi. w/10000 lb

SPEED - 504 knots

ARMAMENT
(1) turret
(2) .50 cal guns
1200 rounds
Max Bomb Load - 22,000 lb
Max Bomb Size - 22,000 lb

ELECTRONIC EQUIPMENT
Nav-Bomb Radar - AN/APQ-24
Glide Path - AN/ARN-5
IFF - SCR-695-B

FIRST FLIGHT - Mar '47 (XB-45)

The primary mission of the B-45A is the destruction of land or naval material objectives. The aircraft is a light bomber, comparable in size and range with World War II heavy bombers. Special features provided in this aircraft consist of thermal anti-icing, cabin pressurization, heating and cooling, ejection-type seats for pilot and co-pilot, and emergency escape hatches for bombardier-navigator and tail gunner. Communications equipment, emergency flight controls and instruments are installed at the co-pilots station. A Type E-4 automatic pilot and navigation-bombing radar are installed as standard equipment. Also provided is a radar-controlled tail turret. The aircraft is the first jet bomber produced in quantity for the Air Force. All models can accommodate JATO installations which are droppable after takeoff. Due to the high operating speed, the B-45 is equipped with radar navigation and bombing systems.

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B-47 STRATOJET

MANUFACTURER
Boeing

DIMENSIONS
Span 116
Length 107.6

POWER PLANT
GE TG-180 (USAF-J-35)
w/5000 lb thrust

CREW
3

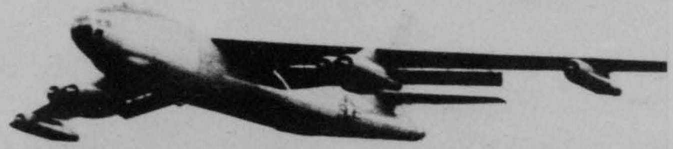
COMBAT CEILING
Over 40,000'

COMBAT RANGE
1740 naut. mi.

SPEED
550 knots

ARMAMENT
Remotely-controlled
tail armament

FIRST FLIGHT
December 1947 (XB-47)



The Stratojet is a high-wing medium bomber powered by six jet engines slung beneath the wings. Two engines are mounted in a single nacelle on each side of the fuselage. An additional single engine nacelle is mounted near each wing tip. The wings and stabilizer are sharply sweptback, giving an arrow-like appearance. The fuselage is long and narrow with a tapering high fin. The tail cone extends beyond the rudder. The B-47 has a retractable bicycle landing gear composed of two-wheel trucks with small wheels extending from the inboard nacelles for balance. There are JATO tube openings in the fuselage sides aft of the trailing edge of the wing.

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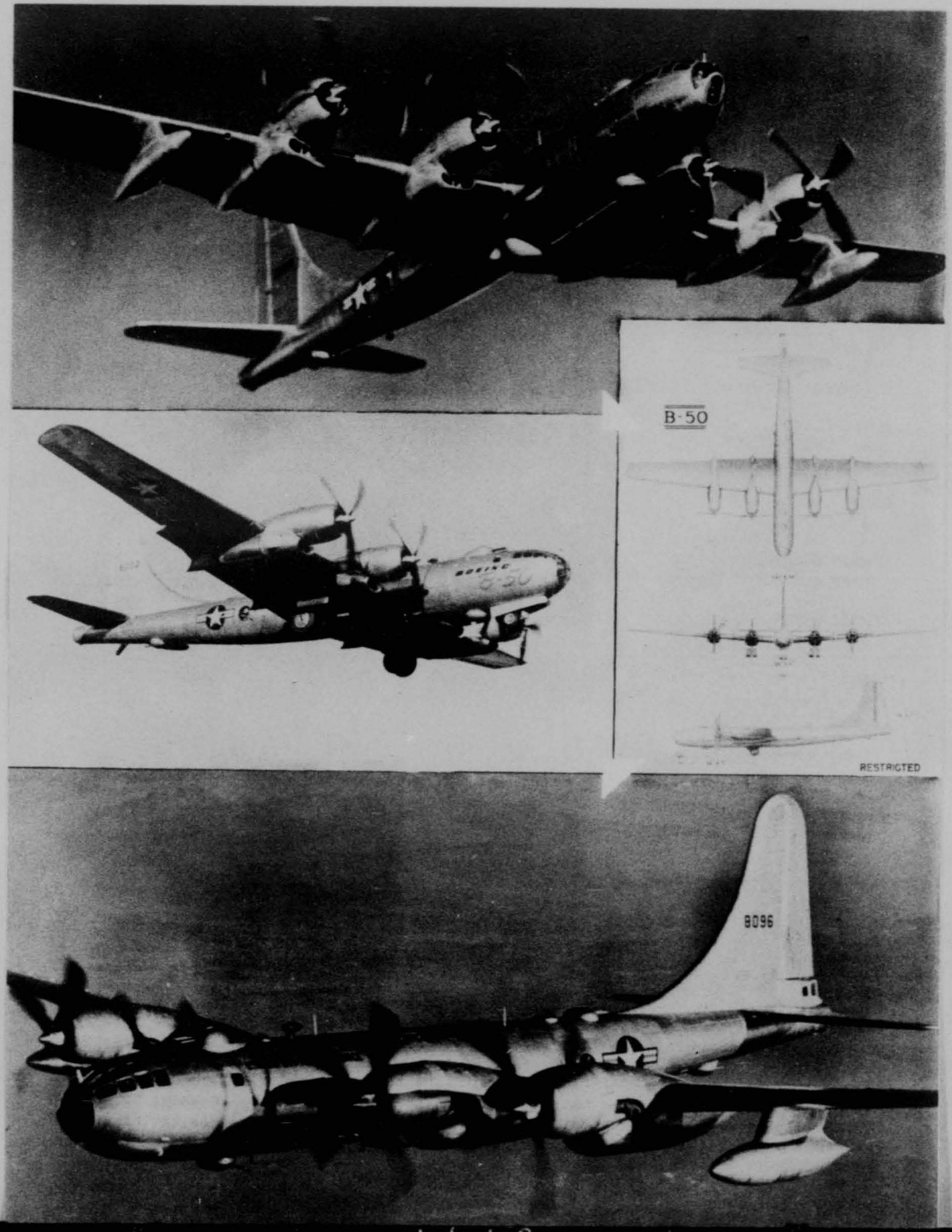
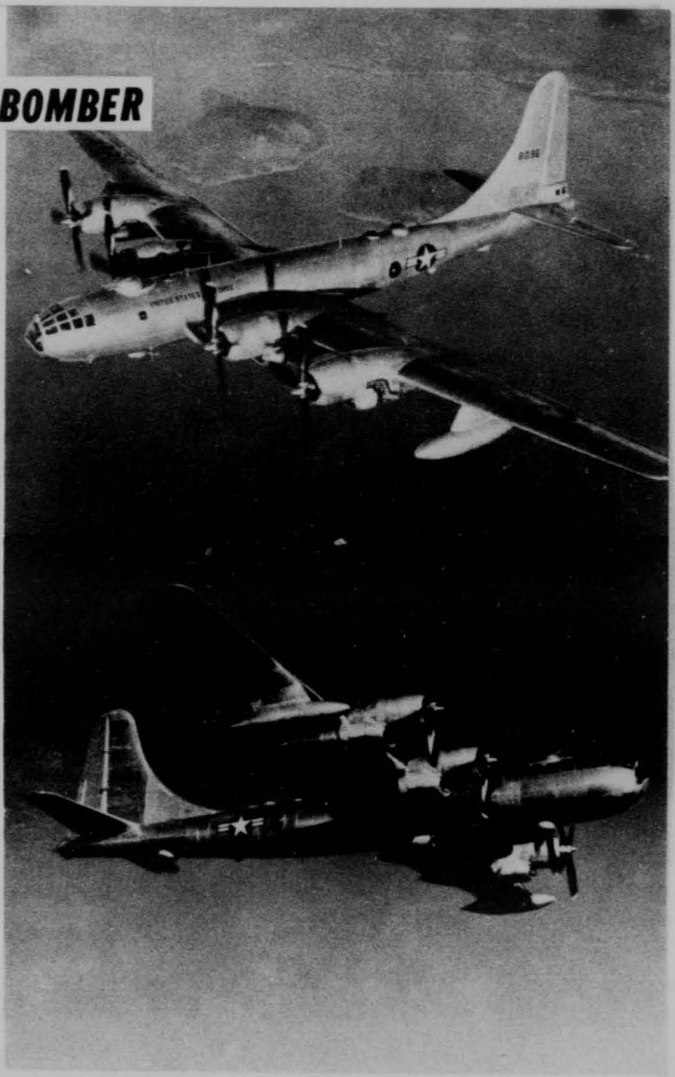

B-50
B-50
RESTRICTED
8096

B-50A *MEDIUM BOMBER*



MANUFACTURER
Boeing

DIMENSIONS
Span 141.2'
Length 99.5'
Height 32.7'

POWER PLANT
(4) R-4360-35 (3500 hp)

CREW - 11

TAKE-OFF RUN
6980 ft. over 50' height

COMBAT CEILING - 33,700 ft

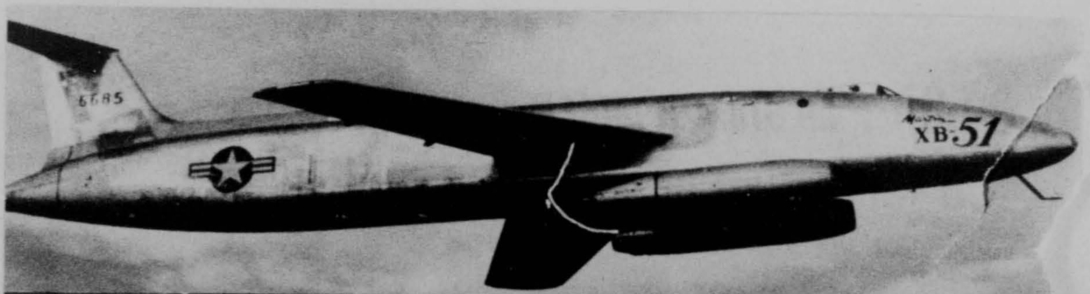
COMBAT RANGE - 3785 naut. mi.

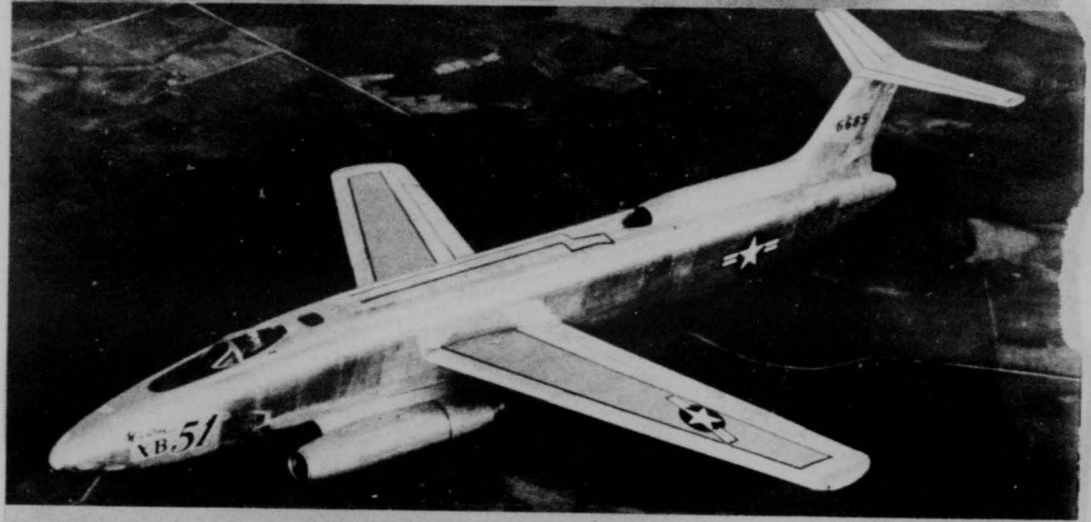
SPEED - 354 knots

ARMAMENT
(5) turrets
(13) .50 cal. guns
6380 rounds
Maximum Bomb Load
Internal - 20,000
External -(2)- 4,000 lb
Maximum Bomb Size - 4000 lb

FIRST FLIGHT
June 1947

The B-50A is a long range high altitude medium bomber. Cabin heating, ventilation and pressurization are incorporated for increased crew comfort on high altitude long range missions. The defensive armament is housed in five electrically operated turrets which are remotely controlled from sighting stations. Principal improvements over the original B-50 model include such changes as new radar equipment, plexiglass nose section, modified four-gun top forward turret and single-point ground refueling. Important from a maintenance viewpoint are the interchangeable "power packs" each of which incorporates a 3500 hp Pratt-Whitney Wasp Major engine, a General Electric turbosupercharger, oil tank and system, generators and engine accessories. Four men can remove an entire "power pack" and replace it with a pre-tested unit in less than one-half hour.


6685
XB-51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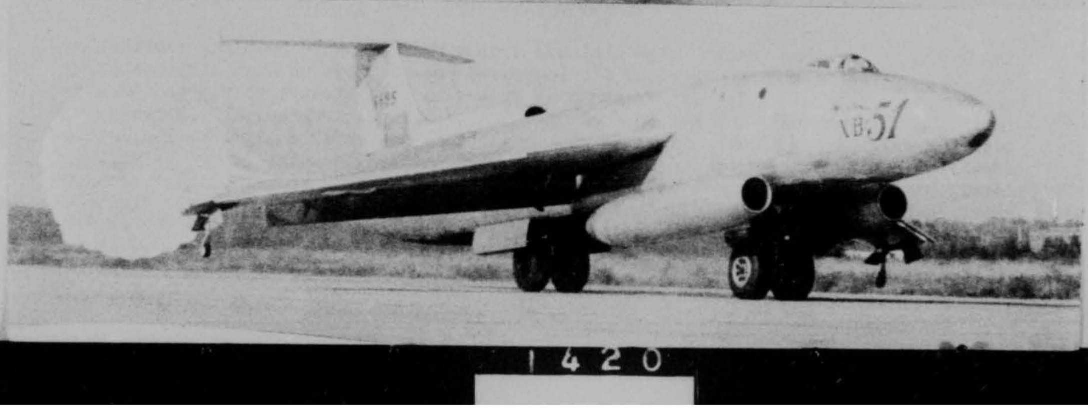
XB-51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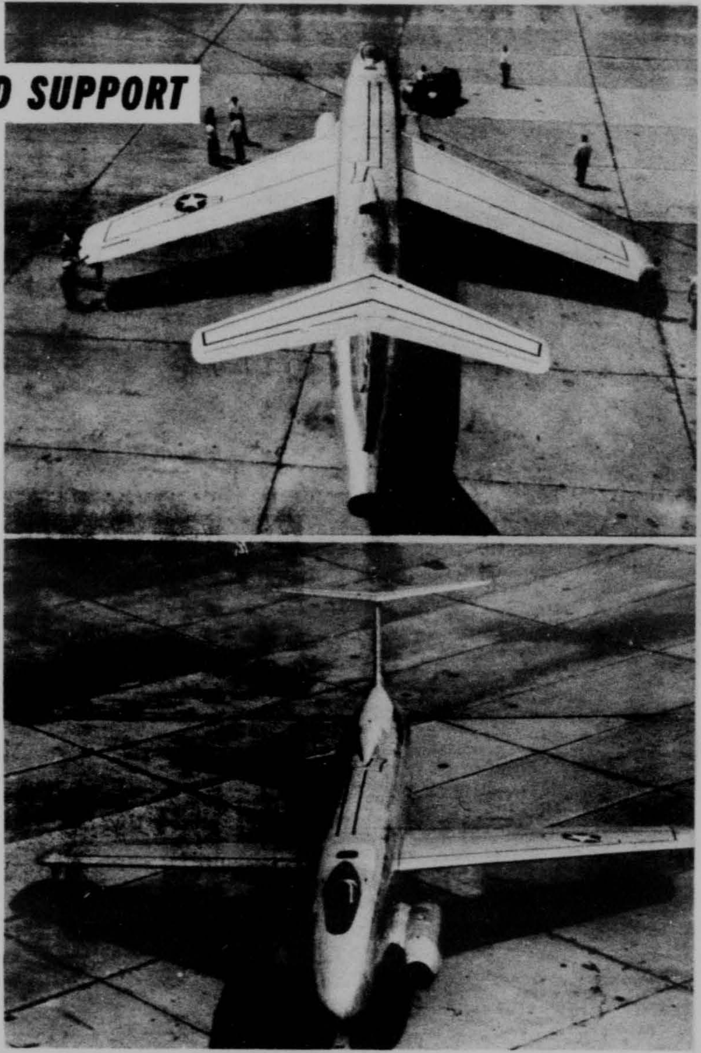
XB-51

XB-51, GROUND SUPPORT



MANUFACTURER
  Martin

DIMENSIONS
  Span - approx 55'
  Length - approx 80'
  Height - approx 17'

POWER PLANT
  (3) J-47-GE-7 over
  5200 lb thrust

CREW - 2

SPEED - Air Force "High"

FIRST FLIGHT
  October 1949

The Martin XB-51 is the first postwar airplane specifically designed for the destruction of surface military targets in cooperation with air, ground and/or naval targets. Radical in design, with a wing sweep back of 35 degrees and horizontal stabilizer mounted "T" style atop the vertical stabilizer. The plane is flown by a two man crew in a pressurized, air conditioned cockpit with pilot ejection seats. Dual main wheels are mounted bicycle style and retract into the fuselage, balance during taxi runs being maintained with small outrigger wheels at the wing tips. The XB-51 is versitile in operations to and from combat area fields. For take-off under such conditions, the bomber is equipped to use JATO bottles, and for landings, it has a parachute stowed aft for more rapid decelleration.

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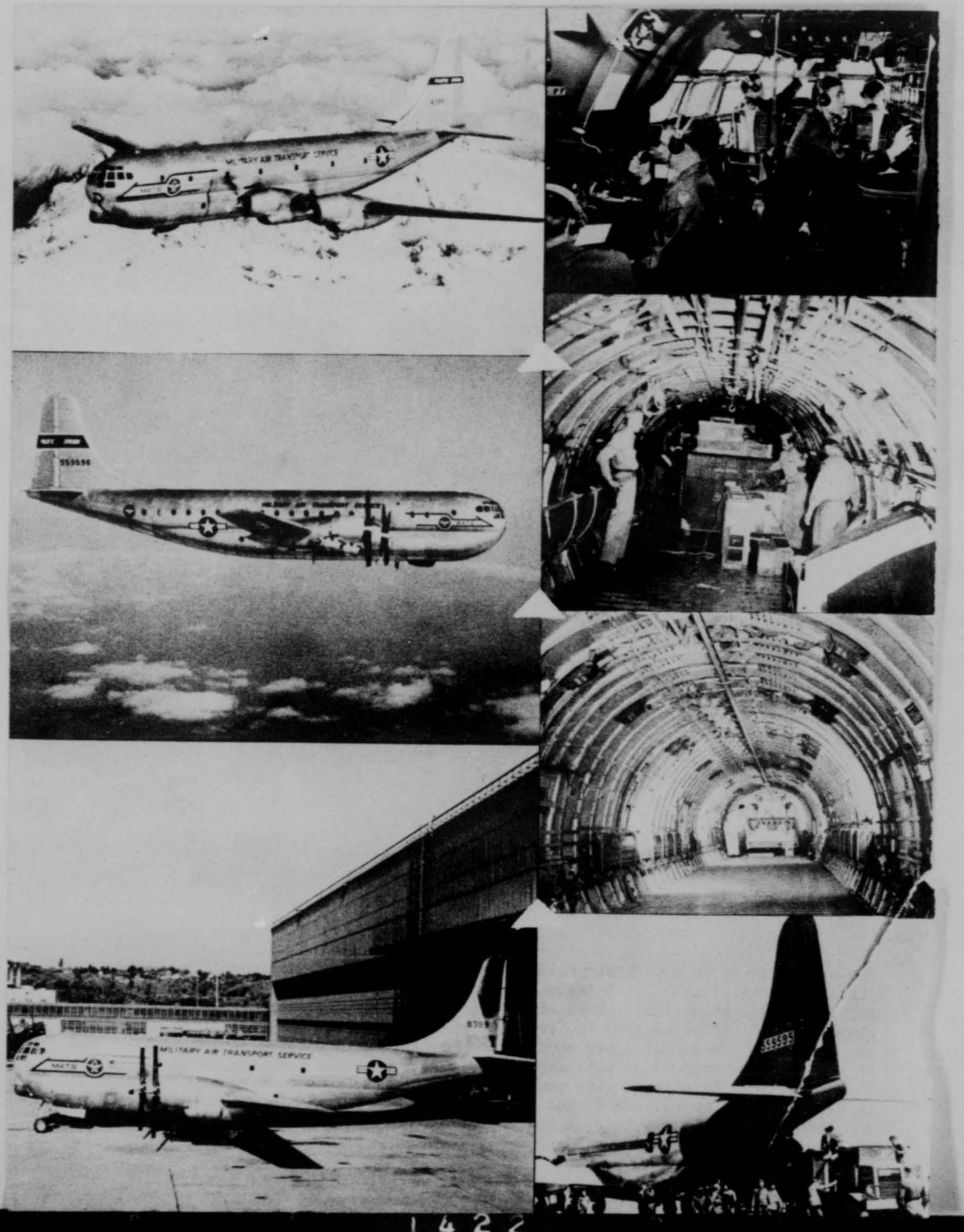
MILITARY AIR TRANSPORT SERVICE
MATS
59596
MILITARY AIR TRANSPORT SERVICE
MATS
53595

C-97A STRATOFREIGHTER

MANUFACTURER
Boeing

DIMENSIONS

Span	141.3
Length	110.3
Height	38.3

POWER PLANT
(4) R-4360-35A Pratt-Whitney (3500 hp)

CREW - five

LOAD

Troops	134
Litters	83
Cargo	68,500 lb (excluding ctr section fuels)

TAKE-OFF RUN
7500 ' over 50 ft height

COMBAT CEILING - 30,000'

COMBAT RANGE
1630 naut. mi. w/59,300 lb

SPEED - 334 knots

FIRST FLIGHT
Nov '44 (XC-97)

This huge double deck airplane is the cargo counterpart of the Boeing Stratocruiser, now in production for major world airlines and is also the transport counterpart of the B-29 and the B-50. The entire fuselage is altitude and temperature conditioned, allowing transportation of perishable goods at high speeds. The unobstructed upper deck is reached through large clam-shell type doors in the rear underside of the fuselage. Two lower compartments are reached through step-contained doors at truck-bed-height. The airplane can carry fully equipped troops or combinations of heavy guns, tanks, or trucks. Mobile equipment can drive into the upper deck on self-contained ramps, which are stowed internally when not in use. An electrically-operated overhead monorail crane travels the entire length of the upper deck cargo compartment, allowing loading and unloading of cargo without extra ground equipment.

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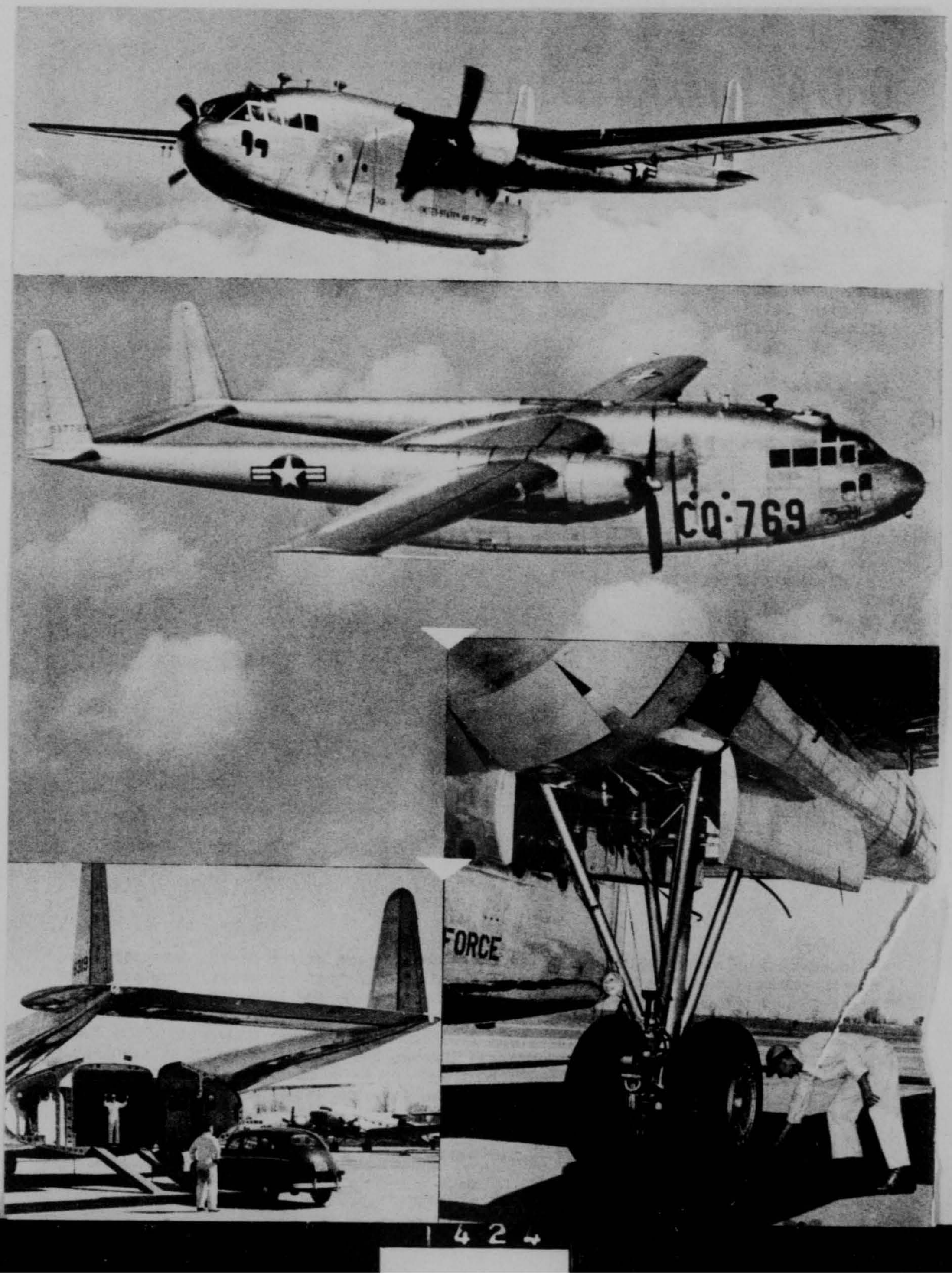
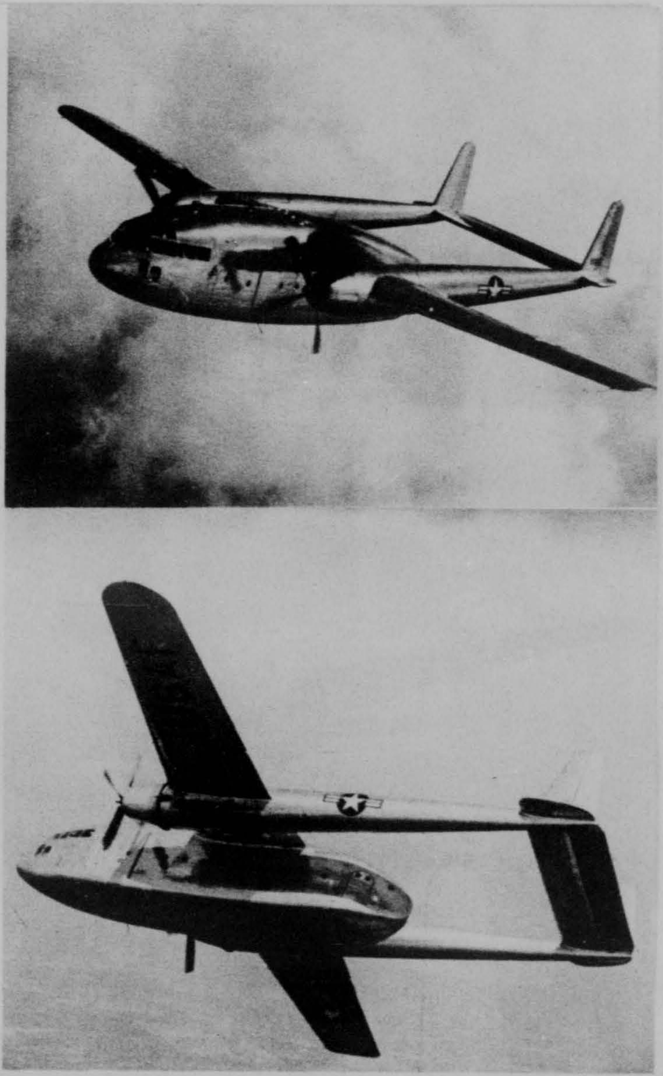

USAF
CQ-769
FORCE

C-119B *PACKET*



MANUFACTURER
Fairchild

DIMENSIONS

Span	109.3
Length	86.5
Height	26.6

POWER PLANT
(2) R-4360-20 Pratt-Whitney (2000 hp)

CREW - 5

LOAD

Troops	64
Litters	35
Cargo	30,000 lb

TAKE-OFF
3100' over 50 ft height

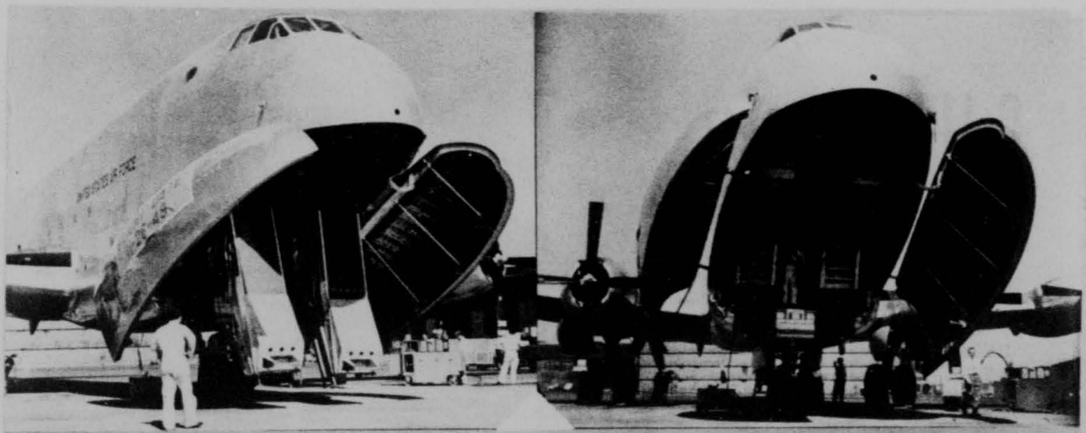
COMBAT CEILING - 26,350 ft

COMBAT RANGE
1780 naut. mi. w/14,000 lb

SPEED - 243 knots

FIRST FLIGHT
December 1947 (C-119A)

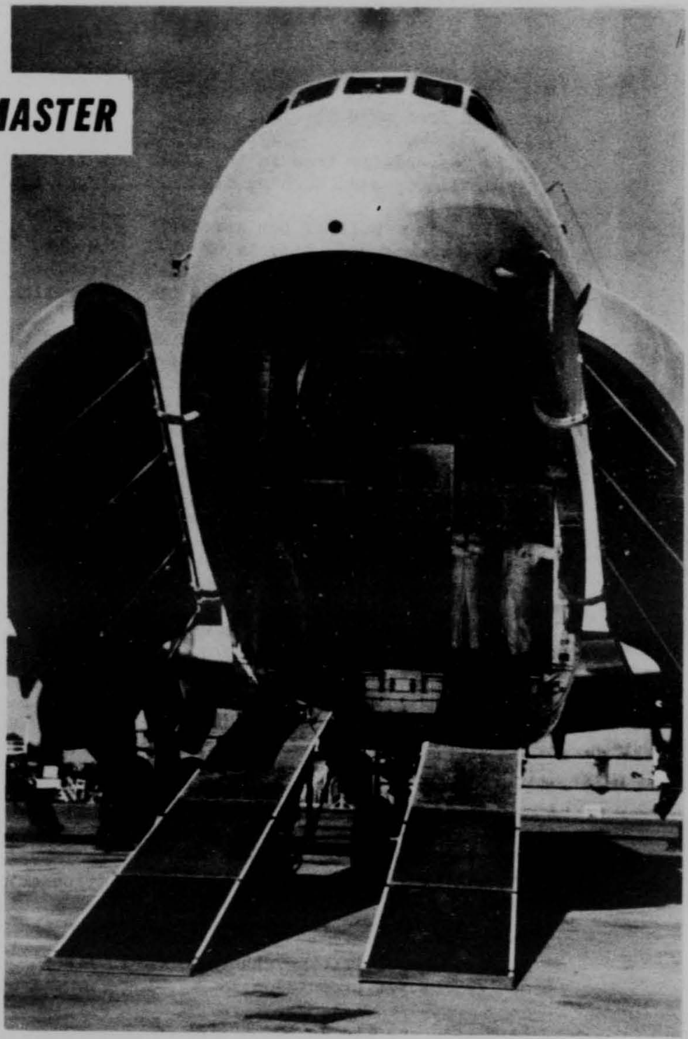
The tactical mission of the C-119B is to transport cargo,personnel, litter patients, airborne supplies, mechanized equipment and/or paratroops. Provisions are made for glider tow. The crew of five includes pilot, co-pilot, navigator, radio operator and crew chief. No combat protection is provided. The large rear doors open to maximum cargo compartment dimensions to provide rapid unobstructed loading and unloading of cargo. Jump doors in each of the main cargo doors provide exit for paratroops. Paracans may be dropped in flight thru doors in the floor of the forward cargo compartment. Special features include - thermal anti-icing, Loran, reversible pitch props, and bladder type fuel cells. This aircraft is an improved version of the C-82 "Flying Boxcar". The principal change is the relocation of the flight deck for improved vision.


UNITED STATES AIR FORCE

UNITED STATES AIR FORCE

CA405
UNITED STATES AIR FORCE

C-124A GLOBEMASTER



MANUFACTURER
Douglas

DIMENSIONS
Span 173.3
Height 48.3
Length 127.1

POWER PLANT
(4) R-4360-20W Pratt-Whitney (3500 hp)

CREW - 5

LOAD
Troops - 200
Litters - 136
Cargo - 75,500 lb

TAKE-OFF
8800' over 50 ft height

COMBAT CEILING
27,100 ft

COMBAT RANGE
1625 naut. mi. w/75,500 lb

SPEED - 284 knots

The basic mission of the C-124A is to carry maximum cargo or combat equipment to a remote base and return without refueling. The airplane is capable of carrying a fully assembled heavy Ground Force, Air Force and Ordnance Equipment in the main cabin. Clam type nose loading doors and an electrically operated elevator provide loading facilities. An auxiliary folding floor is provided in the main cabin. The crew of five includes a pilot, co-pilot, flight engineer, navigator, and radio operator. A relief crew of three is carried for long flights. Fuel combustion heating units provide cabin heat through side wall and floor ducts. Wings and tail are equipped with thermal anti-icing system. Other features are Loran, stowable auxiliary floor, integral loading ramps and traveling hoist.(16,000 lb).

Continued from page 11

This is especially true in the case of jet tail pipes and turbine blades.

ALLOYS. The bulk of our aircraft today are constructed largely of alloys in one form or another. The newest practical alloys are those of magnesium in the form of casting. The reason that these alloys are very promising is that magnesium itself is present in great abundance and is one of the lighest of the alloy structural materials known. All of the aluminum alloys are being considered as to how they can be improved, with some success. Beryllium, a very high strength, light element, has excited the designers for the past few years, but unfortunately ores are not available in quantities sufficient for exploitation. Titanium, available in greater quantities, shows possibilities for use in heat resistant alloys.

Plastics show great promise in the future if the effects of heat can be controlled. In general, temperatures above 150°F are detrimental to plastics; however, the ability of plastics to resist corrosion is much better than any of the other structural materials.

AIRCRAFT PROPULSION PHASE

Factors necessitating change from propeller to jet propulsion.

As stated earlier, to travel at greater speeds we must produce the necessary thrust. Until a few years ago we had been providing thrust by means of a propeller, but this method has proved unsatisfactory due to the fact that the resultant velocities on an average propeller tip are above the speed of sound when the aircraft is traveling only 400 mph at sea level. Of course, there are designs for propellers, such as sweptback blades, that will overcome this difficulty at 400 mph only to recur again at, say, 500 mph. Thereforce, the jet engine has been developed in order to give us the desired thrust. The jet too encounters many problems, such as heat, cold weather operation, fuels, etc.

PROBLEMS OF ENGINE FUELS. In the past war, 2/3 of all tonnage shipped overseas consisted of petroleum products. During March 1945, 280,000,000 gallons of gasoline were used, representing 816,000 tons of petroleum products shipped that month. We were burning this gasoline at the rate of 50 to 160 gal/hr per engine depending on throttle setting and engine size.

Now let us see what happens when we attempt to attain higher speeds using jet thrust. We burn anywhere from 250 to 400 gal/hr/engine in conventional jets and if we go into liquid rocket engines such as used in the XS-1 we will use approximately 106 gal/min of alcohol and 150 gal/min of liquid oxygen.

If we try to increase the octane rating of conventional fuel in order to increase horsepower, we increase evaporational losses, which are already high enough. One B-29 flying from the Mariannas to Japan and return would lose as much as 500 gallons due to evaporation. If we pressurized from 3 to 7 lbs/sq in. to reduce evaporation it would actually apply a force of 4,000 lbs or more in the tanks depending on size of tank, involving a structural problem and flak hazard.

Jet fuels have been mainly kerosene. But kerosene, although it has no vapor loss, does crystallize at -45°F and solidifies at -85°F. With kerosene we also have a problem of low fuel-air ratio explosive mixture which could be a fire hazard providing we are traveling fast enough to encounter high skin temperatures.

Rocket fuels such as liquid oxygen or alcohol also present problems mostly of handling, and large quantity sources of supply. For instance, liquid oxygen boils at -285° F, resulting in high evaporation losses, and also requires special non-freezing valves in the operating systems.

ENGINE TECHNOLOGY AND THEORY. Thrust vs. Horsepower. We have customarily used the term horsepower when describing the actual energy output of a reciprocating engine, but when speaking of jets we express output in terms of thrust. The reason for this is that horsepower takes into consideration force applied for a given distance, for a given length of time (ft. lbs/sec) but thrust is actual force applied (lbs) to moving aircraft. When we speak of horsepower in a conventional aircraft we are merely speaking of the power going into driving the propeller. The propeller produces the thrust (lbs) that moves the aircraft, and this greatly depends on the pitch and size of the prop.

Conversion of thrust to horsepower is as follows:

Horsepower = Thrust multiplied by speed divided by the constant 375. Example — A jet engine producing 3,750 lbs thrust at 600 miles per hour is actually developing 6,000 horsepower. However, this is just the horsepower going into the thrust. If the jet is turbo jet, the horsepower going into the thrust is only 1/3 of the total developed. Thus, in the same example as above the 6,000 horsepower going into thrust represents only 1/3 of the total developed. Thus, 18,000 horsepower is actually developed; 12,000 to the compressor and 6,000 to the jet energy. From this we conclude that the thrust is only a fraction of the actual horsepower developed, and is the actual energy available to move the aircraft by the reaction theory.

REACTION ENGINE THEORY. To understand the theory of reaction engines (jets and rockets) one must first dispel the idea that the thrust coming from the jet is pushing against the other air, resulting in a forward motion.

There are two principles to recall from physics. One is, if we accelerate a mass we have a potential force equal in magnitude to the force multiplied by the acceleration (F = ma). Second, that for every action there is an equal and opposite reaction. Thus, if we accelerate a mass we have a force or action to which there is a reaction. This is exactly what we do in a reaction engine. We accelerate a mass of air by heating a great quantity of it in a confined space and expanding it through a duct. To this action there is an equal and opposite reaction in the form of thrust on the component parts of the engine and resultantly on the aircraft. Barring the need for oxygen from the air, this could just as well take place in a vacuum.

Turbo jets. Centrifugal flow type consist of a single faced or double faced centrifugal impeller (compressor). Has few practical troubles but does necessitate a larger frontal area than the axial flow. However, it is better under icing conditions.

Axial flow type consists of a multi-stage compressor which is more efficient than the centrifugal flow type, but more expensive and difficult to construct. It has more parts, less frontal area and is more susceptible to icing than the centrifugal type.

Turbo prop jet is basically a turbo-jet (either type) engine with a propeller geared to the compressor-turbine shaft. At present it has the best chance of replacing the reciprocating engine in the commercial field. In this type of engine 2/3 of our developed horsepower still goes to the compressor and of the remaining 1/3, the propeller absorbs about 80%, leaving about 20% of 1/3 (or 6%) available for jet thrust.

Compound engines. This type of engine is an improvement over the conventional reciprocating engine. Compounding is accomplished by adding a turbine splined to the engine crank shaft so that any power produced by the turbine will be delivered to the propeller by the crank shaft and thereby supplement the power output of the reciprocating engine. The way the turbine develops power is by extracting energy from the exhaust gases of the reciprocating engine. This is accomplished by merely routing the exhaust through the turbine instead of to the atmosphere and thereby adding about 3% to 4% more shaft horsepower to the total output. It is well to note that this is not a turbo supercharger, wherein the exhaust gases drive a turbine in order to compress air into the carburetor. By using the system of compounding we can increase the total output of a reciprocating engine without adding additional fuel, thus we increase the amount of horsepower obtained for a given amount of fuel consumed.

After-burning. This is a method of re-energizing the exhaust gases of a turbo-jet or a compound engine by introducing more fuel and possibly more air (from external source) to the jet stream after the turbine stage has been completed. This takes place in the tail pipe and in principle reheats the gases and accelerates them considerably, resulting in increased thrust. Of course, we expend more fuel to do this but under ideal conditions with proper mixture we can even decrease the fuel consumption per pound of thrust developed.

Another possible combination of engines is the use of a reciprocating engine to drive the compressor of a reaction engine, thereby eliminating the turbine and corresponding energy losses. Even though this appears to be a good idea, it was found that the total engine weight per pound of thrust developed was exceedingly high, as was the total fuel consumption per pound of thrust.

MILITARY CHARACTERISTICS

Military characteristics have been established for four types of fighters and two reconnaissance type aircraft. Helicopters are being developed to perform search and rescue and transport missions. Research airplanes such as the S-1 are designed without military characteristics but with a definite objective in mind. Trainers are now being designed to meet the approval characteristics for this class.

Military characteristics are contained in a high level staff document that sets forth the requirements for aircraft as determined by a board of senior Air Force Officers. Military characteristics are defined as "those essential qualities which an item of equipment must possess in order to fulfill a definite military mission."

At present funds are not available in all cases to translate the military characteristics into developed actualities. The possibility of an increase in the funds now being allocated to the Air Forces may enable us to increase the tempo of our research and development program.

The following types of aircraft indicate the basic trends in service aircraft development.

FIGHTERS

PENETRATION. The penetration fighter is designed for operations well within enemy territory. Its mission will be similar to that of the F-47s and F-51s in the past war. The penetration fighter will be the mainstay of the Fighter Command. It should have long range, high speed (above 600 knots), and be able to outmaneuver any aircraft it will be called upon to fight in combat. This airplane will have a pressurized cockpit. It will carry at least 6 guns and in all probability it will be a large, heavy airplane.

INTERCEPTOR. The interceptor is a specialized airplane to be used for locality defense. It must have a very fast rate of climb, high speed to intercept other aircraft or missiles, and a duration of flight of near one hour. This aircraft may be rocket powered and launched from a vertical position. It may be that the interceptor will be classified as a research type airplane due to its flight duration.

ALL-WEATHER. The all-weather fighter is required to operate in adverse weather and at night. It will use radar gun laying equipment, radio and radar navigational aids and the latest blind landing equipment. This type airplane is a successor to the F-61. It should be able to perform almost as well as the penetration fighter, as it will be used when the penetration fighters will be grounded due to weather or night.

The all weather airplane must be very strongly built to withstand thunderstorm flying in addition to carrying all the aforementioned electronic aids and should be easy to control at low speeds.

The all weather fighter must effect a good compromise between combat radius of action and rate of climb as it may be called upon to perform many varied missions.

"PARASITE" OR STOWED FIGHTER. The parasite fighter is a development that may be necessary because of the very long range of our new heavy bombers. It is an impossibility for our present penetration fighters to accompany our heavy bombers on very long range missions and as these bombers may need fighter protection, the "parasite" fighter could be the answer. The parasite fighter is designed to be carried and launched from the bomb bays of heavy bombers. It will have no landing gear, only a launching hook. It should be small, fast, heavily armed and able to operate at high altitudes. The parasite fighter will be designed so it can be refueled and rearmed while in the bomb bay of the mother ship. Duration of flight should be more than 30 minutes.

RECONNAISSANCE

Only periodic attempts were made to develop aircraft for purely photographic purposes prior to the last war.

During the early part of the war, fighter aircraft such as the P-38, P-47, and P-51 were equipped with cameras and used for tactical reconnaissance purposes. As the war progressed and longer and longer raids were made by bombers, it became necessary to have longer range reconnaissance aircraft to use in connection with strategic bombing. Bomber aircraft such as the B-17 and B-24 were equipped with cameras, and later the B-29 was used.

HELICOPTER

Military characteristics for search and rescue helicopters are established and have been submitted to contractors. It is believed that helicopters will become increasingly important in air rescue work. Heavy lift helicopters will be designed as short haul transports for combat use. Many companies in this country are designing and building helicopters.

It is a fact that a helicopter can outperform a horse, an automobile, an airplane — even a bird. The helicopter can fly low and slow, high and by surface standards, fast, sideways and rearwards, straight up or down, it can stand still in the air, revolve on its axis, hop hedges or mountains, taxi on the ground, land in a back yard or on a roof, alight on water or a ship's deck. For all it can do now and all it promises in the future, the helicopter is not without some major problems. Technical development is barely begun; governmental regulations are a serious impediment for commercial development, and there appears to be a basic limitation on speed; however it is believed that its top speed may be pushed as high as 150 miles per hour.

RESEARCH AIRCRAFT

In the research aircraft field, desirable requirements for a supersonic research airplane have been tentatively established after much study of the problems involved and the results desired.

Design studies are being carried out not only in airfoil shapes and power plants but also in fields of medicine, metallurgy, plastics, textiles and other allied arts and sciences. The effective research and development carried on in the associated arts will help determine the success of our research program in airfoils, power plants, structures, armament, materials, and escape provisions.

TRAINERS

The Air Force is now buying two types of trainers, single engine and twin engine. The single engine will be used for basic and advanced flying training and the twin engine will be used for advanced schools and for navigator and bombardier training.

Trainers are still using the engine-propellor combination as a source of power.

D/I, Reqmts Div. Rest.

AIR
INTELLIGENCE
HANDBOOK

The Air Intelligence Handbook has been distributed by Continental Air Command Air Forces in accordance with the following minimum standard:

a. RESERVE FORCES UNITS: One (1) copy to each echelon down to and including squadron level; except Intelligence Volunteer Units which will receive one (1) copy for each ten (10) personnel.

b. AIR NATIONAL GUARD UNITS: One (1) copy to each echelon down to and including squadron level.

c. AIR ROTC UNITS: Two (2) copies to each PAS&T.

d. REGULAR UNITS: One (1) copy to each echelon down to and including squadron or comparable level.

Due to cost limitations the "Handbook" was published in limited numbers, necessitating a controlled issuance to units only.

GLOSSARY

AFTERBURNING - Increases both mass and velocity of exhaust gases passing out through the jet by igniting fuel as it is sprayed into the hot exhaust gases in the aft portion of the jet exhaust pipe. This adds to the total thrust of the jet engine without exceeding the critical speed of the turbine.

AIRFOIL - Any surface of an aircraft designed to help in lifting or controlling the aircraft by making use of the current of air through which it moves. Wings, ailerons, rudders, etc., are airfoils.

CAMBER - The rise and fall of the curve of an airfoil section.

COMPRESSIBILITY - When speeds of 500 to 700 mph (or close to the speed of sound) are attained, the molecules of air displaced by the wing cannot travel fast enough to close in behind the airfoil, resulting in a disturbed region of relatively rarified and turbulent air on the surface of the after portion of the wing. Depending on the speed, either a stall or compressibility burble (or a combination of the two) is set up which disrupts the normal functioning of the wing and controls.

FLUID INJECTION - The technique of injecting metered fluid directly into the combustion chambers of an engine to increase vaporization of fuel and decrease temperature of the combustable mixture, thus preventing predetination.

G FORCE - Is the unit measure of earth's attraction (gravity) and centrifugal force. Downward pressure on a body is called positive acceleration (+G). Conversely, in negative acceleration (-G) bodily pressure is upward. Weight is determined, during rest, by the vertical attraction (gravity) exerted by the earth. When seated, then, downward pressure on the body will equal its weight or 1G. Body pressure twice its weight would equal 2G's, as centrifugal force increases beyond 1G. Supporting structures must be strengthened accordingly. The effects of centrifugal forces are determined by: direction - with respect to the body, magnitude and duration.

HORSEPOWER - Theoretical unit of work; one horsepower equals 33,000 lbs raised 1 ft. in 1 minute.

HORSEPOWER OF JET - Equals pounds of thrust times speed in miles per hour divided by 375. $\frac{\text{Thrust X Speed of A/C}}{375}$

PROTOTYPE - An original from which others are copied.

MACH NUMBER OF AN AIRCRAFT - Velocity of aircraft divided by velocity of sound. The velocity of sound varies directly as to the air temperature; that is, the higher the temperature, the higher the speed of sound.

DESIGNATOR ASSIGNMENT- Aircraft will be assigned a basic type designator in accordance with the function for which they are basically designed. When a type of aircraft is modified to perform a function other than its basically designed function, the basic type designator will be prefixed by the appropriate auxiliary symbol. Aircraft will not be redesignated merely on the basis of current usage.

Type - The basic type designation will consist of one letter as follows:

A....Amphibious
*B....Bomber
*C....Cargo
*F....Fighter
*G....Glider
H....Rotary Wing (Helicopter)
*L....Liaison
*Q....Target Aircraft and Drones
*R....Reconnaissance
*S....Search and Rescue
*T....Trainer
**X....Special Research or Experimental

NOTE: *To be used as prefix symbols as required.
**To be used as a classification symbol as required.

Model - A particular model of a given type will be designated by a number or numbers separated from the preceding type letters or letter by a dash, such as B-50.

Series - Following the model number there will always be a series letter, such as B-50A. (This provision is not retroactive.) The letters "O" and "I" will not be used. The series letters of a model will be changed when:

a. A change is made in the engine which materially affects the engine performance rating or seriously affects the interchangeability in the aircraft.

b. A change is made in propellers which affects interchangeability (Curtiss instead of Hamilton Standard) or flying characteristics of an aircraft (13'6" propellers instead of 12'6" propellers).

c. A major change is made in primary installed armament (addition of chin turret, addition of side guns,installation of 20mm guns instead of .50 caliber, etc.).

d. A major change is made in structure and/or equipment installation affecting interchangeability.

PREFIX SYMBOLS - The symbols listed below will be used as prefix symbols to indicate the current usage of an aircraft when it is so modified that its originally intended usage is no longer applicable. Authorization for the use of these symbols will be obtained in accordance with section III of this Regulation. Modification of aircraft, except as noted herein, is not authorized without appropriate redesignation. As an example of this redesignation, a B-50A-10-BO aircraft modified as a reconnaissance aircraft will be redesignated an RB-50A-10-BO. An aircraft so redesignated will retain this prefix until such time as those features which provided its reconnaissance characteristics are removed and it is restored to its original basic condition or remodified for an entirely different function. Only in exceptional cases will more than one prefix symbol be used to designate an aircraft. Such an exception could occur, for example, if an RF-80 is modified for reconnaissance training. It would then be redesignated as a TRF-80. However, if it is modified for normal training purposes, it should become a TF-80. If more than one prefix symbol is used, the first symbol from the left will be considered the primary prefix symbol and the next one the secondary prefix symbol.

Prefix "B" - The prefix symbol "B" will be used to designate aircraft modified to function as bomber type aircraft, i.e., the inclusion of a bombardier nose in fighter type aircraft. The addition of external bomb, torpedo, or depth-charge carrying devices and dive or skip bombing sighting equipment on any basic type aircraft does not constitute sufficient cause for the redesignation of that aircraft as "B" type.

Prefix "C" - The prefix symbol "C" will be used to designate aircraft specifically modified for cargo use. Basic type aircraft utilized for cargo purposes without modification will not be redesignated with the prefix "C".

Prefix "D" - The prefix symbol "D" will be used to designate those aircraft which are modified to function as director aircraft in conjunction with remotely controlled aircraft or guided missiles. (See AFR 58-5)

Prefix "F" - The prefix symbol "F" will be used to designate basic aircraft modified for fighter operations. The addition of rocket launchers on liaison or rotary wing aircraft does not constitute sufficient cause for redesignation as "F" type aircraft.

Prefix "G" - The prefix symbol "G" will be used to designate those powered aircraft after modifications removing all means of self-contained thrust have been completed.

Prefix "K" - The prefix symbol "K" will be used to designate all aircraft modified as air-to-air refueling tankers.

Prefix "L" - The prefix symbol "L" will be used to designate aircraft modified for liaison missions. The use of this prefix will be extremely limited.

Prefix "M" - The prefix symbol "M" will be used to designate aircraft modified for use as missiles. (See AFR 58-5)

Prefix "Q" - The prefix symbol "Q" will be used to designate basic aircraft modified through the inclusion of special electronic equipment for use as targets or drones.

Prefix "R" - The prefix symbol "R" will be used to designate those basic aircraft which have been so modified as to make them suitable for reconnaissance missions, i. e. weather reconnaissance, photo reconnaissance, etc.

Prefix "S" - The prefix symbol "S" will be used to designate basic aircraft modified through the inclusion of special search electronic equipment, airborne life boats, life rafts, or extensive life saving equipment, etc. This symbol will not be used to redesignate those aircraft utilized for air evacuation of litter patients.

Prefix "T" - The prefix symbol "T" will be used to designate those aircraft which have had equipment removed to make them more suitable for training purposes. This symbol also will be used to designate those aircraft modified through the inclusion of special training equipment, i.e., navigator trainers, engineer trainers, etc. Aircraft used for training purposes for which authorization to remove equipment has not been granted, will not carry the prefix "T". "T" prefixed aircraft will not be considered suitable for return to combat status; therefore, the "T" prefix normally will not be authorized to combat potential aircraft.

Prefix "V" - The prefix symbol "V" will be used to designate those aircraft which are modified as staff administrative transports. This will include modified cargo types wherein the modification is not indicated by a series letter. Staff administrative transports will include all aircraft with passenger seat, chair, or lounge installations and other accessories other than crew type seats.

CLASSIFICATION SYMBOLS - Aircraft may have any one of the following classification symbols applied where applicable.

Classification "E" - The classification symbol "E" (Exempt) will be used to designate those aircraft on special tests or experimental projects by authorized activities and for aircraft on bailment contract (Work contracted for by a nonmilitary agency using AF-owned aircraft). This will not include aircraft undergoing contractual removal from storage, reconditioning, modification or modernization to meet an Air Force program, requirement, or characteristic. Aircraft utilized in special tests, experimental projects, or bailment contracts that have not received modifications and where the interchangeability of the aircraft with like type, model, and series aircraft has not been affected, will not be classified with the symbol "E". At the termination of tests, etc., "E" classified aircraft will either be returned to their original condition and designation or, if certain modifications become a permanent part of the aircraft, an appropriate redesignation of prefix, series, or block, other than "E", will be made. The "E" classification is not applicable to "X" classified aircraft.

Classification "X" - The classification symbol "X" will be used to designate experimental aircraft and indicates that the item being developed has not progressed to the stage where engineering tests indicate that the item is sufficiently satisfactory to warrant service tests. This classification also will be used to designate production aircraft that have been so modified for experimental or other reasons as to make them permanently unsuitable for an operational or training requirement, i.e., the experimental installation of R-4360 engines in B-29 aircraft, the experimental installation of tandem landing gear on B-26 aircraft, etc.

Classification "Y" - The classification symbol "Y" will be used to designate those aircraft which have the required military characteristics and are of a quantity produced to develop the potentialities of the model. This classification indicates the item has been developed beyond the experimental stage, but is not ready for classification as an adopted item.

Classification "Z" - The classification symbol "Z" will be used to designate aircraft which are considered by the Chief of Staff, USAF, to be obsolete and of and for which no further procurement will be made. Obsolete aircraft are those aircraft that are declared unsuitable for their original military purposes or for training purposes.

The assignment of a classification symbol to an aircraft will replace any prefix symbol which the aircraft currently possesses, except where the aircraft concerned retains those characteristics and/or equipment which previously classified it under the type indicated by the prefix. In such exceptional cases, the assignment of the classification symbol will be in addition to the prefix symbol. For example, if an RB-17 is placed on bailment contract and is modified, but still retains its reconnaissance features, it would be reclassified as an ERB-17. However, if its reconnaissance equipment is removed, it would become an EB-17. On the other hand if this aircraft is completely superseded by more modern aircraft, it would become a ZRB-17. If, while still in service, the reconnaissance equipment is removed, it then becomes a ZB-17. In no instance will the aircraft classification, prefix, and type designator exceed three symbols. In the event a classification symbol is assigned an aircraft already designated with two prefixes only the most important prefix will be retained.

AIR FORCE LETTER)
NO. 205-30)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 10 MAY 1949

SECURITY

Identification of Persons for Access to Classified Information

(Effective until 10 November 1950 unless sooner rescinded or superseded.)

Paragraph
Purpose 1
Policy 2
Responsibility 3

1. Purpose. This Letter directs the attention of all personnel to the necessity of assuring themselves of the identity of persons, military or civilian, with whom they may discuss, or otherwise reveal, classified information.

2. Policy:

a. No person is entitled solely by virtue of his grade or position to knowledge or possession of classified matter. Such matter will be entrusted only to those individuals whose official or other Governmental duties require the knowledge or possession. This principle applies equally to command control over the dissemination or distribution of classified matter as well as to individual discussions.

b. The discussion of classified military information, either public or private, with or in the presence or hearing of any person not authorized to have knowledge thereof, is strictly forbidden. Care must be exercised at all times not only to refrain from discussing classified military information with or in the presence or hearing of unauthorized persons, but also to prevent inspection of or access to such information by unauthorized persons.

3. Responsibility. Specific measures and precautions to be employed for controlling access to classified information will include, but will not be limited to the following:

a. Before classified information is discussed, exhibited, or revealed in any manner whatsoever, it is necessary that the intended recipients of the information be:

(1) Completely and indisputably identified.

(2) Cleared to receive the highest security category of information to be discussed, exhibited, or otherwise revealed.

(3) Entitled to and in need of the information in the performance of official military or other Governmental duties.

b. Individuals who conduct conferences, meetings, or briefings or who authorize the disclosure of classified information in any manner whatsoever, will be responsible for full compliance with a above, and will maintain a continuing awareness to prevent unauthorized persons from receiving such information.

c. Individuals attending conferences or meetings, including formal committee meetings, regardless of their nature, will not discuss classified information unless assured that all persons present have been authorized to receive all elements of the information.

d. The wearing of a uniform does not by itself serve to identify or qualify a person to receive classified information.

e. When classified military information is discussed, exhibited, or revealed in any manner to persons who are subject to military law or employed within the National Military Establishment, they will be informed of its classification.

f. When classified information is discussed, exhibited, or revealed in any manner to persons who are not subject to military law or employed within the National Military Establishment, they will be informed that it affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation to an unauthorized person is prohibited by law.

g. The delegation of authority to release classified information by the responsible individual to his assistants, either military or civilian, does not relieve that individual of his responsibility in the matter.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

*This Letter supersedes AFL 205-30, 3 September 1946.

MC-30274-1-R
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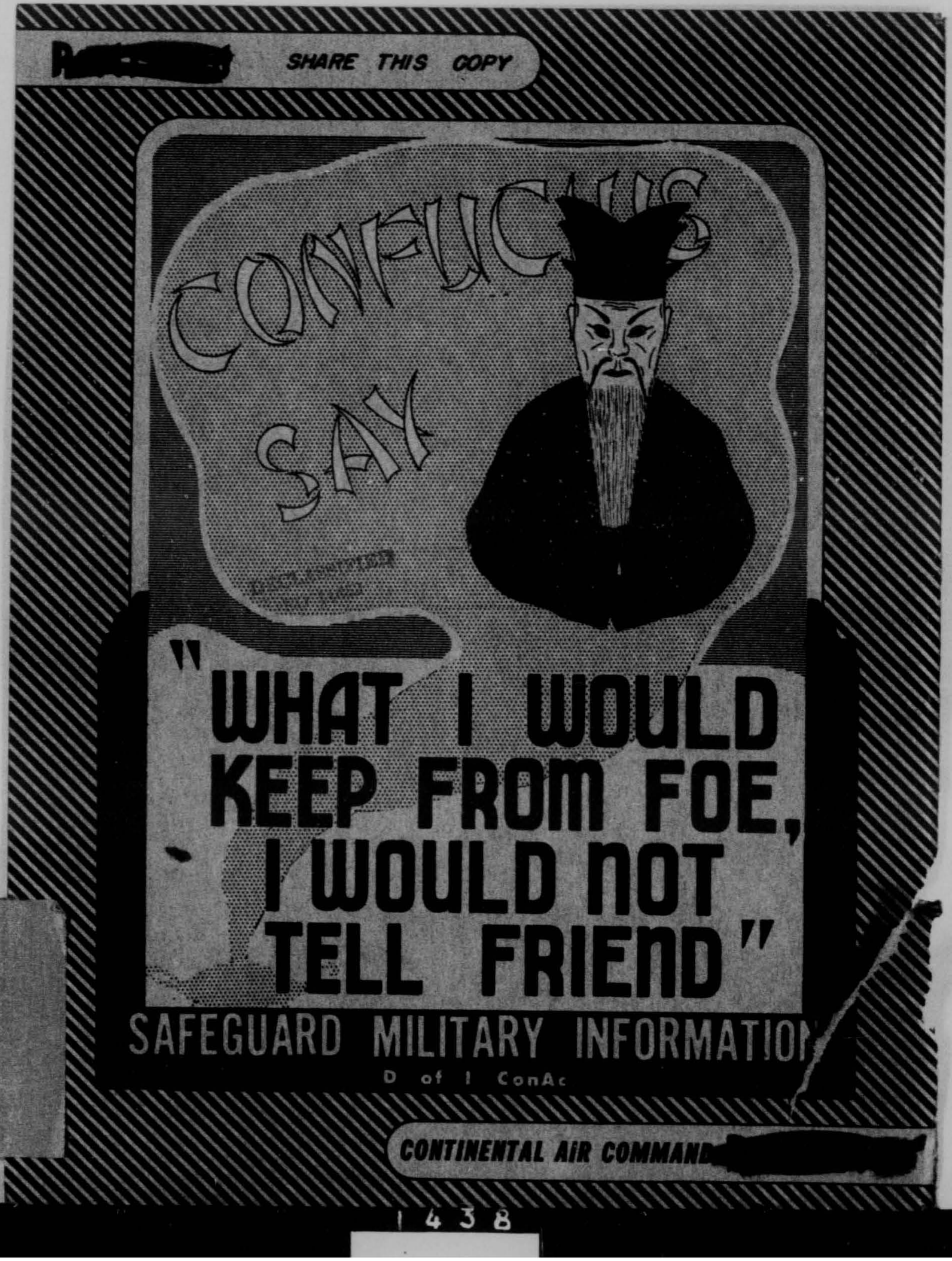
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CONFUCIUS SAY
"WHAT I WOULD KEEP FROM FOE, I WOULD NOT TELL FRIEND"
SAFEGUARD MILITARY INFORMATION
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CONTINENTAL AIR COMMAND [redacted]

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20 Jan 1950

AIR INTELLIGENCE Review

DECLASSIFIED
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Vol. 2 No. 2 20 January 1950

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2. Europe -- Defense [illegible]
3. Communism [illegible]
4. Arctic Indoctrination [illegible]
5. Polar Guide
6. Survival

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AIR INTELLIGENCE Review

This "Review" is published for three reasons:

1. To provide timely data regarding new techniques, practices and general information whereby intelligence personnel can maintain proficiency.
2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

Two types of material are solicited for publication:

1. Stories and pictures relating to the intelligence activities being conducted within an organization.
2. Original articles of a noncontrovessial but informative nature.

Material submitted must include sources utilized and the authors name, rank and present military affiliation. Mail stories to: The Editor, "Air Intelligence Review," ConAC, Mitchel Air Force Base, New York.

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EO 11652

THE AIR-GROUND TEAM

BY GENERAL JACOB L. DEVERS

Success in battle depends upon the integration of all available forces and weapons. A preponderance of manpower and industrial production alone does not insure victory. Nor does individual proficiency of separate armed forces guarantee defeat of the enemy. Victory is the end product of operations carried out jointly, utilizing combined firepower, backed by superior resources and manpower.

In its broadest sense, the team concept is the foundation of our entire military structure. At the highest level of the military hierarchy, Army, Navy, and Air Force are each assigned their respective mixsions- -not as separate entities but as members of the Armed Forces team. Individual fields of action may be far separated, but this detracts none the less from their relation to one another. Naval action and Air Force strategic bombing, for example, sever lines of communication and destroy factories, thereby stifling the enemy's economy. This means less equipment produced and thus fewer divisions to fight in the inevitable invasion of the enemy's stronghold.

But we achieve the ultimate in teamwork on the field of battle. There Army and Navy, Army and Air Force, or Army, Navy, and Air Force join their means to achieve a smoothly-functioning battle team. Most extensive are the joint operations pursued in conjunction with Tactical Air Forces. Great importance must also be ascribed to the troop-carrier support role of the Air Forces, but this discussion will be limited to tactical air support of ground operations other than airborne.

Front-Line Service

Operations of the Tactical Air Forces include indirect support missions, such as establishing and maintaining local air superiority, isolating the battlefield, and performing tactical reconnaissance; but it is with the direct support mission of the Tactical Air Forces that I am most concerned when I speak of the air-ground team. The latter involves the attack of enemy ground forces within the zone of contact with our own ground forces. From the airman's point of view, this is a hazardous, highly exacting operation. He is attacking a target which is only a few hundred yards—in extreme cases even less than 100 yards—from our own ground troops. Since he must attack at low altitude to identify his target and deliver his fire accurately, he is subjected to withering fire from enemy ack-ack and small arms.

Yet is is impossible to overemphasize the importance of this close air support to ground troops. The history of World War II is replete with instances where ground commanders ascribe the success of an action to timely air attacks against critical targets directly opposing their advancing troops. To the doughboy caught in withering fire from a tank or emplaced weapon,the most heartening sight in the world was that of a P-51 or P-47 winging in to the attack.

While in terms of numbers of mis-

[redacted]

sions flown it may be necessary to concentrate greater effort on indirect support, there will be numerous occasions when the bulk of tactical (and even strategic) air forces should be thrown into direct support. This is particularly true during critical stages of an attack.

I can think of no better instance to illustrate my point than the familiar all-out air attack preceding the breakthrough by the first U.S. Army at St. Lo in the Normandy campaign. More than 2000 aircraft participated in this attack, directed at a target area extending for a depth of 3000 yards along an 8000-yard stretch of the St. Lo-Periers Highway. It was designed to break the crust on enemy defenses to insure a quick breakthrough of our ground forces.

The St. Lo Operation

Coordination measures were thought to be adequate, but artillery smoke used to mark the target drifted with the wind, and dust and smoke from exploding bombs obscured the target with the result that some of the bombs missed their mark. Nevertheless, the bombing had a telling effect on enemy defenses. Once launched, our ground-force attack pushed forward rapidly against disorganized resistance, breaking out of the narrow confines of the Cotentin Peninsula and sweeping southward. Thus, air support was of great assistance to the Northern force in the first critical phase of the sustained drive that carried our troops across France to the Siegfried Line.

This operation, while somewhat unlike the more common close-support mission, serves to illustrate the tremendous power of the air-ground team. At the same time, it points up to the difficulties of air-ground coordination, thereby emphasizing the need for well-defined procedures and extensive joint training for this type of operation.

More typical of the role of air power in close support of ground operations is the attack of specific targets involving only fighter-bombers, generally in small numbers. The target may be an enemy tank, an artillery or mortar emplacement, a fortification, an antitank gun, or even troop formations. While artillery or other ground weapons will be employed whenever possible, the advantages of aerial bombing, strafing or rocket attack can be visualized readily when the enemy target is carefully dug in, defiladed from view, or occupies a commanding terrain feature from which he can direct fire upon ground weapons employed against him.

This type of action is the ultimate in cooperative, coordinated joint action. It is the most difficult, and for that reason demands the most extensive joint training.

A Developed Idea

The air-ground team concept, as we know it today, is largely an end product of our World War II experiences. The team was employed with great success in later phases of the war, but during the earlier African campaign coordination did not approach the near-perfection we were later to achieve.

In Africa, whereas German planes seemed to pop out of the sky in a matter of minutes when an American vehicle exposed itself to view, the full potential of our own close-support was not realized. This was no fault of the Air or Ground Commanders concerned, nor did it show lack of foresight on the part of those responsible for training our Ground- and Air Forces. A system for coordination had been established, but it lacked the improvements that come in the light of combat experiences. Moreover, joint training in air-ground coordination had been extremely meager due to the limited availability of combat aircraft for training purposes

General McNair, the commander of the Army Ground Forces, whose responsibility it was to train all ground-force units before shipment overseas, sought at every opportunity to promote joint training exercises in which air-ground cooperation would be developed. He believed that close support should be emphasized in training because it was the hardest to learn. Lacking air force units with which to train, he directed that available liaison planes of the "grasshopper" type be used as substitutes for combat aircraft to add a note of realism to the training.

In operations involving tactical air forces in support of ground forces, we are dealing with two separate command structures engaged in a common effort. It is true that unified command rests with the theater commander, but, at the operating levels and the lower planning levels, each force is essentially an independent organization. Thus, coordination becomes the keynote of unified joint action. To overcome the inherent divergencies of this bilateral command structure, the closest liaison is necessary.

We learned a lot about air-ground coordination in the past war from the British in Africa and Italy. We also learned from the Germans—the hard way.

While I was Deputy Theater Commander in the Mediterranean, we worked out a highly effective system of coordination in the Fifth Army and the XII Tactical Air Force (similar in many ways to the British system), which later became the model for the entire European theater. Essentially the same system was used in the Pacific. That system was based on the closest possible coordination at the Army Headquarters—Tactical Air Force level.

This we obtained through an intimate relationship gained by locating the forward ground and air command posts within a few yards of each other. There they held nightly joint conferences to agree on the missions to be flown the next day. Also, a series of liaison officers assured close contact with lower army units and with supporting air units where they assisted in briefing pilots, posted bomb safety lines and exchanged information concerning operations of air and ground forces.

Another outstanding feature of the Fifth Army-XII TAF system, which has been subsequently adopted as a common procedure, was for the Air commander, or his representative, to go to the line of battle where, by radio communication with the attacking planes, he literally "talked them on to the target".

When the war in Europe ended, further improvements had been made in this coordination system and standardized methods had been adopted. But the impetus of every advance was invariably a more widespread understanding of the other fellow's problems, gained by constant daily association of the two forces.

Closer association was encouraged by interchange of personnel. For example, Air Force pilots were attached to infantry regiments where they shared the hardships and hazards of the doughboy. When they returned, they had a better understanding of what the ground soldier expected of them and how they could give the kind of support needed. In the same manner, ground officers were attached to air units where they accompanied pilots on missions, thereby gaining a better appreciation of the airman's problems and his hazards in providing close tactical support.

In our training today it is important that we do not lose sight of these wartime experiences in the realm of the air-ground team. Furthermore, we must continually study the problems of the air-ground team, perfecting our methods and searching for better ones. Techniques of air control in indirect support missions may have reached an advanced state of perfection, but many of the problems of close support are solved only partially at present. From the ground commander's point of view, these problems are to provide:

1. A positive reliable method of communicating the location of friendly ground troops to the aircraft pilot.

2. An accurate method of marking the target or directing the pilot to the target.

3. The most direct means of communication between forward air controller on the ground and the aircraft pilot.

4. Reduction to a minimum of the time lapse between a request for an air mission and the execution of the mission.

5. Further development of aircraft for ground-support missions.

To minimize these problems, the Army must - and does - work closely with the Air Forces in planning and conducting training exercises. As Chief of the Army Field Forces at Fort Monroe, Va., I have a close relationship with the Tactical Air Command at Langley Field. Joint maneuvers and field exercise are planned on a joint basis. Since the war, we have had several such exercises, including SNOWDROP, ASSEMBLY, and the most recent one, EXERCISE TARHEEL. Under Air Force auspices, there also have been the highly valuable "Combine" exercises, conducted each year for the past three years. The latter, a joint Army-Navy-Air Force exercise, have been of inestimable value.

Joint exercises form a valuable part of our current training, but they do not go far enough. We need a joint organization to function on a continuous basis which, in addition to providing joint training, will act as an agency for developing joint air-ground doctrine, for perfecting existing coordinating systems, and for developing new methods in the field of air-ground support. The nucleus for such an organization has now been established at Fort Bragg and Pope Air Force Base, N.C. There the Air Force has organized a Tactical Air Force Headquarters which will operate in conjunction with V Army Corps Headquarters and other Army units, providing a vital coordinating link at the operating level.

Naturally, the Army also has an

interest in the military capabilities and performance of aircraft to be employed in future ground-support operations. We need a plane that can bomb, strafe or fire rockets on tanks, fortifications and other ground targets that may be opposing us. It must possess the ability to maneuver over the target or within a limited radius thereof. It must have flight characteristics such as to insure the pilot adequate time for target identification and for accurate delivery of fire. It must possess endurance time in the air in order to obtain the maximum duration of air-alert missions. It must be capable of operating from short, rough runways such as could be constructed quickly close to the supported ground troops. It must operate efficiently at altitudes of about 7000 ft. and below.

There are Disadvantages

I am fully aware that all of these characteristics cannot be met and at the same time provide maximum protection against attacking aircraft or hostile AAA fire. Certainly jet fighter-bombers will be better able to beat off attacking aircraft or evade hostile AAA fire. While the jets offer this and other advantages, they fall short of meeting the requirement for an ideal close-support aircraft. They stress high speed and maximum performance at high altitudes to the detriment of low-altitude performance and maneuverability. They require long prepared runways not likely to be available in the battle areas. Furthermore, their endurance time and armament do not equal those of conventional aircraft. These last-named deficiencies must be corrected.

It may be that a point has been reached in the development of fighter aircraft where the same craft can no longer be employed efficiently for the dual role of offensive aerial combat and close ground-support missions.

Although the comments here are limited to the Air Force and the Army, the same principles of coordination apply when the Navy and the Army team together. The Naval Air Force executes supporting missions in amphibious operations. This Naval air support is essential, both in the assault of the landing beach and during the advance of ground forces inland, until Air Force units are prepared to continue the support.

Joint operations came of age in the last war. They will dominate the scene even more completely in a future war, for, in looking forward, it seems probable that armies of the next war will need the tactical support of aircraft constantly, and as closely tied in to the action of front-line infantry and tanks as was the artillery of World War II.

Our efforts at present, then, are toward close harmony between the air and the Army to insure the coordination which adds "tactical air", as a member, to the infantry-tank-artillery team. Other factors being equal, that nation which achieves the most effective integration of its forces will win. We must insure the most effective military force by even greater cooperation and coordination.

Teamwork in battle won the past war; teamwork in preparedness will help to insure against the next war.

INTEL SUMMARY 12AF 1 Nov 49 Uncl

DEFENSE OF EUROPE WITH EUROPEAN ARMIES

GIOVANNI MESSE, ONE OF THE THREE LIVING ITALIAN MARSHALS, RECENTLY EMPHASIZED THE GREAT DISPARITY OF LAND AND AIR POWER AVAILABLE IN EUROPE TO THE EAST AND WEST. IN HIS ARTICLE MESSE POINTS OUT: IT IS EVIDENT THAT RUSSIA, AT THE MOMENT, CAN DO AS SHE PLEASES IN EUROPE, EXCEPT FOR THE RESTRAINING INFLUENCE OF THE ATOMIC BOMB. HE WARNS OF THE DANGER INHERENT IN THE "PSYCHOSIS OF WAR PREVENTION" AND ESTIMATES THAT ILL-CONSIDERED MOVES WILL NOT BE MADE BY EITHER SIDE AT THIS TIME. MESSE STRESSES THAT NOW IS THE TIME FOR THE ATLANTIC SYSTEM TO MAKE GREAT STRIDES TOWARD ESTABLISHING SECURITY. IN THIS, THE EUROPEAN NATIONS MUST PLAY THE PRIMARY ROLE.

It is not easy to write fully about such an important subject within the small space of one article. Staying within the limits of approximation and the caution of reservedness which such a summarized examination requires, we will however attempt to estimate the size of the minimum forces necessary to an Atlantic System which could be expected to intercept the threats it wishes to oppose. For an exact evaluation of the figures - very few to tell the truth - which we will have to cite, we shall say at once that it concerns data obtained for the greater part from the press, which in foreign countries (unfortunately it is not that way in Italy) offers as much as possible to illuminate and interest public opinion in these problems fundamental to the life of nations.

It is figured that Russia has today at its disposal 200 divisions ready for use, those of Russia proper and satellite countries, where the reconstruction of the military forces is taking place without worrying too much about the formal obligations of the respective peace treaties. More than half of these divisions may be considered to be available for the European front. A great part of these forces is armored, mechanized and motorized. The air force is very well developed in quality and quantity, especially for action in the tactical field; it is perhaps less formidable in the field of strategic action. In general, therefore, it is an imposing force, well commanded and able to meet, from any aspect, the requirements of modern warfare.

On this side of the iron curtain, in the occupied territories of Germany, Austria, and Trieste, we find a small number of allied divisions and military organization which, at the present stage, we may in general state to be undeveloped in the various countries associated with the Atlantic Pact (with exception of the few lucky ones which managed to keep out of the late conflict) or neutral. One must also add that the resources of some of these states (France, England, Holland) are largely engaged in expensive work of reorganization in far away overseas territories.

In order to set up a force of suitable size we may think of a complex of 25 to 30 divisions. The total value of these available forces is noticeably diminished by the heterogeneity of their construction, plus the lack of directing groups - indispensable for efficient teamwork. Some US divisions are available, organized in conformity with the latest suggestions of military technique. At the present time, however, it is not intended to transfer them to Europe. If they were to be used, their number is not great enough to compensate the unbalanced forces on the continent.

Also the Air Force (we may limit ourselves to consider only the Anglo-American Air Force) is represented in Europe in very limited numbers, absolutely insufficient to face the overwhelming air force of the USSR. One must, however, keep in mind the important air bases which the United States has already established in England, where they keep heavy bomber squadrons which are to be feared. More could promptly arrive in case of need. Beyond the Atlantic the American strategic Air Force has a definite supremacy, entrusted above all to the apocalyptic threat of atomic bombing of which it believes to be able still to maintain the monopoly for some years.

The situation which results from these few data is very simple. Russia has today, a distinct predominance of the ground forces which would allow her to proceed at any moment to occupy the European continent with a relatively slight effort and in a relatively short time. The temptation to insure such a favorable position may be very strong and may become even irresistible, should Moscow be convinced of the inevitability of a conflict and, consequently, of the convenience of making the first move, before the new European armaments have reached appreciable strength. In brief one must fear the psychosis of the war of prevention which has already many times prepared the great wars of the past. On this temptation to make the first move, however, acts with just as much force the certainty that the predominant American Air Force is in a position if not to stop the operating armies, to make them pay with an exorbitant price such initial success. This may, however, reveal itself soon to be an absolutely transitory concept.

One may believe that in this tense field will not take place in the near future inconsiderate moves apt to disrupt the present situation of instable balance between the tremendous forces which influence it. Of this precarious truce the Atlantic System must take advantage without delay in order to reach a state of security more tranquillizing for all and less exposed to the changes of the moment.

While on one hand America will have to do everything possible to maintain and even increase the supremacy of its air potential, the European countries will have to proceed rapidly and in agreement, with material, technical and financial aid of the United States to the reconstruction of their military forces until they reach the consistence foreseen. This is necessary in order to be able initially to sustain alone the first clash of a probable agression. One must not underestimate the possibilities of these countries which constitute a block of over 150 million inhabitants; they have a very considerable industrial potentiality and can easily set up those hundred divisions which are necessary for the purpose.

The Chief of Staff of the United States, General Bradley, has authoritatively affirmed that America does not want to be called to liberate an invaded Europe but intends to make an invasion impossible by supplying the various states with the means to defend their borders. As far as Italy is concerned it is clear that this task can not be attended to with the few divisions which we have available and not even with the 12 divisions of which our Minister of Defense has spoken. Naturally, it is not the issue to bring up precise figures, which on the other hand, can only come forth from a profound examination of the requirements of our borders, our national resources and the allied concurrence both in military reconstruction and in case of a probable conflict.

Comments

This article by Giovanni Messe, one of Italy's three living Marshals, is an accurate and factual analysis of the precarious situation with which Europe in general and Italy in particular today is faced. The forceful factor about it is that it does not "gloss over" the hard facts of truth with which Italy is faced but brings them clearly in the open, as opposed to other current articles which have a tendency to lull their readers into a false realm of security, based on the Atlantic Pact and the Military Aid Program. Particularly significant is the author's warning against the "pschosis of war of prevention" which has led to great wars of the past. The overall importance of the article lies in its factual educational value to thousands of Italians.

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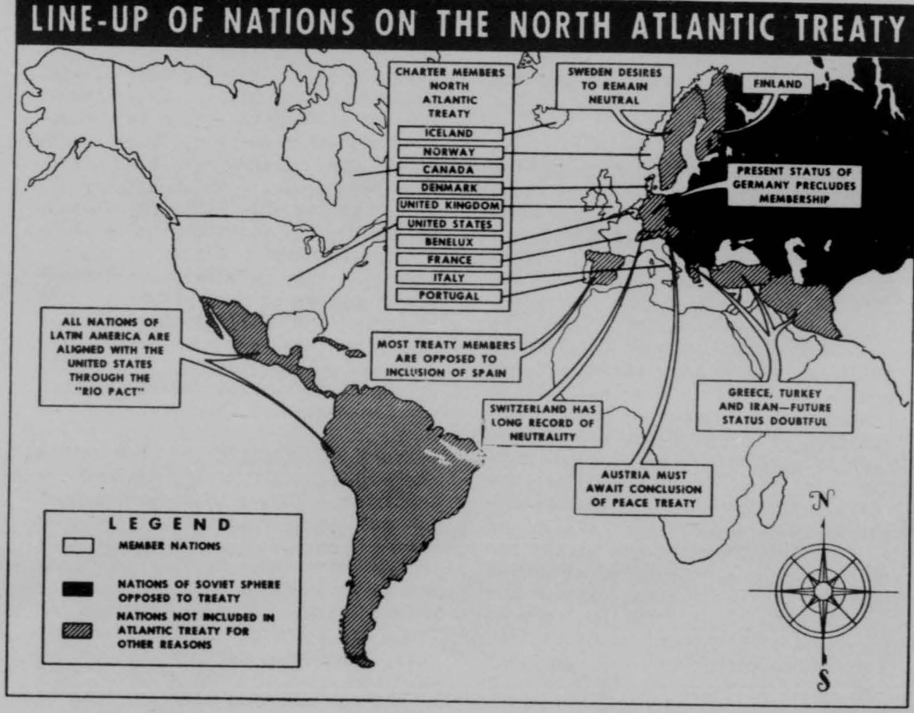
LINE-UP OF NATIONS ON THE NORTH ATLANTIC TREATY

CHARTER MEMBERS NORTH ATLANTIC TREATY
ICELAND
NORWAY
CANADA
DENMARK
UNITED KINGDOM
UNITED STATES
BENELUX
FRANCE
ITALY
PORTUGAL
SWEDEN DESIRES TO REMAIN NEUTRAL
FINLAND
PRESENT STATUS OF GERMANY PRECLUDES MEMBERSHIP
ALL NATIONS OF LATIN AMERICA ARE ALIGNED WITH THE UNITED STATES THROUGH THE "RIO PACT"
MOST TREATY MEMBERS ARE OPPOSED TO INCLUSION OF SPAIN
SWITZERLAND HAS LONG RECORD OF NEUTRALITY
GREECE, TURKEY AND IRAN—FUTURE STATUS DOUBTFUL
AUSTRIA MUST AWAIT CONCLUSION OF PEACE TREATY
LEGEND
MEMBER NATIONS
NATIONS OF SOVIET SPHERE OPPOSED TO TREATY
NATIONS NOT INCLUDED IN ATLANTIC TREATY FOR OTHER REASONS
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WEAKNESS OF THE WEST

Compared with Russia's Land Forces, Western Europe's are small and ill-equipped.
Hanson W. Baldwin, The New York Times

The military weakness of Western Europe is the principal reason for the United States arms-aid program.

As compared to the great land forces of Russia and her very strong close-support air forces, the armed power of Western Europe is extremely small. Here are some of the figures measured in divisions, the yardstick of land armies:

FRANCE -Between five and six divisions in metropolitan France and Germany, with two more almost complete and others being formed. There are, in addition, between 100,000 and 150,000 troops in French Indo-China. About 100,000 troops in North Africa are organized, as yet, in units no larger than regiments, but will be organized in divisions. About five divisions are pretty well equipped, and one of these - with obsolescent tanks - is an armored division. Spare parts and automotive equipment are particularly short. France has very little air power, but has recently put into service one small unit of British jets.

ITALY -Has the equivalent of seven or eight divisions today; is aiming at cadres of eleven, which will be maximum permissible within the limits of the peace treaty. Divisions are poorly equipped, chiefly with obsolescent British wartime equipment and some American equipment. About 75,000 Carabinieri are rather well equipped with jeeps and light arms. Little air power.

BRITAIN - Has about the equivalent of two divisions, or slightly more, in Germany, and has less than one organized division in the British Isles in addition to various units of less than divisional size in other parts of the world. An armored brigade is in Germany. Equipment on the whole, is good. Air Force is strongly equipped with the best interceptor jet fighters in the world, but Britain is weak on modern bombers and has relatively little tactical or close support aviation.

BELGIUM - Her army's structure is built on a three-division basis, now all at cadre strength. Little air power.

NETHERLANDS - Army built on a three-divisional basis, but all three divisions are now in the Netherlands East Indies, with units no larger than brigades at home. Little air power at home.

NORWAY - A brigade is the largest unit. Very little equipment.

DENMARK - Two light divisions are planned, but equipment is scarce.

LUXEMBOURG - Two battalions.

PORTUGAL - Maintains about thirty-five regiments. Air strength consists of about 370 army and ninety naval planes - all obsolescent.

It is these weak and disparate forces that the Atlantic pact and arms-aid program are trying to weld into a strong and cohesive whole.

If the present military assistance program is endorsed by Congress, the

Continued on page 19.

REGIMENTATION OF LABOR IN THE SATELLITE COUNTRIES

Although publicizing themselves as "workers' regimes," the Communist dominated countries of Eastern Europe in practice operate in a manner opposed to the interests of labor as traditionally understood by the labor movement. Bulgaria, Rumania, Czechoslovakia, Poland, Hungary, Yugoslavia and Albania have all adopted elements of the Soviet pattern of subjecting their working forces to a network of compulsions and restrictions.

As soon as the Communist leadership gained power in each of these countries, basic trade-union rights were swiftly denied. Under the power of the Communists, trade-unions have been transformed into an instrument for executing the directives of the government and consolidated into nation-wide "company unions." Instead of serving as a guardian of their members' interests, the trade union in the "people's democracies" devotes its main efforts to forcing increased production from each worker through the speed-up system and similar devices and to indoctrinating the workers in Communist ideology. With the trade-unions operating as an arm of government and with the latter the owner of the predominant portion of the country's industrial resources, collective bargaining in Eastern Europe is actually nonexistent. In matters concerning wages and working conditions, the government's policies are decisive. The right to strike, although not forbidden by law, has in effect been abolished in each of these countries. Without the effective right to strike or otherwise protect and improve their economic condition, these workers are actually working under conditions of involuntary servitude.

The freedom of the workers has been violated not only by the perversion of trade-unions into instruments of compulsion. For the very reason that the unions, permeated with Communists in key positions, no longer have the protection of their members' interests as their primary aim, the governments of the Soviet orbit have been able further to infringe on labor's rights through a variety of manpower controls. As there is some variation in the extent and intensity of these additional restrictions - limitation of labor mobility, forcing of "voluntary" contributions of labor to public projects, etc. - the situation in each of the satellite countries will be reviewed separately.

RUMANIA

By an order in Council of 4 July 1947, the Rumanian government made all labor subject to allocation by the Commission for the National Distribution of Manpower. This order provided the machinery, first, to purge all workers who have not fallen in line with the Communist ideology and, second, to draft by compulsion workers needed for understaffed industries.

A March 1949 decree further tightens the government's strict control over the entire field of labor. Pursuant to this decree, any individual who becomes unemployed for any reason is reduced to a position where in effect he must accept the particular job to which he is directed by the government.

The so-called "voluntary" contribution of labor to public works and other projects which has been promoted by the government is virtually indistinguishable from compulsory labor. Even where no evidences of direct coercion are present, social pressure is so strong and the known risks of noncompliance are so great that the ordinary individual must feel that he has no choice but to participate when called upon.

BULGARIA

By virtue of the Law for Labor-Economic Mobilization of 27 February 1948, Bulgaria has the power to draft any individual or group between the ages of 18 and 50 for economic or other work of state or public character.

Bulgaria is also following a planned campaign of increasing production through "voluntary", unpaid spare-time and overtime labor which by its intensity and method approaches compulsory labor. All inhabitants are now required to devote the equivalent of two months yearly to unpaid public work. Non-participants are exposed to discrimination and penalties as "unreliable elements". The spare-time "voluntary" work goes into local public works. The growth and extent of the spare-time brigade movement is suggested by the following official figures: In 1946, 24,212 brigades or 1,133,618 workers contributed 1,148,424 man days; during the first eight months of 1947, 4,430,000 brigaders worked 3,851,000 man days.

The youth labor brigade movement is a special form of "volunteer" unpaid labor. Theoretically a voluntary movement organized by youth organizations, the youth brigade has the earmarks of an officially sponsored and organized movement for supplementing the labor supply without cost and for the political-labor education of youth. The bulk of the work is done during the school summer vacation. High-pressured drives are made in schools to enroll or "draft" recruits.

HUNGARY

A decree of 6 April 1948 established a Hungarian cabinet committee to regulate the employment, transfer and dismissal of all personnel employed in nationalized and state-controlled and partly state-owned enterprizes. The implication of this decree may be gauged from the fact that at least three-fourths of all Hungarian workers are covered by the scope of this decree. The cabinet committee exercises its powers through the State Manpower Economy Committee (SMEC), which is an office of the Ministry of Construction and Public Works. The SMEC is empowered to dismiss or to transfer individual employees at the recommendation of the Communist-dominated plant committees and to determine wages and salaries to be paid to employees transferred to other jobs.

A series of decrees also establish the obligation of Hungarian citizens to perform public works. Work thus performed is compensated by the payment of wages determined by the government. It is known, however, that exemption from this type of labor may be obtained on payment of a monetary fee which is proportionate to the income or real estate owned.

CZECHOSLOVAKIA

The Czech government has a comprehensive decree authorizing broad manpower controls. Issued on 9 May 1947, it permits the national mobilization of labor in order to complete the country's two-year economic plan. The decree provides that, should mobilization on a voluntary plan fail, "the government would implement a compulsory program of transfers and recruitment". While the provisions of this labor decree have apparently not been widely applied, their mere existence acts as a deterrent to free action, since any attempt to transfer to a less essential job might have unpleasant consequences.

In order to obtain additional labor, Czechoslovakia, like other orbit countries, has resorted to the organization of "voluntary" work brigades. When organized on a nation-wide scale under the guise of national or victory shifts, "voluntary" work becomes virtually mandatory.

POLAND

Through various social and moral pressures, Polish labor is channeled into enterprises selected by the government. A specialist, for example, whose transfer is desired, would not be given employment elsewhere and so would have to go where he is directed.

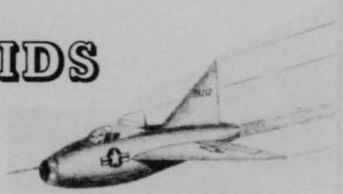
Poland has also introduced national youth service under the name of "Service to Poland" which is obligatory on all youths from 16 to 21 years of age.

ALBANIA

In May 1947 a Directorate of Labor was createdand given sweeping powers for the mobilization of all Albanian workers. On 13 August 1947, the Albanian radio announced that the government had decided "to introduce forced labor,"adding that, according to this decision, "all the persons who served the former anti-people's regimes and who at present are jobless will be mobilized and employed in construction work". And again on 8 February 1948 Radio Tirana said that the Albanian government had recently issued an order providing for the employment of all able-bodied citizens between 16 and 50 who "as a result of idleness avoid work." The word "idleness" is, of course, subject to wide interpretation. Albania also makes extensive use of the so-called "voluntary"labor for unpaid, part-time service on public works projects."

With the disappearance of independent trade-unionism and the general regimentation of labor, all workers in the satellite countries are subject to varying degrees of compulsion, of involuntary labor. Moreover, forced labor, in the sense of assignment to hard labor in labor camps follows deprivation of liberty without formal judicial process, is encountered in these countries. For example on 25 October 1948, the Czechoslovak Parliament legalized compulsory labor camps for "work shirkers" and "disrupters". So loosely defined are the terms "work shirker" and "disrupter", and so sweeping the terms of the law, that it appears they may be applied to anyone whose political or economic views are not acceptable to the government. The so-called "labor-education" or concentration camps in Bulgaria are notorious. In existence from the beginning of the present regime,they have been kept supplied through such arbitrary and loose legislation as the Law for the Labor Mobilization of Idlers and Vagrants,the Law for Labor-Educational Communities for Politically Dangerous Persons, and the special powers granted the militia. These decrees have been directed to all sorts of nonconformists and have furnished the government with a supply of unpaid manpower for the hardest kinds of labor, especially in the coal mines.

HOW DELTA-WING AIDS HIGH-SPEED FLIGHT



UNCONVENTIONAL PLANFORM COMBINES ADVANTAGES OF LOW ASPECT RATIO AND SWEEPBACK, BOTH REDUCING DRAG.

Although it is now more than four years since cessation of hostilities in Europe, U.S. and British aerodynamicists are still exploring a wide variety of ideas developed by German scientists during the war.

It is now apparent that since the beginning of 1944 researchers at German aeronautical laboratories were convinced that supersonic flight was practical. Accordingly by far the vast majority of their work from that time to V-E Day was concentrated on problems of highspeed flight.

DRAG REDUCTION STRESSED

By the end of the war the Germans had clearly defined these problems and proposed the basic solutions. In the missile field, at least, they had actually attained supersonic speeds and were well along with solutions for piloted supersonic flight.

Aside from obvious problems of providing suitable powerplants, major problems in the attainment of supersonic flight were reduction of drag and provision of lift. Because dynamic pressure at supersonic speed is so great, lift co-efficients need not be large, and this phase was laid aside in favor of the more serious difficulty of drag reduction.

DUAL ANSWER

They provided two solutions to this problem, both working equally well independently, and even better when used in combination—wing sweep and low aspect ratio. Efficiency of these two solutions is now well known. Not only have U.S. and British laboratories compiled extensive data on these planform configurations, but numerous craft are now flying using either or both.

The "delta-wing" combines both these solutions into a single planform to produce a triangle shape resembling the Greek letter A. Although it combines the two major ingredients of drag reduction, the delta-wing is useful only in the special case of very high speeds, since flight at lower speeds can be accommodated more practically by moderate sweep and aspect ratios.

MACH FACTOR

Generally, angle of sweep is determined by the maximum Mach number at which it is desired to fly without excessive drag, assuming, of course, adequate power. The faster the design speed of a projected plane design, the greater must be the sweep angle.

For Mach 1.5, the sweep angle must be greater than 45 deg.; for M 2.0, sweep must be greater than 60 deg.

To obtain a low aspect ratio (3 or less) with a practical delta-wing, it is desirable that leading edge sweepback be 45 deg. or more. Hence, the delta-wing planform finds its most suitable range of application in aircraft operating at speeds greater than M 1.5, having leading edge sweepback greater than 45 deg. and aspect ratio less than 3.

HISTORY

The proposal for a delta-wing planform originated with Dr. Alexander Lippisch, well-known German scientist. He was long associated with Deutsches Forshungsanstitut fur Segelflug in the design of tailless gliders during the period of the armistice with Germany, which forbade powered aircraft.

During World War II, he was associated with Prof. Willy Messerschmitt in the design of the ME-163 Schwalbe rocket-powered fighter featuring sharply swept wings and no horizontal tail surfaces. Shortly after completing consulting work on this project he was made president of Luftfahrtforshung Wien, an aeronautical research laboratory near Vienna. Here he developed his ideas concerning supersonic aircraft design.

L-13a's DELTA-WING

Oddly enough, his studies on the subject came as a by-product of his paramount interest in the Lorin propulsive duct, or ramjet engine. When his propulsion investigation had passed the wind tunnel and flying model stage, Lippisch began design of a supersonic research plane to test his powerplant.

This project, the L-13a, had a delta-wing planform with leading edge swept back 60 deg. The ramjet engine was built integrally with the wing center section and was to be operated by refined coal.

WING'S FEATURES

The plane was to weigh 5060 lb., and had an estimated speed of 1020 mph. It incorporated a number of interesting design features including an elliptical airfoil section (to minimize transonic stability problems).

There was a gap of about three percent chord between wing trailing edge and control surfaces (to permit large control surface movement without the danger of reversal due to shock wave formation on the leading edge) and cooking air ducts between center section and outer wing panels to isolate the heat of the engine.

INITIAL TESTS

First, a model was tested in the Gottingen high-speed wind-tunnel up to Mach 2.6. These trials showed the design to have marginal stability at high speed and wholly insufficient stability at low speed.

Consequently, it was decided to build a glider version for stability investigations. This was designed by the Flugtechnische Fachgruppe Darmstadt and completed early in '44.

GLIDER NOT FLOWN

It was built of wood and fabric, and carried a pilot in the center section, his enclosure comprising the fin leading edge. It was to have been carried aloft on the back of a Siebel Si 204 light transport and released at 25,000 ft.

Small water tanks provided changes in trim and a rocket motor could be used for high-speed dive testing.

Tests were never made, however, and the glider was subsequently brought to this country.

FIRST DELTA-WING FLIES

The next delta-wing airplane(and first to fly)was not completed until four years later,but followed closely the general arrangement of the L-13a. The Convair Model 7002 made its first flight June 9, 1948 for a few miles at a height of only a few feet. Its first extensive flight was on Sept. 18, 1948. Both trials were at Muroc Air Force Base, Calif.

This design differs from the Lippisch in that it has a fuselage housing the pilot and powerplant, and a thin, air-foil-shaped wing. Test flights are continuing with the Model 7002, but results are not yet available.

Thus, the history of the delta-wing configuration is still meager-made up only of proposals and extensive wind tunnel tests in Germany and a few flights of a design built in the U. S. on the basis of these data, supplemented by wind tunnel tests at the Ames Aeronautical Laboratory of the National Advisory Committee for Aeronautics. But these data, together with greatly extended theoretical calculations, provide sufficient information on which to appraise this new and promising supersonic planform.

LIFT AND DRAG

In addition to low drag,the delta-wing exhibits the unique characteristic of immunity to lift coefficient changes with Mach number.

For example, the rectangular wing experiences a 20-percent increase in lift as Mach 1.0 is approached, an 80-percent increase as supersonic flow is established and a rapid deterioration of this lift with increasing Mach until it has dropped about 50 percent below its subsonic value at Mach 3.0.

In contrast, the delta-wing of low aspect ratio produces the same lift throughout this entire range from low subsonic to high supersonic speeds.

LIFT COMPARISONS

Despite this highly desirable characteristic, the lift coefficient of the delta-wing is considerably lower than that of a rectangular wing.

For example, from hydrodynamic theory, the lift coefficient of a conventional subsonic wing may be expressed: $C = 2 a$, where a, the angle of attack, is expressed in radians. First approximation for a very slender delta-wing gives a value of the lift coefficient $C = Aa/ 2$, where A is aspect ratio.

Since this approximation is valid only for very small aspect ratios, at a ratio of 2 this equation will have a value of $C = a$, which is only half the value of the conventional subsonic wing, given above.

A further approximation is obtained by integrating the pressures over the upper and lower surfaces and this produces $C = 4a/ 1$. Inspection of this equation indicates that it is higher than the conventional wing only at low supersonic speeds (up to Mach 1.2) but grows progressively lower as Mach number is increased.

DRAG ANALYSIS

The low drag of the delta-wing is its justification and is made up of conventional friction drag, wave drag and drag due to its production of lift.

In general, friction drag of the wing will be of the same magnitude as the thickness drag, one of the terms in the wave drag. In the absence of test data, its value is usually assumed at something less than 0.01, with a value of 0.006 being reasonable.

Tothis must be added the wave drag, which has been the subject of extensive theoretical study. The equation takes the same form of the lift coefficient plus the addition of thickness drag, mentioned above: $C_d = (4/ M^2-1)(A^2 + t^2)$, where T is wing thickness divided by the chord. This may be rewritten as $C_d = aC_l + 4t^2$ M^2-1, clearly isolating the drag due to the thickness ratio.

SUPERSONIC CONDITION

At subsonic speeds it is customary to divide the drag into two parts-a friction drag and an induced drag, the latter produced as a consequence of lift. At supersonic speed, drag due to production of lift can no longer be called "induced drag", since pressure changes in the trailing vertex cannot propagate forward and influence flow conditions.

The drag due to the lift at supersonic speed is a complex function which will not be repeated here, but it is proportional to the square of the lift coefficient.

Because drag of a delta-wing at supersonic speed is proportional to the square of the thickness ratio and the square of the lift coefficient, it would follow that low drag is obtained when both thickness ratio and the lift coefficient are low.

However, use of an extremely thin wing, poses, in addition to structural considerations, an interesting aerodynamic problem.

LEADING EDGE ACTION

Since the delta-wing leading edge is swept behind the Mach cone at moderate Mach numbers, an infinite velocity exists around the leading edge, the same as that assumed in satisfying the Kutta-Joukowski condition in subsonic flow.

If the leading edge is rounded, this infinite velocity is reduced to a large, but finite, value, pressure is reduced at the leading edge and a suction force is created. This suction causes the resultant force on the wing to be inclined forward relative to the chord plane, and the drag due to the lift is reduced proportionately.

Thus, a sharply pointed leading edge robs the delta-wing of this induced thrust. Requirements for extreme thinness are, therefore, in conflict with that for an adequately-rounded leading edge.

It is interesting to note however, that Lippisch used an extremely generous leading edge radius-of-curvature on his delta-wing glider, although it is not known whether he had discovered the mathematical reasons for such a configuration at the time.

STABILITY AND CONTROL

It is now well known that the slope of the lift curve is reduced by reductions in aspect ratio and by increases in sweep angle. This indicates, of course, that the angle of attack required to obtain a given lift coefficient is increased proportionately.

Delta-wing airplanes, then, require very high altitudes for landing and takeoff within distances comparable to those for conventional aircraft.

These altitudes need not be used when sufficient runway is available for the takeoff and, because of other considerations to be shown, power may, and probably will, be used in landing delta-wing aircraft to reduce the altitude for touchdown and provide sufficient energy for the flare.

STABILITY CONSIDERATIONS

In general, the delta-wing pitching moment is stable so long as its aspect ratio is held quite low. This requires that a 45-deg.-swept delta-wing have an aspect ratio not greater than 3 and a 60-deg. design an aspect ratio not much more than 1.

This stability holds true up to the stall, although experimental data are in conflict in the region of the stall. At this point, the low damping in roll of the delta-wing becomes a vital consideration and some model tests indicate actual autoration at the stall due to this characteristic.

Other tests indicate marginal longitudinal stability at the stall, particularly for extremely high degrees of sweep.

One of the difficulties of predicting low-speed derivities for delta-wings is the unpredictable effects of flow separations at high angles of attack required for the stall. These angles may often have values as high as 40 deg.

LOW-SPEED DATA

Some interesting results of low-speed tests of delta-wing planforms are available from captured German reports of work done at DVL.

These data show a strong lateral flow development over the rear of the wing moving towards the tips. Since this flow results in low pressures, lift is increased.

This increase in lift at high angles of attack produces a peculiar concave discontinuity in the lift curve and the slope actually begins to increase from $C_l = 0.4$ on up.

This flow also produces a rearward shift in the neutral point, the lift coefficient at which this shift begins decreasing with decreasing aspect ratio and increasing sweep angle.

A further result of this flow is a paradoxical increase in $C_{l\underline{max}}$ with decrease in aspect ratio.

NACA RESULTS

Although extensive test data on delta-wing planforms has now been compiled by NACA, the only unclassified results available contain data on a model having 63.4 deg. sweepback on the leading edge, aspect ratio of 2 and an NACA 0012 airfoil, the same section used by the Germans in their tests, previously outlined.

These data show a maximum lift coefficient of 1.7 at an angle of attack of 35 deg. But of major interest is that this lift coefficient was attained at a point about 40 percent of the semi-span outboard of the longitudinal centerline. Maximum lift coefficient attained at the centerline was only 1.05 at an angle of attack of 48 deg. This illustrates one of the important practical characteristics of the delta-wing, its wide variation in span load distribution with angle of attack at low speeds.

In these tests, maximum span loading coefficient moved outboard from the centerline (at 4.3 deg.) to a point 60 percent of the semi-span at 22.7 deg. and then moved back inboard again to the centerline at the stall.

Center-of-pressure moved inboard with angle-of-attack from 42 1/2percent semi-span at zero deg. to30percent semi-span at 48 deg.

Throughout these tests, however, the wing center-of-pressure remained constant longitudinally at about the 40 percent mean aerodynamic chord location.

TIP STALL

These data indicate that despite earlier optimism, the delta-wing is subject to the tip-stall propensity which a cursory examination of the planform would suggest, since its spanwise lift distribution is theoretically infinite along the leading edge and sinks to a very low value along the centerline.

This theoretical distribution is only modified slightly in practice (since infinite velocities are reduced to high but finite values), resulting in the planform stalling at the tips first and this, coupled with the low damping in roll, combines to create serious low-speed stability problems which will undoubtedly require high-power landings, mentioned previously.

REYNOLDS NUMBER DATA

Further doubts concerning the low-speed stability of delta-wing planforms are expressed on the basis of adverse Reynolds number effects. An NACA study of captured German reports together with Allied and U.S. data indicate that although at low Reynolds numbers higher maximum lift coefficients were obtained for moderately swept-back wings than for unswept wings of similar planform, at high Reynolds numbers, however, increasing the sweepback decreased the maximum lift coefficients. The study showedthis effect particularly marked for delta-wing planforms.

It was on the basis of these indications that the decision was made by the Air Force and Convair to delay the final design of the XF-92 until a flying scale model,the 7002, could be built and tested to provide high Reynolds number data.

CONTROL SURFACES

Problem of the location and planform of control surfaces on a delta-wing has undergone extensivetheoretical and experimental study,but much remains to be done.

Use of delta-shaped control surfaces at the tips of the wing shows promise with one theoretical study indicating that for the same ratio of control surface chord to wing root chord, the triangular surface produced a rate-of-roll per hinge moment coefficient twice that of a two-dimensional case.

For the case of conventional full-span,constant-chord control, the results are not yet clear. Although the study indicated that the lift produced by a unit control deflection was actually greater than the lift resulting from a unit angle of attack of the entire wing, this is probably a result of the low lift curve slope of the wing, previously described, rather than control effectiveness.

For the case of partial-span surfaces, either inboard or outboard, the variation of their effectiveness with Mach number leaves little to choose between the two, although the study indicates that high aspect ratio control surfaces have the same superior characteristics at supersonic speed as do those at subsonic speed.

One of the interesting possibilities of providing camber and twist to a delta-wing to support specified lift distributions at supersonic speeds is the use of a gull-wing design, which was first revealed at the 1949 Inspection of the NACA Langley Aeronautical Laboratory.

Whereas the flat-surfaced delta-wing has a U-shaped lift distribution when viewed in the plane of the wing, a flat distribution can be given by arching the plane of the wing upward and outward from the centerline. Various degrees of arch can be used to provide any required lift distribution. While these offer interesting theoretical possibilities, structural considerations make them impractical at this time.

Aviation Week 4 Jul 49 Uncl

Continued from Page 9

first year's results will mean internal security and a great psychological "shot-in-the-arm" for Western Europe, and at the end of a year or eighteen months Western Europe should have, in addition, to seven or eight fairly well equipped Italian divisions, about twelve divisions pretty well equipped, plus supporting tactical air forces. What the eventual size of the armed force will be is anyone's guess today, for the ultimate goal has not yet been planned, but it will probably be between forty and sixty divisions, closer to forty than to sixty.

Most of the equipment that is tabbed for transfer to Europe in the first year is for land forces, but there is some air equipment. Britain is assuming the responsibility of equipping the Continental air forces with her jet Vampire and Meteor fighters. We expect to transfer to Britain 100 B-29 bombers, which are now considered intermediate range bombers, primarily useful for tactical purposes.

Gen. Hoyt S. Vandenberg already has announced that the two groups of United States fighters in Germany will henceforth be completely jet-equipped. One group already is flying jets; the other, which has been flying F-47 Thunderbolts – a type very useful for ground support work – will turn over about 100 of these planes to France. France will also get some obsolescent Douglas navy dive-bombers for use on her aircraft carriers.

USAF Inst of Tech Nov 49 Uncl

THE BOOK SHELF

RECOMMENDED READING FOR YOUR OFF DUTY HOURS

TITLE: Three-Jet XB-51 Shows Unusual Design

SOURCE: Avia. Week 3 Oct '49 (51-14 Wkly); pp 12-13; illus.

ADDRESS: Aviation Week
McGraw-Hill Publishing Co.
330 West 42nd Street
New York 18, N. Y.

The most unconventional jet-aircraft design yet produced in the U.S. is the new three-jet XB-51 ground-co-operation fighter-bomber announced by Glenn L. Martin Co. A variable-incidence wing on the XB-51 and the uncommon position of two of its three turbojet power plants, mounted on pylons extending from the fuselage, together with the sweepback of wing and tail surfaces give the craft a radically different appearance. Placement of the stabilizer at the top of the tailfin and the tandem main landing gear, which retracts into the fuselage, add to the strangeness of the design. The basic advantage of variable-incidence over fixed-incidence design on the XB-51 is explained. The XB-51 wing features the use of spoilers for lateral control. Stabilizer location atop the fin avoids jet and wing turbulence at slow speeds and guarantees maximum longitudinal control.

CADO 15 Nov 49 Uncl

TITLE: X 4 Germany's Smallest Liquid Rocket

AUTHOR: H. Gartmann

SOURCE: Interavia Sep '49 (Mthly); pp 553-555; illus.

ADDRESS: Interavia S. A.
Corraterie 6
Geneve 11, Switzerland

German war-time rocket developments included an extremely small liquid-propellant rocket engine. The Bayerische Motorenwerke furnished this small engine for the X-4 missile. The first serial models had a thrust duration of 22 sec, a maximum thrust of 140 kg, and the fueled engine weighed a total of 22.5 kg. Other operational data on the first test models and the first serial models are given. Since it could not be used more than once, the construction had to be as simple and the manufacturing costs as low as possible. In the main, this engine consisted of a combustion chamber, two spiral pipes serving as propellant tanks, a compressed-air container composed of two separate tanks, two valves for the air container, and a few accessories. The functions of the component parts are described, and available operational data and developmental data are discussed.

CADO 15 Nov 49 Uncl

AIR FORCE LETTER)
NO. 205-25)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 30 MARCH 1949

SECURITY

Disclosure of Classified Information to Reserve Forces Personnel

(Effective until 30 September 1950 unless sooner rescinded or superseded.)

	Paragraph
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1. Purpose. To provide uniformity, this Letter outlines the policy of the Air Force with respect to the dissemination of classified military information to Reserve Forces personnel.

2. Scope. This Letter applies to the Air Force Reserve and the Air National Guard, and in addition, its provisions will be followed in connection with activities concerning the Air Reserve Officers' Training Corps and the Senior Division of the Civil Air Patrol. This Letter does not apply, however, to personnel on extended active duty.

3. Policy. In compliance with the provisions of AFR 205-1 regarding security of military information, Reserve Forces personnel may be entrusted with classified information as follows:

a. RESTRICTED information may be disseminated for official military purposes to any Reserve Forces personnel.

b. Except as authorized in c below, information classified no higher than CONFIDENTIAL may be disclosed to Reserve Forces personnel not on active duty who are actively participating in official training activities, provided that possession of the information is essential to the training course or program.

c. SECRET information may be disclosed to Reserve Forces personnel on active duty for training purposes and personnel not on active duty who have a mobilization assignment, provided that possession of the information is necessary in the performance of official assigned duties.

d. TOP SECRET material will not be used for training purposes in connection with Reserve Forces training programs. As authorized by paragraph 7, AFR 205-1, 14 March 1949, however, individuals serving on short periods of active duty whose assignments require it may be given access to the TOP SECRET information essential for the performance of their assigned duties.

e. Documents containing information classified higher than RESTRICTED will not be disseminated for retention by individuals. Such documents will be stored in military files only.

f. Reserve Forces personnel not on active duty who receive classified information will be informed that the information affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation or transmission to an unauthorized person is prohibited.

g. Upon termination of active duty training, personnel will be briefed on the necessity for maintaining security of their professional knowledge while on inactive status.

4. Investigation and Clearance. Commanders concerned are responsible for requesting personnel security investigations and clearing personnel referred to in this Letter whenever required or necessary in accordance with separate Regulations.

5. Residents of Foreign Countries and Foreign Nationals. The provisions of AFL 182-4 and 8f, AFR 205-1, 14 March 1949, will be observed regarding dissemination of military information to persons residing in foreign countries, or to foreign nationals as defined in paragraph 2i, AFR 205-1.

6. Requirements. Although it is the desire of the Air Force to make available to Reserve Forces personnel such classified information as is required for training purposes within established training programs and courses, it is of primary concern that no breach of security will result from this policy. Commanders concerned will review continuously all classified material required by or of direct value to Reserve Forces activities, and whenever appropriate, will initiate down-grading action thereon in accordance with paragraph 27, AFR 205-1, 14 March 1949.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

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*This Letter supersedes AFL 205-25 (formerly 46-7), 31 March 1948.
This Letter has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.

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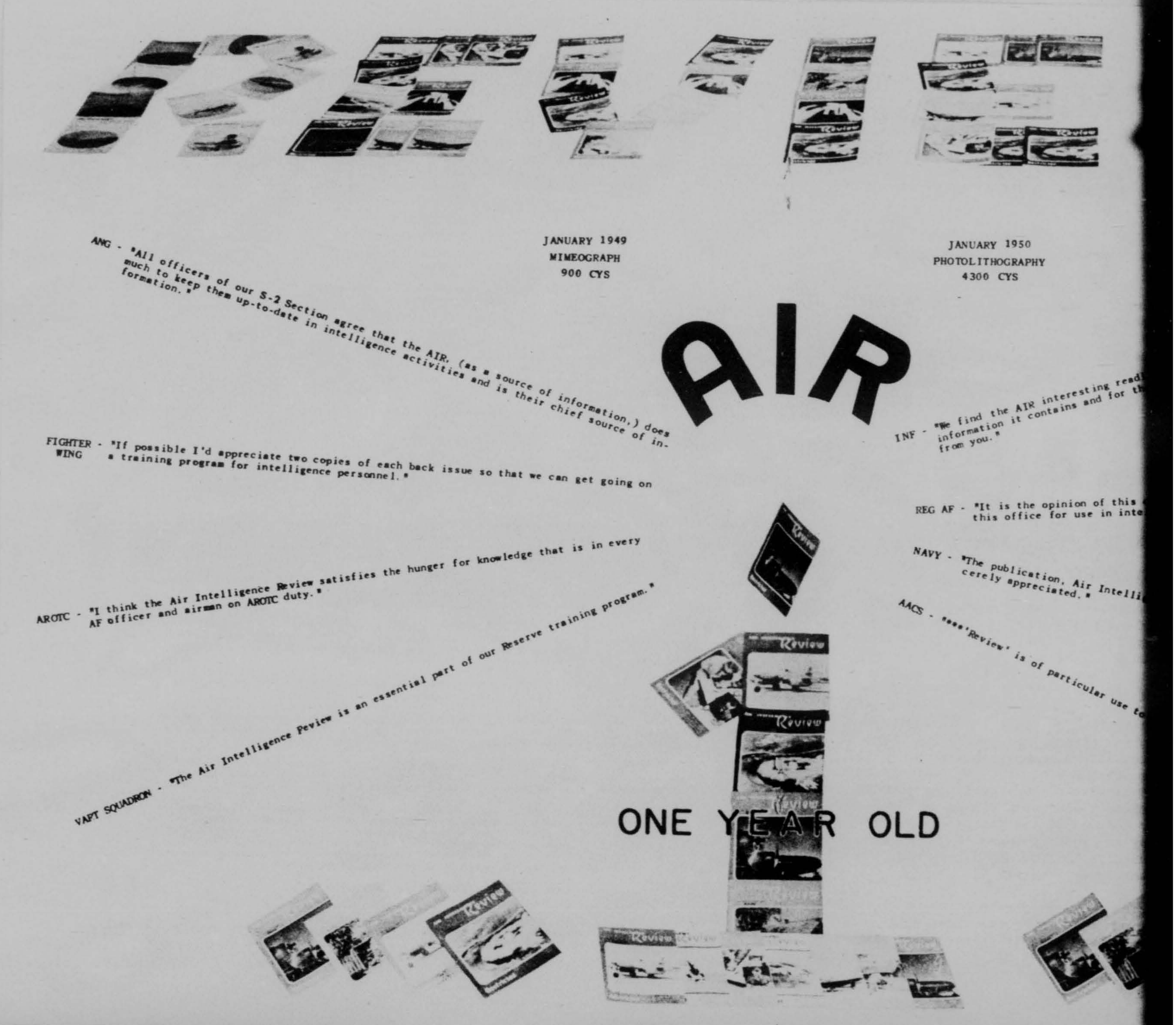

ANG - "All officers of our S-2 Section agree that the AIR, (as a source of information,) does much to keep them up-to-date in intelligence activities and is their chief source of information."

FIGHTER WING - "If possible I'd appreciate two copies of each back issue so that we can get going on a training program for intelligence personnel."

AROTC - "I think the Air Intelligence Review satisfies the hunger for knowledge that is in every AF officer and airman on AROTC duty."

VAPT SQUADRON - "The Air Intelligence Peview is an essential part of our Reserve training program."

INF - "We find the AIR interesting readi information it contains and for th from you."

REG AF - "It is the opinion of this this office for use in inte

NAVY - "The publication, Air Intelli cerely appreciated."

AACS - "...'Review' is of particular use to

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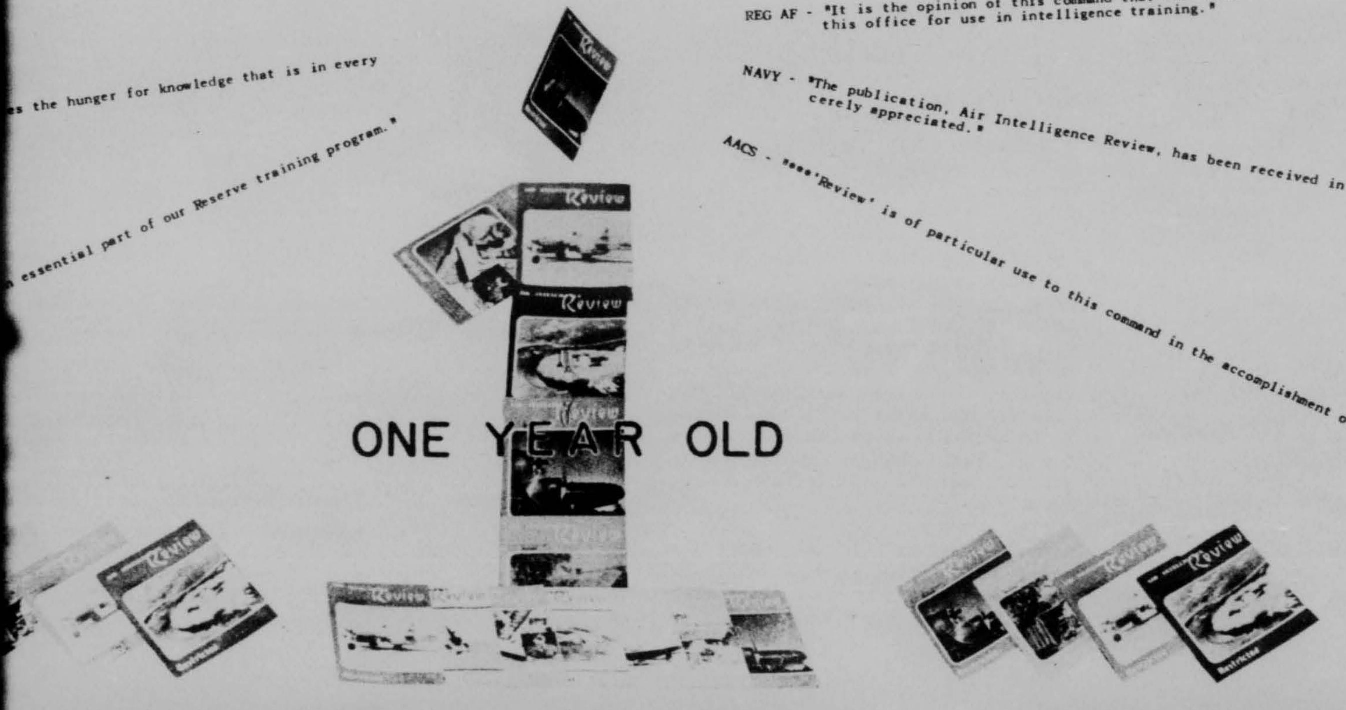
INF - "We find the AIR interesting reading and would like to continue receiving it both for the information it contains and for the publishing ideas we may occassionally be able to 'lift' from you."

REG AF - "It is the opinion of this command that the 'Review' is the best publication received by this office for use in intelligence training."

NAVY - "The publication, Air Intelligence Review, has been received in this office and is sincerely appreciated."

AACS - "***'Review' is of particular use to this command in the accomplishment of its mission***."



ONE YEAR OLD

MAPS AND DIAGRAMS

This is the XXIV and final chapter of a series extracted from the handbook for intelligence officers entitled "Air Intelligence Handbook", ConAC, classified Restricted. The book in its completed form will be disseminated to each regular and reserve unit in sufficient copies to:

a. Enable the intelligence officers of the TO&E units of the reserve forces assigned to this command to achieve the standards of training established by ConAC Training Standard 45-2.

b. Assist the training officers of Intelligence Volunteer Air Reserve Training Units in implementing their individual unit training programs.

c. Assist intelligence officers of regular Air Force TO&E units in the implementation of ConAC Training Standard 45-1.

(Distribution of the handbook to units of this command will be accomplished by ConAC Air Forces.)

SCOPE

This Chapter assumes the intelligence officer's knowledge of the basic principles and practice of military mapping and map reading (as outlined in FM's 21-25, 21-26, 21-30 and 30-22), and discusses only special maps and diagrams whose preparation and maintenance are peculiar to intelligence. The more common types of graphic representations prepared by intelligence sections are:

a. Situation Map.

b. Theater Map.

c. Enemy Air Order of Battle.

d. Geographic Flak and Enemy Defense Map.

e. Flak Diagrams.

f. Bomb Impact Plots.

g. Track Charts.

  1. Air Combat.

  2. Proposed Route.

h. Target Charts and Strips.

SITUATION MAPS

Situation maps portray enemy, friendly, or enemy and friendly, operations and positions at a specific time. In ground units, a map showing enemy positions is known as an intelligence situation map; showing friendly positions, it is known as an operations situation map. In air units a combined, or joint operations-intelligence, situation map is recommended because intelligence is required to have knowledge of both friendly and enemy situation. Usually information is posted on an overlay so that changes can be made quickly, and the map maintained constantly up to date.

The overlay should never be cluttered with material that will obscure the basic information, or with data already available on the underlying map.

Any transparent hard-surfaced material, such as tracing paper, tracing cloth, vellum, cellophane, plasticele, plexiglass or cellulose acetate can be used for an overlay. Depending on the surface of the overlay material, markings can be made with colored inks. (Camera film with the emulsion washed off in warm water, with sodium carbonate added to aid in the removal, makes a satisfactory substitute for plasticele. The film should be so overlapped that grease pencil rubbings will not work through to the map surface).

Where overlays are not used, postings may be made directly on the basic map; using cardboard, push-pins and flags as symbols. Some situation maps, particularly in anti-submarine units, are laid over an iron sheet and magnetized metal markers are placed at will on the surface.

To facilitate the measuring of distances, handy map scales made in the form of wooden rulers can be hung near the appropriate maps.

The usual information posted on a situation map is presented in the "shorthand" form of military symbols, prescribed in FM 21-30. Every item posted should be dated.

THEATER MAPS

A theater map is a display or "Current events" map. An effective theater map is shown in this chapter, where typed information relating to events at specific points is posted around the border of the map and connected to the points by yarn or pencil markings. Aerial photographs, detail maps, statistical tables, news clippings, etc., are used to add interest to the display.

ENEMY AIR ORDER OF BATTLE

Enemy Air Order of Battle is most effectively represented in map form. The example given shows how to keep such a map with push-pins to indicate enemy air units. Different shapes, colors and markings on pins can be used to distinguish type and strength of units represented. In advanced field conditions, data is best marked by grease pencil on an overlay.

FLAK AND ENEMY DEFENSE MAPS

Flak and enemy defense maps show the location and type of anti-aircraft weapons, searchlights, balloon barrages, etc. Locations may be indicated with pins, flags, or markings on an overlay or on the map itself.

A geographic flak map shows by means of circles and variety of colors the enemy anti-aircraft defenses of an area, indicating location, type, density and ranges of guns.

FLAK DIAGRAMS

While a flak map shows the location of enemy anti-aircraft guns, a flak diagram is a representation of the volume of probable fire at a given altitude over a specified target. Density of fire is often illustrated by the use of light-colored circular discs to show the field of fire. These can be printed on a chart, or made of translucent plastic material and hung on pins which indicate gun positions. The varying density of color, resulting from the overlapping of the discs, is a gauge of the intensity of fire. The more accurate clock density charts showing the number of units of fire to be expected along the different radii or headings from a target can be used to show the paths in and out which are most free of flak.

COMPOSITE MAPS

At times, especially when the unit is moving rapidly, a single map presenting all information may be preferable.

BOMB IMPACT PLOTS

A bomb impact plot is an annotated print which shows the location of each bomb impact in the target area. These plots are made by using every photograph taken by the attacking aircraft during any one mission. With the aid of a stereoscope all bursts visible on the photograph are plotted on the bomb impact overlay or photograph. A report stating what areas or buildings appear to have been hit always accompanies the Bomb Impact Plot.

TRACK CHARTS

There are two types of track charts: Air combat and route. Track charts of air combat locate attacks by enemy aircraft and anti-aircraft artillery on the track made by our aircraft. Track charts of routes show the routes proposed for each mission and those actually flown by each aircraft or group of aircraft. Information necessary for the preparation of both these charts is obtained through interrogation, navigators logs and photographs of enemy aircraft.

TARGET CHARTS AND STRIPS

Target charts and strips are described in Chapter XVIII. Usually they are available to intelligence from higher echelons; if not, intelligence can prepare substitutes by drawing concentric circles at one-mile intervals on a map of the target area.

CHAPTER QUIZ

1. What is a situation map?

2. What is a theater map?

3. Discuss flak and enemy defense maps.

4. What is a bomb impact plot?

5. What are target charts and strips?

I/D ConAC Rest

AIR FORCE REGULATION}
NO. 100-28 }

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 11 NOVEMBER 1949

COMMUNICATIONS

Classification of Ground Radar Sets by Slant Range

Paragraph
General 1
Definitions 2

1. General. By action of the Joint Communications-Electronics Committee (Joint Communications Board) on 25 February 1949, the following definitions were adopted for the classification of ground radar sets by slant range. These definitions will be utilized for all inter- and intra-service purposes.

2. Definitions.

a. VLR (Very Long Range) - Equipment whose maximum range on a reflecting target of one square meter normal to the signal path exceeds 800 miles, provided line-of-sight exists between the target and the radar.

b. LR (Long Range) - Equipment whose maximum range on a reflecting target of one square meter normal to the signal path exceeds 300 miles, but is less than 800 miles, provided line-of-sight exists between the target and the radar.

c. MR (Medium Range) - Equipment whose maximum range on a reflecting target of one square meter normal to the signal path exceeds 150 miles, but is less than 300 miles, provided line-of-sight exists between the target and the radar.

d. SR (Short Range) - Equipment whose maximum range on a reflecting target of one square meter normal to the signal path exceeds 50 miles, but is less than 150 miles, provided line-of-sight exists between the target and the radar.

e. VSR (Very Short Range) - Equipment whose range on a reflecting target of one square meter normal to the signal path is less than 50 miles, provided line-of-sight exists between the target and the radar.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

HOYT S. VANDENBERG
Chief of Staff, United States Air Force

*This Regulation supersedes AFL 100-19, 30 March 1948

POLAR GUIDE

This is the fourth of a series of articles on Arctic Indoctrination

Chapter 8 —— Medical Problems

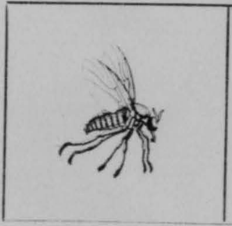
INSECTS

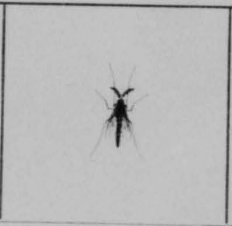
In the polar regions, the word "flies" has a special meaning. It refers not to house flies, blue bottle flies, and other such relatively inoffensive and friendly creatures, but to insect pests that come after a man in savage hordes, usually two or three kinds at once, intent on drinking his blood. "Flies" include mosquitoes, black flies, deer flies, and midges. Flies have been called the curse, the bane, and the scourge of the polar summer. That they deserve this description will be readily admitted by all who have spent part of June, July or August in the north woods or on the tundra. They are the foe of both man and beast. During the long bright days, when twilight hours are few, they know no rest. Always on the lookout for a meal of warm blood, they swarm about their victims, centering their attack upon exposed skin or places where the hair is thinnest. There they alight, probe, and bite away until a hand slaps them, a strong wind blows them off, or a chill rain disposes of them. Only with the end of summer does their onslaught stop. Mention flies to a seasoned North countryman, and he will give a special scowl as he adds his bit to the opinion that has piled up through the years. "Why, I've had flies on me so thick, that you couldn't tell the color of my clothes", he begins and he's off. By the time he's finished, you wonder what he means when he speaks of loving the polar regions.

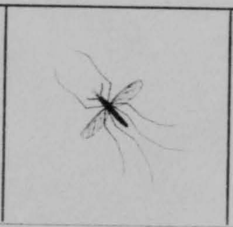
Description

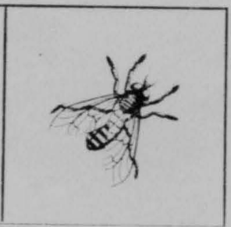
Mosquitoes - These need no description — you'll know them.

Black Flies - These are small, black stout-bodied, hump-backed flies, sometimes called buffalo gnats or (erroneously) sandflies. Their bites stay open and continue to bleed for some time. They attach themselves especially at the collar line and inside the clothing where the belt binds the waist. They are less abundant north of the tree limit than south of it.


Black fly.


Midge.


Mosquito.


Deer fly.

Deer Flies - These are large, strong-flying pests with banded wings. They bite ferociously the instant they alight on the bare skin and on hot days they follow a person persistently, even in a stiff wind. There are several kinds and their names vary locally. They are also known as gadflies. Other flies in the same family are moose flies. These are larger, sooty black flies also called horseflies or bulldogs. The last term is peculiarly apt in view of their tenacity and the size of the hole they drill in the skin.

Midges - These are minute flies about one twenty-fifth of an inch long, known as "no-see-ums", "punkies", "gnats", and even "creepin' fire". They sink their tiny biting mouth parts into the skin, causing a sharp, burning pain all out of proportion of their size. Some of them are about the color of human skin and are very hard to see on the arm or hand.

Characteristics

Mosquitoes, black flies, deer flies, and midges don't resemble each other in general appearance, but they are alike in several significant ways. They all bite-- that is, they do not sting, as bees and wasps do. They do not generally carry diseases. They are primarily daytime insects. In more southerly regions, mosquitoes may not come out in numbers until evening, but in the Far Norththey seem to prefer daytime, especially the afternoon. If it turns cold, they become inactive, even when they are abundant. Only the females bite. (This is an interesting fact from which you may derive a dubious comfort). During their larval stage, they live in water. All these pests have their natural enemies. As adults, some are captured occasionally by birds, spiders, and such predatory insects as dragon flies. As larvae, some are eaten by birds, small fish, and certain aquatic insects. As eggs and as pupae, they are fairly safe from molestation because they are motionless.

How Flies Attack

Each of the fly families has its own method, manner and time of attack. They exhibit the following attack characteristics.

Mosquitoes are not bothersome on cold nights, but the coolest summer nights are so short in the polar regions that they furnish only brief periods of respite. Mosquitoes are discouraged by a strong wind, however, so if you can stay near the coast, or on a peninsula, where there is a sea breeze, you may remain comparatively free of the pests. The worst days are the warm, quiet ones with a gentle land breeze. Then, for hours at a stretch, the unrelenting attack continues, especially in the afternoon. While the mosquitoes seem to prefer dark places, and will settle on dark clothing in preference to light, they do not seem to mind the direct sunlight.

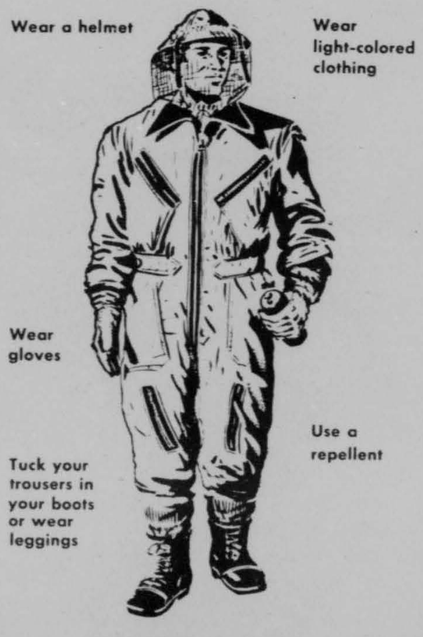
Black flies prefer hot, sunny, dry days and are especially bothersome in June and July. They become quiet in cool weather and are never troublesome at night. Unlike mosquitoes, which usually fly from one point of attack to another, black flies run nimbly about like tiny bees, looking for openings in the clothing. When they get inside a man's shirt they gather at the waist in a greedy row or crawl down to the boot-tops. By evening, it is not uncommon to find your middle encircled with a row of open bites to which blood-stained underclothing sticks. If you have no head-net, black flies will attack the collar-line savagely. A handkerchief will afford slight relief.

Deer flies and mooseflies are lovers of sunlight, warmth, and moisture. Cool weather discourages them, and they are not as annoying on cloudy days or after sunset. But they can be very bothersome even in windy weather as long as the day is warm and bright. They will follow mile after mile, flying in the shelter of your head, winging round and round, striking your face, especially about the eyes. Their bites swell considerably.

Midges are irregular in distribution, but locally they can be terrible pests. They bite chiefly in the evening and early in the morning, and may be very bothersome on cloudy sultry days. They are quickly dispelled by cold weather.

Protective Measures

It is one thing to slap a mosquito now and then on a warm summer evening in Ohio — but quite another thing to run from a cloud of polar mosquitoes and black flies so thick a man can scarcely see through them. Don't be foolhardy enough to think that you're tough enough to get along without a headnet. You owe it to yourself, and to the work you must accomplish, to avoid bites, the danger of infection from scratching, and the wear and tear on your nerves by making certain that a good headnet and gauntlet gloves are part of your equipment.


Wear a helmet
Wear light-colored clothing
Wear gloves
Use a repellent
Tuck your trousers in your boots or wear leggings

PROTECT YOURSELF

Headnets — Headnets must stand out from the face so that they do not touch the skin. It is most practical to wear them over a fatigue hat. You can sew them to the brim of your hat or attach them with an elastic band that fits around the crown. They should be made of the best grade of fine-meshed bobbinet (at least 18 meshes to the inch). Ordinary mosquito netting is not suitable for headnets, because it is not tough enough. Black is the best color, for you can see through black more easily than through green or white. At the bottom, there should be a strip of tough cloth encasing a drawstring, for tying snugly at the collar. Hoops of whalebone or ratten, or a broad coil of lightweight flat steel wire fastened on the inside, will make the net stand out from the face and at the same time allow it to be packed flat. Headnets are hot and disagreeable at best. The larger they are, the better the ventilation. But very large nets will not do for wooded country where they may become snagged on brush. Some nets are provided in front with a celluloid window. Others have a special opening for a pipe. The most durable and airy ones are made of wire screen, with cloth and draw-strings at the bottom.

Gloves - Gloves are hot, but are a necessity where flies are really numerous. Old kid gloves with a 6-inch gauntlet closing the gap at the wrist, and ending with an elastic band halfway to the elbow, are best. For fine work, kid gloves with the fingers cut off are good. This requires a liberal use of fly dope on your fingers. Cotton work-gloves are better than no protection at all, but mosquitoes will bite through them. Treating the gloves with a creolin solution will help.

Clothing -It is well to bear in mind that mosquitoes do not often succeed in biting through two layers of cloth; hence, a lightweight undershirt and long underwear will help. To protect your ankles, tuck the bottoms of your trousers into your boots,or wear some sort of leggings. Tests show that light-colored clothing is better than dark. Navy blue, red, or black are apparently more attractive to mosquitoes, perhaps because they make the pests almost invisible to their enemies or because darker colors have greater capacity to absorb heat. The white camouflage or suntan clothing now issued by the Air Force is one form of protection against flies. Tan-colored socks offer less likelihood of ankle bites than dark socks. If you lose your headnet, make the best of a bad situation by wearing sun glasses with screened sides, plugging your ears lightly with cotton, and tying a handkerchief around your neck.

It is a good idea to spray your clothing with aerosol insecticide at night — it will help a lot to keep out no-see-ums during the day when you are working.

Fly Repellents - Fly dope will help keep the pests away. One of the best new preparations is dimethylphthalate, now being used by the Air Force. It gives good protection for a little less than two hours after application, even when you perspire liberally. Various other mixtures have been used from time immemorial. Many a fisherman, woodsman, and explorer has evolved his own favorite recipe. Many home-made preparations can be used when a regular repellent is not at hand. Those containing oil of tar are the most effective.

Tents - Tents should have a complete cheesecloth lining or bobbinet curtains at the front if they are to provide real comfort. Ordinary mosquito netting is not satisfactory. Cheesecloth with a circular or oval opening that can be closed with drawstrings may be sewn into the front of the tent. A bobbinet curtain, weighted with shot at the bottom so that it will hang to the ground serves the same purpose. To by flyproof, the tent must have a complete cloth floor, or a foot-wide cloth extension, which may be held down with sod, extending inward from each wall. A tarpaulin laid over this extension makes an extra-tight floor. There must not be the slightest rip or hole in the tent, as mosquitoes quickly find openings of this sort. Before entering, brush the flies vigorously from the front of the tent and from your clothing.

Beds - Make the beds flyproof if the tent is not. Bobbinet is best. Make certain that the net will be held away from the face and body of the sleeping person (nets should be held from the sides of the bed). A net covering the whole bed or sleeping bag is more satisfactory than one covering the head only.

To keep no-see-ums out of the bed nets during the day, spray the nets with aerosol insecticide and put them in an air-tight bag. Spray the beds and nets at night again, for no-see-ums can get through the nets.

Smudges - Smudges when properly made will furnish relief for a short period. For a good smudge, clear away all debris and humus down to the mineral soil to prevent ground fire and build up a brisk blaze of dead wood. Let this burn until a bed of coals is formed. Meanwhile, gather a supply of additional fuel as well as a mass of green ferns, leaves, twigs, damp leaf mold, and rotten wood. Place new dry wood on the coals and allow it to burn up brightly, then cover the whole fire with part of the green material. The dense smoke that now arises will banish the black flies instantly and repel most of the mosquitoes.

Built in a pail or pot, a bucket smudge is very useful since it can be moved easily in case the wind changes, or can be taken inside a tent until the flies are driven out. Put about two inches of sand in the pail before starting the fire. When you take a bucket smudge inside, be very careful to prevent setting the tent on fire.

Of course, if you are not an expert on smudges, they will probably run you out of the tent faster than the flies. Moreover, they constitute a fire hazard. Consequently, the best method is an aerosol insecticide bomb.

Spraying - Fumigation is a means of killing flies. Burning powdered jimson weed in a tent will stupefy mosquitoes without injuring human beings. The jimson weed is most effective when 8 ounces of it, mixed with 2 1/2 ounces of saltpeter to facilitate burning, is allowed for every 1,000 cubic feet of tent interior. Commercial fly spray is also good. Be careful not to strike a light after spraying a room, since an explosion may occur.

The most convenient lethal spray for use indoors is the aerosol insecticide dispenser. Operation for a few seconds is sufficient to kill all mosquitoes in a pyramidal tent, and one dispenser will suffice for 200,000 cubic feet. This spray is non-inflammable and will not harm human beings.

Food - Keep all food covered, especially meat, as long as insects are prevalent, and don't be too hasty in stopping these precautions. It is surprising how late in the fall insects are around.

Treatment of Fly Bites

Soaking in soapy water is the easiest and best all-round treatment of fly bites. You may use cold wet compresses made with baking soda. ammonia, glycerine, alcohol, iodine, moist soap, and even naphthalene moth balls. You can relieve the itching with calamine lotion.

As has been previously pointed out, black fly bites may stay open and continue to bleed for some time. There is, consequently, real danger of infection, especially from scratching. Occasionally, on a hot day at the height of the black fly season, a badly bitten neck will swell noticeably. Careful bathing in cold water, plus application of a wet compress will reduce this inflammation.

Fly Control Measures

Can these flies be exterminated? The answer is — No — not in the polar regions; these regions are too vast. There is too much shallow water and other favorable breeding places. You may cut down the local abundance of black flies slightly by keeping streams free from obstruction and spraying DDT by plane. The larvae cling to rocks, roots, and fallen branches which accumulate at riffles. However, black flies breed only in swiftly flowing streams; avoid camping near them in black fly season. On the tundra, where innumerable ponds meet the eye in all directions,the situation is hopeless with regard to mosquitoes. Here, there is actually more water-surface than land surface. Most of the water is ideal for mosquitoes, for it warms up promptly in the spring. For every pool you can cover with oil there are a thousand you can't see. For every wriggler you can destroy, ten million will survive. The best you can do in this sort of place is to put on your headnet, line your tent with cheese-cloth, use repellents and sprays, and face the quiet summer days with as stout a heart as possible.

FROSTBITE

Frostbite is the freezing of some part of the body. It is a constant hazard in sub-zero operations, especially when the wind is strong. Frostbitten skin becomes whitish and the flesh becomes stiff. As a rule, frostbite causes numbness rather than pain. The parts that are most easily affected are the cheeks,nose, ears, chin and forehead, wrists, hands, and feet. Prevention is a matter of taking proper precautions. If and when you become frostbitten, thaw the frozen parts promptly. Neglected frostbite ultimately causes gangrene.

Frostbite may be classified according to its degree of severity. First degree frostbite is a superficial freezing which results in no loss of tissue. It usually covers a small area with a waxy white skin discoloration. Second degree frostbite is a moderate freezing of tissue which results in the loss of only the superficial layers of skin. Its appearance is much the same as that of first degree frostbite. Third degree frostbite is a deep freezing of a relatively large amount of tissue which results in eventual death and loss of tissue deeper than the superficial skin layers. During the frozen stage, a third degree frostbite appears the same as the second degree, although it is of a much greater extent. Upon thawing, there is mottling, and evidences of gangrene often appear early. The amount of pain is no indication at all of the severity of the frostbite.

Causes

Frostbite is caused by exposure to severe cold, particularly in wind. Contributing factors are loss of body heat and poor blood circulation, the latter a condition occurring naturally or caused by overtight clothing. Clothing that is wet, either because of external causes or sweat, is especially dangerous. Insufficient clothing also adds to the risk. Further important contributing factors are shock, extreme fatigue, improper diet, and excessive carbon monoxide.

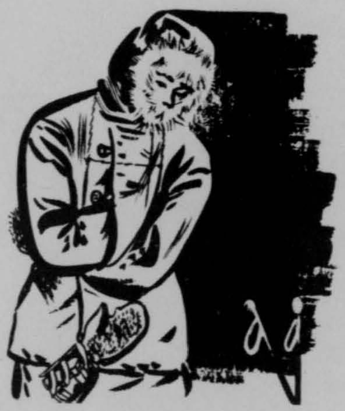
Treatment

The sooner you begin treatment of a frostbitten part the better. Treatment of first degree frostbite requires no procedures other than simple thawing of the part that is frostbitten. Where it is possible, the best treatment is exposure of the involved parts to air at approximately 70°F. In the field, thaw minor frostbites of the face by holding a warm bare hand against it. To thaw a frozen wrist, grasp it with your warm hand or stick it inside your pants. Thaw frozen hands against your chest, under your armpits, or between your legs at the groin. If you need to thaw a frostbitten wrist, ear, or parts of your face, and your hands are cold, warm them first as just described. Thaw frozen feet by holding them against a companion's belly or between his thighs. Change to warm, dry, footgear or, if these are not available, remove the cold shoes and socks and wrap your feet with skins or sleeping bags.

Treat second degree frostbite in the same manner, but protect the injured area by dry, loose, sterile bandages and foot cradles where necessary. Place the injured area in a comfortable position, but never immobilize it by the use of pressure dressings. Elevate frozen limbs slightly to help the circulation.

You may treat third degree frostbite in the same manner, but of course gangrene is usually a complicating factor and treatment will definitely involve medical assistance. Recent methods of treating third degree frostbite, such as the use of decoumoral, heparin, histidine, and sodium ascorbate have not been sufficiently tested to permit strict evaluation of them. Even medical officers should use them only when they have strict and accurate laboratory control facilities and experience in their use.

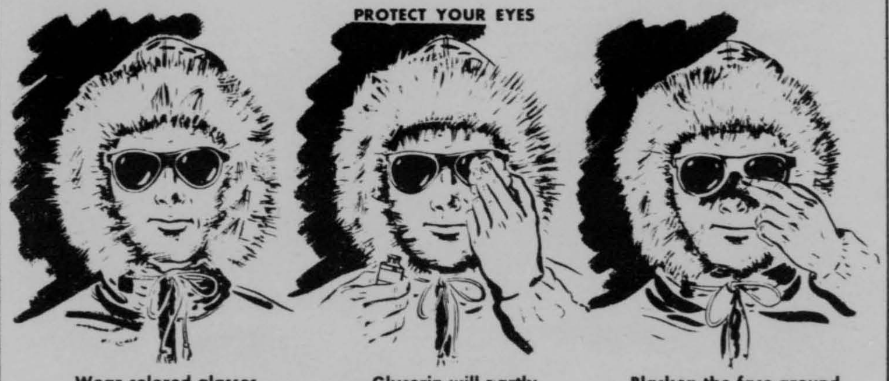
Never rub a frostbite. This breaks skin tissue, causing open wounds, and in sub-zero temperatures wounds heal very slowly. Bending frozen arms, legs, or ears also breaks skin tissues. Never apply snow or ice - they increase the freezing. For the same reason, never warm frozen limbs in kerosene or oil unless you know their temperature accurately, as these liquids may be so cold that they will increase the frostbite. On the other hand, do not get too near a hot stove or other source of heat or use hot water to thaw a frostbite. Too rapid thawing increases pain and damages skin tissues.



Thawing Hands.

When frostbite is accompanied by breaks in the skin, put an ointment like boric acid or vaseline over them and cover with a loose dry, sterile bandage. If infection continues, you might have to take sulpha medicine orally, as directed by a physician.

A burning sensation like that of sunburn follows the thawing of a frozen part, and the treatment following the thawing is the same as that for sunburn. The thawing of serious frostbite may be very pain-



PROTECT YOUR EYES

Wear colored glasses constantly

Glycerin will partly prevent clouding

Blacken the face around the nose

ful. Do not break the blisters that sometimes develop -a medical officer should open them. If they happen to break, trim off the dead skin with scissors and treat them as you would an open wound or burn. Always report to the Dispensary for any degree of frostbite. To soothe post-thaw burns, apply a good burn ointment, preferably lanolin.

Prevention

Keep your clothes loose to allow free circulation of air. This keeps them dry, and is the most important method of frostbite prevention. Protect yourself as much as possible from wind blast. Be careful also not to become overly fatigued and lose your body heat reserve. Avoid becoming over-heated, for excessive sweating means soaked garments. Should you get wet, change as soon as possible to dry apparel. When you do heavy work, loosen your clothing and throw your parka hood back. During the pause, however, put on extra clothing to prevent chilling.

At all costs, keep your feet and hands warm and dry. Your shoes or mukluks should be big enough to allow two to five pairs of socks without binding. Insoles of felt or senna grass contribute to dryness. When you make camp, change at once to dry footgear and lie so that your feet are nearest the fire. Wear heavy wool mittens with outer mittens of windproof cloth (such as canvas).

There is some dispute as to the advantages and disadvantages of wearing a beard. Some feel that it helps because it serves as external insulation; others that moisture from the breath collecting on it converts it into a virtual ice mask. It probably depends on your own individual preference and the size and thickness of the beard you grow. If you wear a beard, keep it clean and combed. If you don't wear a beard, clip your facial hair rather than shave. When it is necessary to shave, you can avoid chapping by shaving before going to bed rather than in the morning and by applying a thin film of lanolin to your face to restore natural oils.

To guard against a frozen face, wear a parka hood that projects well beyond your face; you can adjust the hood to shut off the wind. You can protect your face also by the use of a wind proof cover over the lower part of it. "Make faces" from time to time and touch your face to test for stiffness. Also watch your companions' faces for tell-tale spots. To maintain good circulation in your ears, press them forward now and then.

Keeping in tip-top physical condition through adequate rest and proper diet is a major frostbite preventative. Alcohol increases the risk of frostbite because it seriously disturbs a man's judgment, his body's normal heat production, and its control of body temperature. Never drink alcohol before going out into the cold. As far as satisfying warmth is concerned, a cup of hot chocolate will go further.

Cold Exposure

Cold exposure, sometimes termed advanced general freezing is evidenced by muscular weakness, fatigue, stiffness of limbs, and overpowering drowsiness. The victim's sight grows dim; he staggers, falls, and becomes unconscious. If pulse and respiration are detectable, recovery is possible even though the body is rigid.

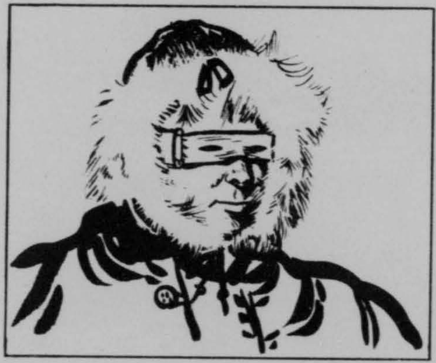
It used to be thought that treatment of cold exposure consisted of a very gradual rewarming of the body. Lately, however, it has been discovered that the best treatment is rapid - not gradual - warming. The victim has suffered a loss of the body heat reserve, and warmth must be restored immediately to help him recover. The best treatment, therefore, is hot baths and hot stimulants. An effort must be made to bring the patient back to normal body temperature as rapidly as possible. Such treatment is vital even when the patient hasn't been thoroughly overcome by cold exposure. Thus, if a person has been frostbitten after having been out for a long time in the cold, it is better to treat him for the cold exposure first, then for the frostbite. A simple and thoroughly reliable method for determining whether a person suffers from cold exposure - or hypothermia, the medical term - is to take his oral temperature. If it is below 96°, treat him for cold exposure.

All the frostbite preventatives apply as well to hypothermia. Proper clothing and good physical condition are particularly important. Clothing that is adequate, loose, and dry helps to retain body heat. Eating well and getting enough rest are equally important in preventing the rundown physical condition that invites the risk of freezing to death.

Snow Blindness

Snow blindness is both very painful and wasteful of time but with proper care you can prevent it. Make every effort to avoid the first attack, because it makes you more susceptible to others. Recurrent attacks may permanently impair your vision. In the polar regions, delays are serious and often dangerous. For this reason alone, a snow-blinded person is a liability. With a slight attack, he must lie over for at least a day. A severe attack means longer halt. The victim's usefulness, moreover, is reduced even after he is again able to travel.

The cause of snow blindness is an overabundance of light produced by reflection or glare from snow. Over-



Improvised goggles.

cast days as well as sunny ones are snow-blinding days; so also are days of light fog. Keep in mind that snow blindness may result from very short periods of exposure to glare. During overcast days, there is multiple reflection back and forth between the cloud ceiling andthe snow, and there are no shadows, causing the ground tc look level. This causes straining of the eyes and makes them more susceptible to snow blindness.

If your eyes feel sandy, burn, grow red, fail to focus properly, and become increasingly sensitive to light, stop using your eyes. These are the first symptoms of snow blindness. Sometimes, you may not have any symptoms during the day of exposure but may be awakened by a terrific headache about three o'clock the next morning. The final state is intense pain.

Keep the victim of snow blindness in a dark place or bind his eyes with a dark bandage. A cold compress is helpful. Have him rest until recovered. If traveling, blindfold and lead him.

Colored glasses are the surest means of preventing snow blindness. Heavy horn-rimmed Air Force goggles, which are rose tinted, give ample protection with little eye strain or fogging. For blizzard conditions, a leather-lined plastic or metal slit-goggle is useful. Eskimo goggles have the special virtue of not frosting over, but they limit the field of vision. You can make these of wood by burning or cutting out slits large enough to admit a half-dollar. Place one of these over each eye. Keep them on with a cord about the head. You can make glare shields by Cutting T-shaped slitsin thin pieces of wood or shells. Bind the "lenses" together and keep them on with a cord.

Wear colored glasses (or their equivalent) constantly for daytime operations in snow or ice-covered regions, and carry spares in case of breakage. When your glasses cloud or frost over, resist the impulse to remove them or to peer around the rims. A thin coat of glycerin on the lenses will partly prevent clouding. If you are without an anti-clouding preparation, keep the glasses on, removing them only occasionally to clean them; have a handkerchief always handy for this purpose.

Blacking your nose and around your eyes, as well as looking at dark objects as you travel, helps somewhat to reduce glare, but remember, these are merely extra precautions, and are not a substitute for dark glasses.

Sunburn

Sunburn is a major source of discomfort in summer operations where there is much snow or ice. It is caused both by the direct rays of the sun and by reflection of light from snow and ice surfaces. Lips and nostrils are especially susceptible. Sun-blistered lips that become infected can produce serious results. Use lanolin cream to soothe the sting of sunburn. The best preventive is the application of a mild opaque ointment such as petroleum jelly or lanolin along the red line of your lips and at the corners of your nostrils. Resist the temptation to remain stripped to the waist longer than a few minutes on a very sunny day. Wear at least a light garment at all times. Remember that it is the combination of direct and reflected sunlight that causes the bad cases of sunburn.

Carbon Monoxide Poisoning

Whenever you use a stove, fire or gasoline heater indoors, there is danger of carbon monoxide poisoning. Many cases have occurred among ground crews working in planes and using gasoline heaters for warmth. Carbon monoxide is a deadly gas and is particularly dangerous because it is odorless. Make sure, therefore, of a steady supply of fresh air in your living and working quarters.

Generally, there are no symptoms, With mild poisoning,you have a headache, dizziness, yawning, weariness, nausea, and ringing in your ears. Later on, your heart begins to flutter or throb. But the gas may hit you without any warning whatever. You may not know that anything is wrong until your knees buckle. When this happens you may not be able to walk or crawl. Unconsciousness follows; then death. Or you may be asphyxiated as you sleep.

In case of carbon monoxide poisoning, get the victim into fresh air at once but keep him warm. In winter, fresh air means merely circulating air that is free from gas; exposure to outdoor cold might cause collapse. If the only fresh air is outdoors,put the patient in a sleeping bag for warmth. Hot water bottles and hot pads are helpful in maintaining body temperature. Keep the patient absolutely quiet and warm for at least a day. Never exercise a carbon monoxide victim. This further reduces the precious supply of oxygen in his blood, and increases his demand for it. If a gassed person stops breathing or breathes only in gasps, start artificial respiration immediately. In the latter case, your movements must be carefully synchronized with the victim's gasps. Use pure oxygen and a mask if available. Breathing pure oxygen removes carbon monoxide from the blood faster than does breathing air. The only preventive of carbon monoxide poisoning is proper ventilation.

Polar Guide Rest

IS YOUR INTELLIGENCE MAPFILE COMPLETE?

Maps available thru regular channels (See AFR 67-3 4 October 48).

AMS 8005 (Key #113105) United States Military Installations overprint.

AMS 8202 series, scale 1: 2 1/2m:

Key #665496 Sixth Army Area
Key #665497 Fifth Army Area
Key #665499 Fourth Army Area
Key #665500 Third Army Area
Key #665498 First And Second Army Areas

Maps are an AMS 1948 issue showing cities of 1st,2nd and 3rd importance, roads (data as of 1946), airfields, installation classifications, airfields and seaplane anchorages.
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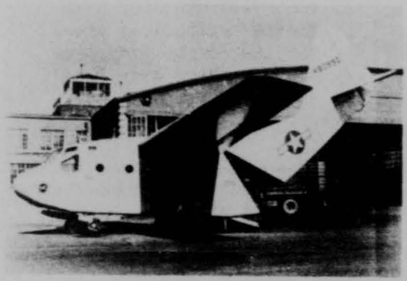
XC-123's FIRST FLIGHT MAY MARK END OF TOWED-CRAFT ERA,

ASSAULT TRANSPORT DESIGNED TO REPLACE GLIDERS

The first flight of the Chase XC-123 may have marked the end of the glider era, Air Materiel Command officials believe. Glider men in AMC's Engineering Division have long sought a means of ridding themselves of the parasitic glider which always depended on a C-47 or other tow plane to become airborne. They now think the Chase-C-122, which can carry 8000-lb of equipment 750 miles, and the XC-123, which can carry twice that weight the same distance, can do the job previously performed by their glider counterparts.

Despite the addition of power plants, gasoline, and oil, the assault aircraft can carry the same combat loads as towed craft. Besides, it was pointed out, the assault gliders can return to their home bases under their own power.

In describing the evolution of the latest Chase ship, Cargo Branch men at AMC trace it back to two wartime experiments, the PG-2A, built by Northwest Aeronautical of St. Paul, Minn., and the XPG-3A, built by Waco. Both were equipped with power plants. The former had two Ranger engines; the latter was fitted with two Jacobs propeller-turners.



January 1945 saw Chase's first model, the XCG-14 all-wood non-powered glider towed into the air for the first time. Nine months later, its offspring, the part-wood, part-metal XCG-14A also was borne aloft. The XCG-14 was equipped with a removable tail to facilitate loading of equipment. In the XCG-14A, the tail was modified so that it swung upward, an improvement in ease of loading.

By December 1947, the B-18A, another Chase craft made completely of metal to reduce deterioration and minimize the effects of possible enemy incendiaries, had taken to the air. This model became the C-122 when two Wright R-1820 engines, each rated at 1475 hp, were added to late production versions. The G-18A had another tail change, with the wide rear door swinging up and the loading ramp down, so that wheeled combat vehicles could be driven right into the ship. Still to come is the XG-20, with twice the capacity of the G-18A (16,000 lb as against 8000), and it is from this glider that the XC-123 was built.

The new Chase XC-123, the tail of which stands more than three stories high (32 ft 8 in.), has a wing span

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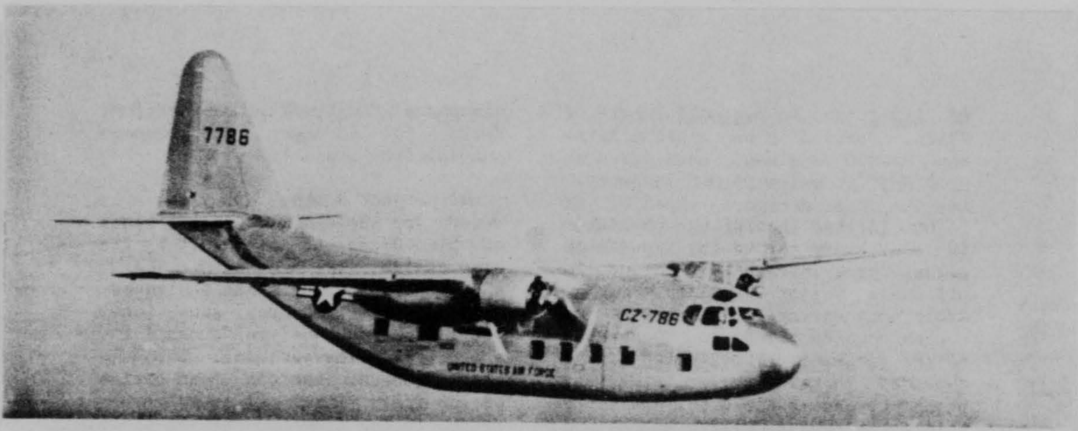
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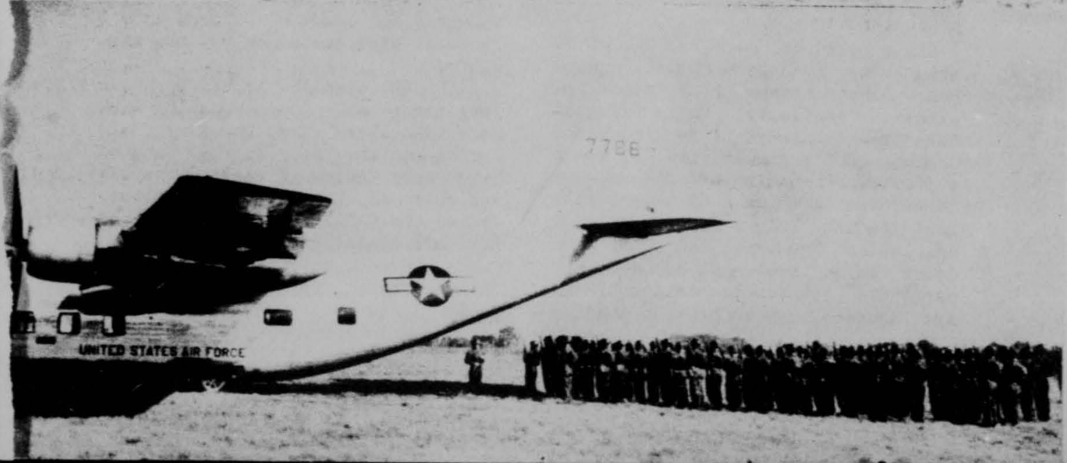
7786
UNITED STATES AIR FORCE

of 110 ft and an over-all length of 77 ft. Powered by two Pratt & Whitney R-2800 engines, each rated at 2100 hp, it weighs 25,000 lb empty. Despite its designed capacity of 16,000 lb, the manufacturer believes it can carry a useful load much greater than its empty weight.

Equipped with the unique loading ramp which proved so successful in the C-122 and G-18A, the assault transport can carry a 155mm howitzer and a truck, or any other comparable combination of wheeled combat units after they are driven into the ship.

For simplicity in loading other cargo, the ramp can be swung down to any intermediate tailboard level, and the transfer of cargo from truck to palee is made as simple as loading trucks at a warehouse platform. To load heavy shipments or vehicles without power, a cable can be passed from the load at the rear of the plane through the cargo hold, out the nosewheel well, and hooked to an external power source to haul the heavy objects aboard.

As a personnel carrier, the giant Avitruc can transport 62 fully equipped combat troops or 50 litter patients. Basically, it is designed for the transport of forward-based combat and engineer troops, troop supplies, evacuation of wounded, and other uses to which a transport with fast-loading characteristics is adaptable. Personnel can enter side doors which are also suitable for parachute jumps. The tail surfaces are mounted high to provide loading clearance for trucks, and therefore would not endanger paratroopers jumping from the ship.

AMC project engineers say the main reason for the excellent performance of the Chase assault craft is its wing design. The wing on the XC-123 and its predecessors has a high aspect ratio, providing exceptional short-field take-off performance and a moderate wing loading. With all this, however, the plane can cruise at 200 mph. Like all assault aircraft, it can also land within short distances on improvised runways.

Other features of the Avitruc include a tow-release mechanism both in the nose and tail (making the XC-123 adaptable as a glider or tow airplane); engine installation which permits removal of the entire nacelle and its replacement within 45 min; jettisonable self-sealing fuel tanks (for the elimination of fire hazards in crash landings); specially fitted windows in the cockpit and cargo compartment which can be removed with one motion for quick exits in ditching; and a high degree of crash protection offered the crew by the structure of the pilot's cockpit.

The cargo-compartment floor is specially designed for cargo handling. Numerous high-strength tie-down fittings make it possible to secure loads against damage even though crash loads of as much as 8 g factors are sustained by the aircraft.

Although assault aircraft are a long-range AMC project dating back more than five years, the Army field Forces and the Troop Carrier Command have been quick to realize the advantages of this type of airplane. Since the C-122 first appeared, the AMC officials say, those organizations have been anxiously awaiting future versions for their use.

CADO 1 Nov 49 Uncl

SOVIET SECRET MEASURES

No country in history has established such extensive categories of state secrets as the Soviet Union did in June, 1947, two years after its avowed enemies - Germany, Italy, and Japan - had been destroyed as great powers. Few countries have manifested such an obsession for secrecy, an obsession whichhas been officially intensified concurrently with a campaignto end "subservience" to foreign influences and admiration for the achievements of other countries. The Soviet security measures go far beyond the limited secrecy measures instituted by other countries. The comprehensive character of Soviet censorship, particularly its concern with matters which on the surface lack military significance, necessarily suggests that the Kremlin:(1) Fears that such information is at variance with the vague claims of economic, cultural, and social accomplishments advanced by the Soviet Government, and/or (2) is carrying on activities which are at variance with the Soviet Union's postulations of peaceful intentions and desires to collaborate with other countries.

The extravagance of current Soviet claims probably explains much of the present censorship blackout on all parts of Soviet life. If conditions were really so superior within the borders of the Soviet Union there would be no need to prevent foreigners from testing with their own eyes the veracity of the Communists' claims.

The postwar period has witnessed a feverish intensification of spy scares in the USSR and a progressive stiffening of laws restricting the flow of information. A new list of state secrets was issued in June, 1947. It included military, economic, and scientific information and contained a significant omnibus clause permitting almost anything to be classified as secret. Typical of its contents is the clause classifying scientific information as secret:

> The discoveries, inventions, technical improvements, research, and experimental work in all branches of science, technology, and national economy (are secret) until they have been finally completed and permission to publish them has been given.

At the same time a law was passed increasing the penalties for divulging secret information. Passage of this legislation furnished an occasion for many speeches and articles calling for increased vigilance against foreign spies. These laws did not affect the release of information by the government, but their enactment signified that the government was far from relenting in its stern attitude toward any seepage of information about the USSR to the Soviet population and the world outside.

At the end of 1947 a law was passed which required that relations of representatives of foreign governments in the USSR with Soviet citizens and institutions be channeled through the USSR Ministries of Foreign Affairs and Foreign Trade. This reduced further the small area of informal contacts between Soviet citizens and foreigners, because a large part of the foreign colony in the Soviet Union now consists of representatives from foreign governments. In any case, the law was interpreted by many Soviet citizens as applicable to all foreigners. This interpretation was no doubt reinforced by the ideological campaign against foreign influences and by the fact that in February, 1947, the Presidium of the Supreme Soviet had banned marriages of Soviet citizens with foreigners.

The pressure to isolate foreigners in the USSR from Soviet citizens was made more severe in September, 1948, when the Soviet Government instituted new regulations governing the physical movements of foreign representatives. These regulations barred three-quarters of the Soviet Union from visits by foreign officials. Foreign correspondents and most other foreigners in the Soviet Union are virtually confined to Moscow and its environs.

No comprehensive economic statistics have been published by the USSR since the prewar period. Current claims of economic achievements are given in terms of percentage increases over some earlier attainments. Since the base figures have not been published, the communiques lack real significance. Data on purchasing power and cost of living have been suppressed since the 1920's. Penal statistics have been carefully concealed for the last twenty years of the Soviet regime. When figures on the number of persons in penal institutions were published, they showed a tendency to increase, and the cessation of publication in the late twenties was followed by repressive measures, such as the liquidation of the kulaks, which increased greatly the number of inmates in "corrective labor" camps. Even educational statistics are subject to censorship.

The laws establishing censorship have the double aim of concealing data which the government does not want disseminated and of insuring that the ideology conforms to the correct and most recent line. The fact that almost all the media of communications are monopolized by Communist Party and Soviet Government organizations would seem to simplify, if not completely eliminate the need of control: In the USSR all printing equipment and even mimeograph machines are subject to registration with the police and can only be in the possession of certain groups. Sharp and precipitous changes in the Party line, however, appear to make necessary Communist censorship of even the most faithful Communists. Positive censorship control over content of publication, radio broadcasts, etc., rests with Glavlit (Glavnoye Upravleniye po Delam Literaturi i Izdatelstv, or Chief Administration of Literary and Publishing Affairs). Glavlit representatives examine all material before and after publication, and affix a permit for the appearance of given works. The sweeping nature of Glavlit's role is indicated by the statutory definition of its functions:

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>
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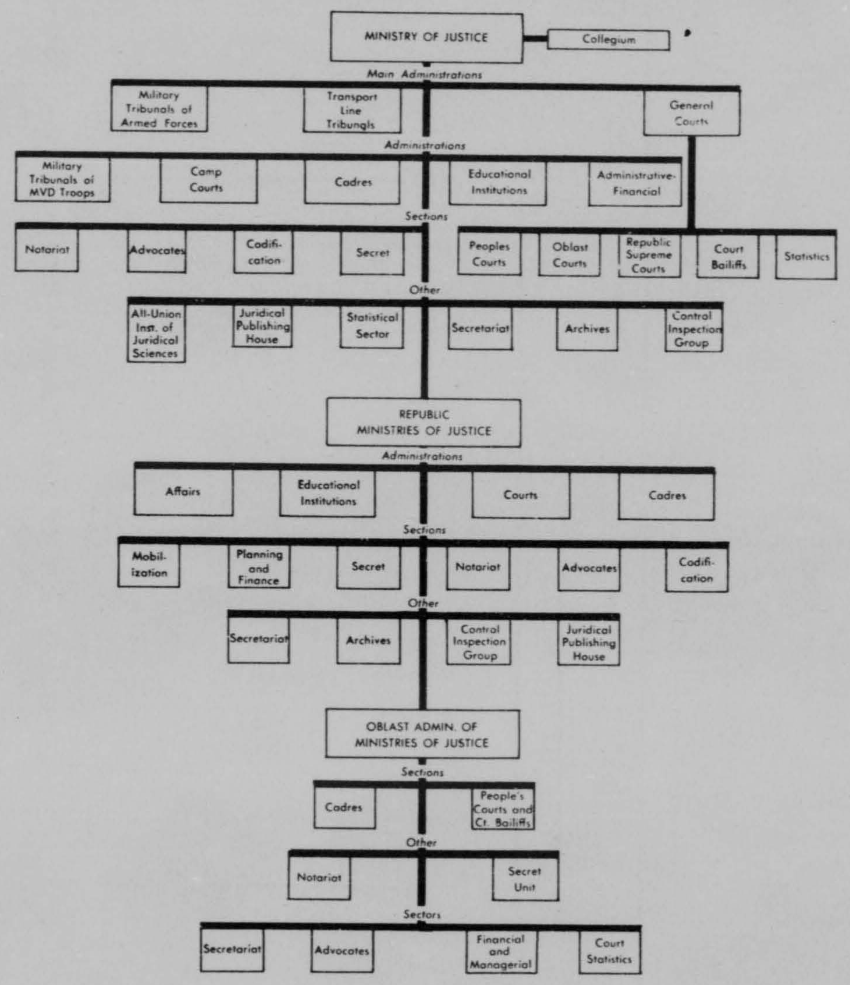
Ministry of Justice of the USSR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Transport Line Tribunals
General Courts
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Camp Courts
Cadres
Educational Institutions
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This is the eighth of fourteen charts on USSR organization of Government and Communist Party.

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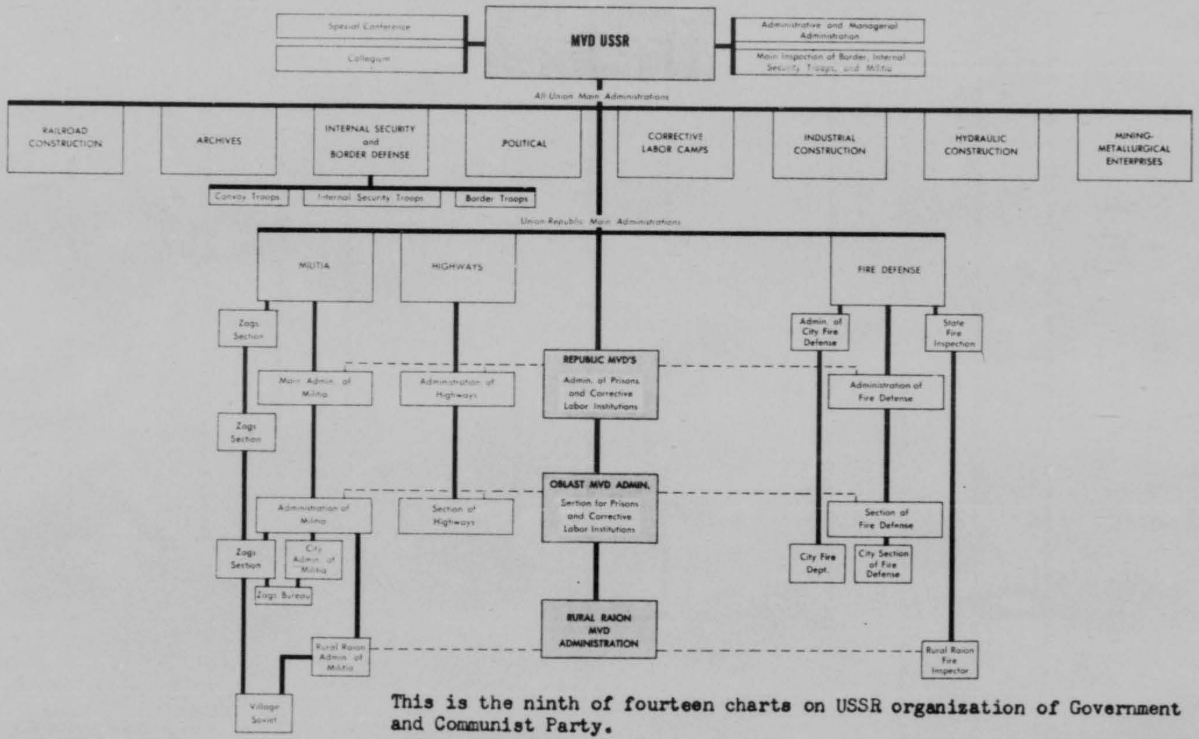
Ministry of Internal Affairs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Collegium
MVD USSR
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All-Union Main Administrations
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ARCHIVES
INTERNAL SECURITY and BORDER DEFENSE
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HYDRAULIC CONSTRUCTION
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Internal Security Troops
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Administration of Highways
REPUBLIC MVD'S
Admin. of Prisons and Corrective Labor Institutions
Admin. of City Fire Defense
State Fire Inspection
Administration of Fire Defense
Zags Section
Administration of Militia
Section of Highways
OBLAST MVD ADMIN.
Section for Prisons and Corrective Labor Institutions
Section of Fire Defense
Zags Section
City Admin. of Militia
Zags Bureau
City Fire Dept.
City Section of Fire Defense
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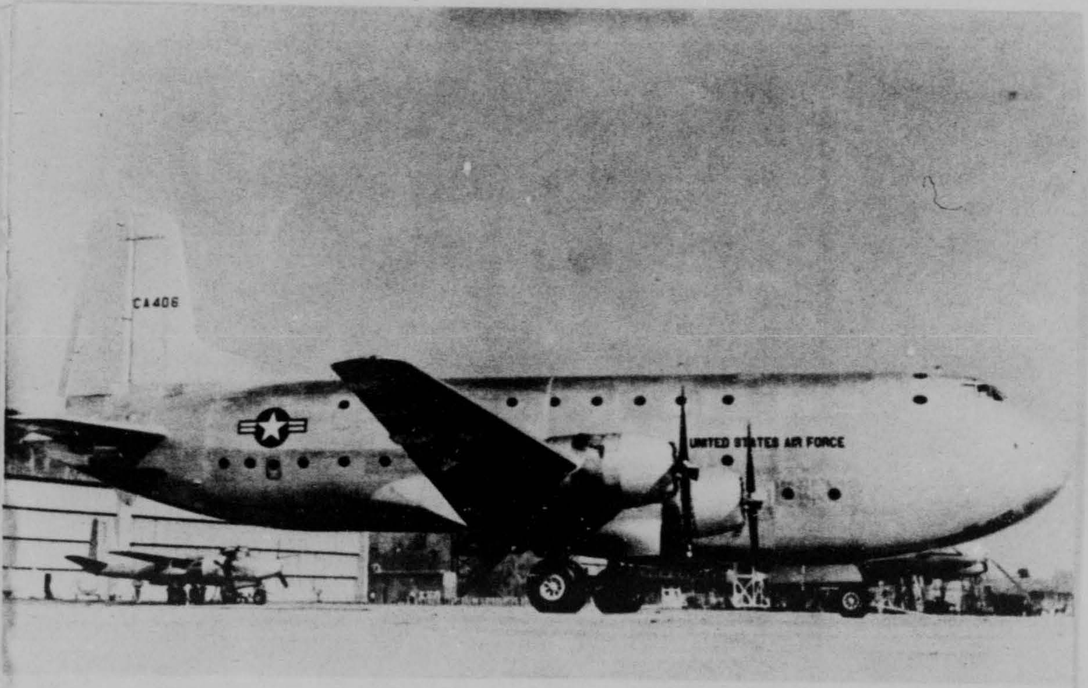
Village Soviet

This is the ninth of fourteen charts on USSR organization of Government and Communist Party.



The C-124 is two and one-half times the size of the Douglas C-54 Skymaster and has a designed gross weight of 175,000 pounds. Despite its larger size, it is expected to operate from the same short fields that the Skymasters use.

The plane is designed to carry 50,000 pounds of military cargo 850 miles and return to the base without refueling. Lesser loads to be carried even greater distances. The C-124 will be used to transport heavy ground force equipment such as tanks, field artillery, bulldozers and fully-loaded trucks - landing the equipment at "airheads" that have been secured by an airborne attack of paratroopers and glider troops.

Like the sea-going LST of World War II, the C-124 has unique clam-shell doors in the nose of the plane and a ramp for loading and unloading vehicles. The ship may also be loaded by means of an electric elevator set into the plane's underbelly, amidships.

Wing span of the new transport is 173 feet three inches; length, 127 feet two inches, and it is 48 feet three inches high. The cargo hold is 13 feet wide, 12 feet 10 inches high and 77 feet long which provides more than 10,000 cubic feet of cargo space. Four Wasp Major engines provide 3,500 horsepower each at takeoff.

As a personnel carrier, the interior of the C-124 may be quickly converted into a double - deck cabin with a capacity of 222 troops and their field equipment. When used as an airborne hospital 123 litter patients, 45 ambulatory cases and 15 nurses may be carried.

The Air Force has ordered 29 production C-124's from the Douglas Aircraft Company from Fiscal Year 1949 funds. Taxi tests on the prototype have begun and its maiden flight was scheduled to take place before the end of November.

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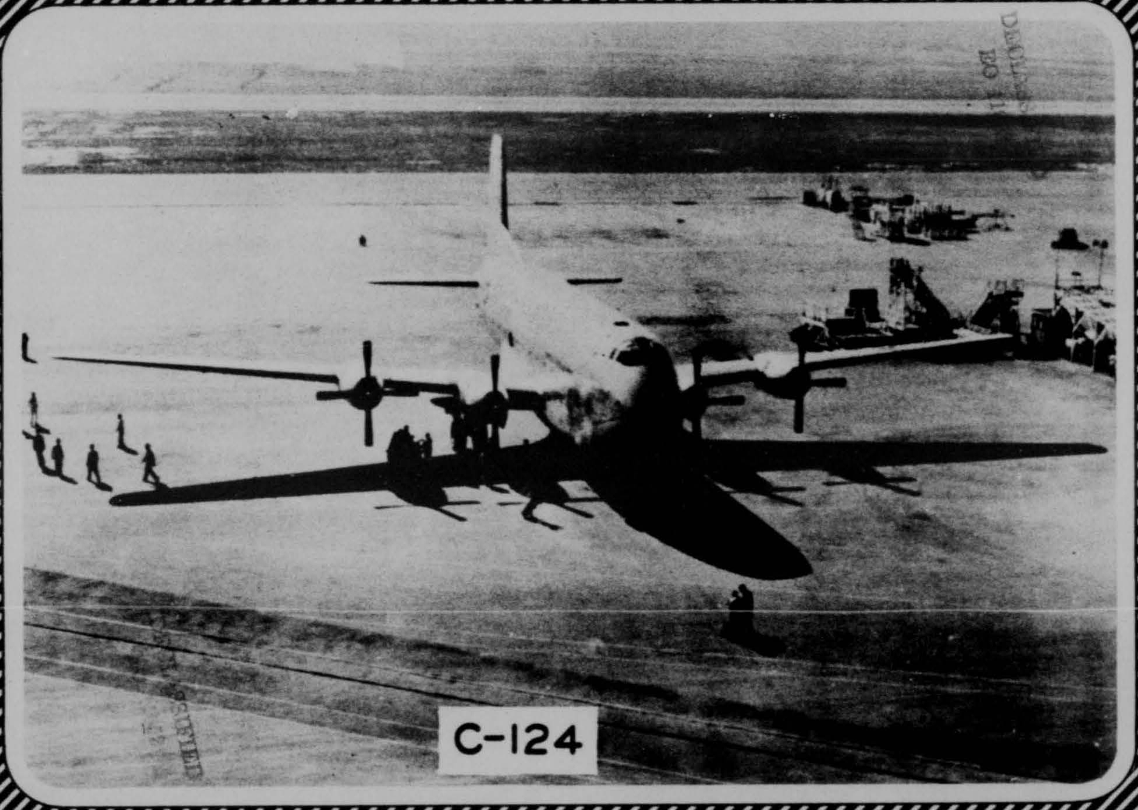

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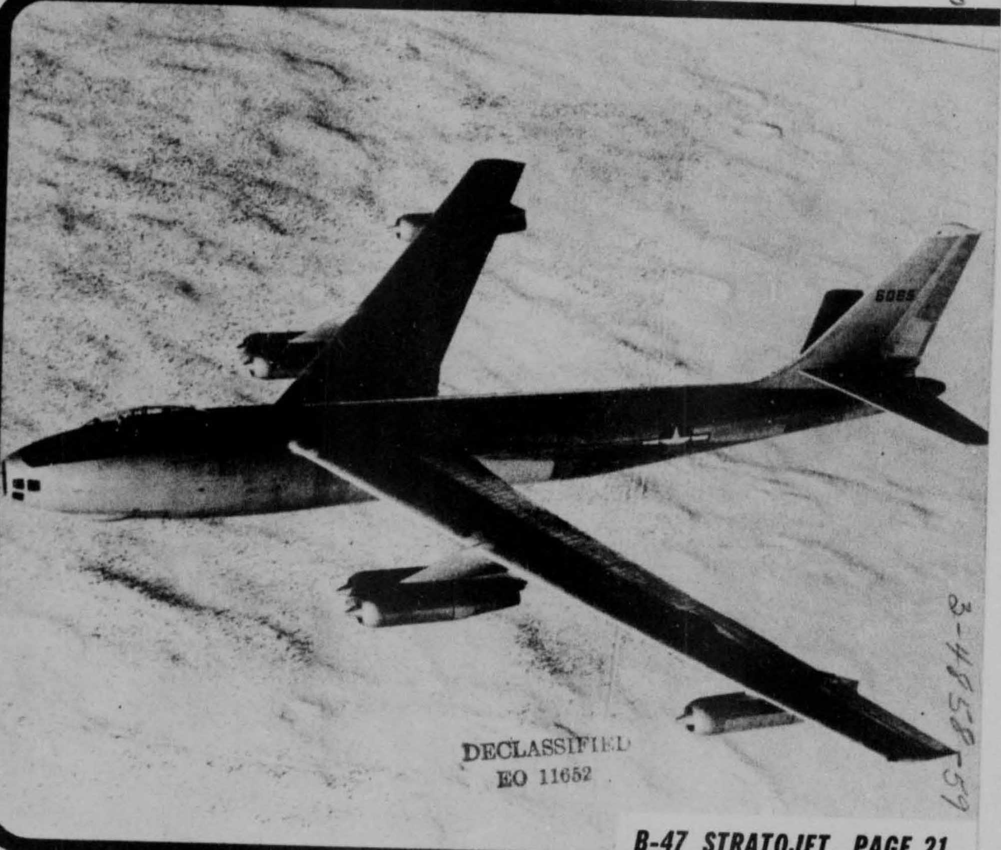

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2. Intelligence Training
3. Alaska
4. Warfare Deterrents
5. Southeast Asia
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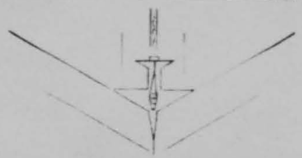

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1. To provide timely data regarding new techniques, practices and general information whereby intelligence personnel can maintain proficiency.
2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

Two types of material are solicited for publication:
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NATIONALITIES IN THE SOVIET ARMED FORCES

Principal Type of National Unit That May Continue To Appear is One Which will form Nucleus for a Projected Foreign Soviet Dominated Military Establishment

Of the 195,000,000 people who live in the Soviet Union, only about 60 percent are Russians. The remaining 78,000,000 include many national groups, ranging from Belorussians to Bashkirs. Antipathy to the Soviet form of government, traditional distrust of the Russians, and technological and social backwardness limit the military value of these ethnic minorities.

Soviet policy with regard to the utilization of these ethnic minorities in the Armed Forces has varied according to political expediency. At times when it has been advantageous to appeal to the local national interests of these groups, units with national composition and designation have been favored. Foreign military groups, such as Polish and Czechoslovak units, have been formed on Soviet territory, to serve as nuclei for Soviet-sponsored armed forces abroad. At present, national or ethnic origin normally has no official, and little practical, bearing on an individual's military service.

THE EARLY RED ARMY

The early Red Army was anything but uniform either in organization or in national composition. It was a collection of provisional units held together by the centripetal force of a few tens of thousands of energetic political commissars. There were battalions of Lettish riflemen, bands of Caucasian partisans and brigands, and even units of armed Chinese coolies, as well as a vast gray mass of Russian peasants - all leavened by politically conscious worker-soldiers from the big cities.

During the Civil War which followed the Bolshevik Revolution, various theories for and against national units in the Red Army were advanced; but, until peace came, local necessity was the urgent arbiter of the problem in each case when it arose.

THE TERRITORIAL SYSTEM

Beginning in 1924, the Red Army settled into a peacetime mold which lasted for more than 10 years. Backing a standing army of about 40 divisions were some 45 territorial or reserve divisions, which had regular cadres of from 5 to 10 percent of T/O strength. The remainder of their personnel consisted of semi-trained reservists who served for brief periods, usually not over a month at a time. These units, organized on a regional basis, eventually included no fewer than 17 non-Russian divisions.

The Soviet regime had inherited a policy of discrimination against minority peoples from Czarist Russia and, despite its Marxist equalitarian doctrines, continued to apply it, at least in part, for many years. In Czarist times, the peoples of

[redacted]

GREAT RUSSIAN - The Great Russians form the backbone of the Soviet Army and are considered the most reliable troops.

❶ LITHUANIAN - The majority of the Lithuanians are unwilling citizens of the Soviet Union.

❷ TURKOMAN - The Turkomans are representatives of an ethnic group that spreads from Turkey to Singkiang

③ AZERBAIJANI - Azerbaijanis were lukewarm adherents of the Soviet regime during World War II.

④ BELORUSSIAN - A dour lot, the Belorussians inhabit the desolate country around the Pripet Marshes.

⑤ ARMENIAN - The Armenians tend to be either fanatical supporters or implacable foes of the Soviet regime

⑥ KIRGIZ - Mountaineers from Central Asia, the Kirgiz have only a thin veneer of Soviet "culture."

Central Asia, the North Caucasus, and various Siberian aborigines - most of whom spoke no Russian - had only a colonial status and did not render military service. This practice of limiting military liability was unofficially sanctioned by the Soviets in the 1920's and early 1930's, when only Ukrainian, Belorussian, and Transcaucasian separate units were formed. The lesser breeds for all their theoretical sharing in the new enlightment, apparently were considered as still too unreliable and too untutored to enjoy full military equality.

In 1939, the territorial system was scrapped. The Red Army was rapidly expanding and becoming modernized. The half-trained and inefficient territorials were integrated into the Regular Army. To hasten training, their personnel was shuffled and reassigned. National units were jettisoned as unsuitable in the monolithic, all-union army.

EARLY WAR MEASURES

During their two years of distrustful friendship with the Nazis, before they were drawn into the war in 1941, the Soviets carried out military moves which had some bearing on the nationality problem in the Army. In 1940, they engulfed Estonia, Latvia, and Lithuania and inherited the modest armies of these three countries. For the sake of appearances, perhaps, the armies of these hapless countries were maintained substantially intact, though with a heavy dilution of Russians and Communist Balts. The Baltic generals received commensurate rank in the Red Army and were given semi-honorary assignments. One such general still occupies a quiet post on the faculty of the Frunze Military Academy.

The Cossacks, hateful symbols of Czarist repression, had lived under a cloud during the first two decades of Soviet rule in Russia. Many had fought on the Red side in the Civil War (the present Minister of Armed Forces, Marshal A. M. Vassilevski, is a Cossack, as are several other high-ranking Soviet officers), but the hostility of the unruly Cossacks to collectivization in the early 1930's seemed to confirm the Soviet leader's worst suspicions. It was not until the late 1930's that the Cossacks were rehabilitated. By 1941, Cossack cavalry units were formed, and the Cossack tradition and uniform were glorified. Most of the Cossacks served their country well in World War II, although considerable numbers of them fought for the Germans. Despite deep lingering resentment against Soviet farm policies, the Cossack villagers in South Russia generally behaved well in the face of the invading enemy. Cossack cavalry divisions fought splendidly and were awarded more than their share of citations, perhaps partly as a matter of policy.

The steady prewar tempo of mobilization before the German onslaught of June 1941 was greatly accelerated after war broke out. There were few trained reserves, and soon dozens of divisions were being activated, assigned raw fillers, and shipped to the front with only a few month's training. The careful distribution of recruits from any given region was abandoned, and divisions and even whole armies were formed on a regional basis.

Shortly after the beginning of the war, unprecedented appeals were made to what the Soviets shortly before would have dismissed as chauvinist and thoroughly un-Marxian national patriotism. Old Russian heroes became fashionable, including the early Ukrainian nationalist, Bogdan Khmelnitsky. A reflection of this exploitation of patriotism and national pride (and a convenient mobilization device as well) was the reintroduction of national Units. Many Transcaucasian divisions and a number of Turkmen, Kazakh, and other Asiatic divisions were activated and publicized. The Baltic units retained their distinctive titles and were filled with unenthusiastic Baltic recruits from labor camps and refugee camps. Buryat Mongolian units were organized in the Far East. On the other hand, apparently no Great Russian, Ukrainian, or Belorussian units bearing distinctive national titles were formed.

The Soviets' experience with their national units was not encouraging. The troops were, for the most part, only half-trained and had little zeal for the Soviet cause. Many had been drawn directly from crude, seminomadic surroundings. It was not surprising that they fought halfheartedly, deserted readily, and generally proved unequal to the demands of modern war. The Armenian units which distinguished themselves in the defense of Stalingrad and Sevastopol were exceptional.

The Germans attempted, with moderate success, to take advantage of the lack of enthusiasm found in the minority nationalities for the USSR, although they fumbled their grand opportunity of forming effective anti-Soviet units of Great Russian personnel. From prisoners of war and deserters the Germans eventually formed 2 Cossack divisions, 1 Turkestan division, and about 100 special battalions for static defense in the West, composed mainly of Ukrainians, Georgians, Armenians, Azerbaijans, North Caucasians, and Turkomans.

THE DISAPPEARANCE OF NATIONAL UNITS

The Soviet Army, meanwhile, had reached its full strength of over 500 divisions by 1943, and thereafter its personnel problem was primarily one of replacement rather than producing new units. The overburdened and inefficient replacement system worked on a bulk basis. Replacements were combed out from the interior, they were impressed in reconquered territories, and many came from battered, demoralized units that were withdrawn from the line and inactivated. Niceties of national and regional origin were not considered. Georgian divisions, for example, ended the war in 1945 with more Western Ukrainians, Bessarabians, and Belorussians than Georgians, while Georgian replacements were sent to Great Russian divisions or wherever else they were needed at the moment.

Thus, by VJ-day, the national units had become blurred, mixed, and no longer distinctive in personnel composition. The experiment with national units - somewhat embarrassing as a whole to the Soviet regime was abandoned as no longer of propaganda or practical mobilization value. There remain a few such units, including an Armenian division in the Caucasus and a Latvian division in Latvia. But in general the present policy of sending recruits to serve in units far from their homes has eliminated national units as a practical fact in the postwar Soviet Army.

FOREIGN NATIONAL UNITS

During World War II, the Soviets formed several foreign units which fought as part of the Red Army on the Eastern Front. A sizable Polish force was formed of Sovietized Poles and unwilling remnants of the 1939 Polish Army, and was committed in 1943. It was commanded by a Soviet puppet, General Berling, who has since sunk into obscurity. This Polish organization eventually was expanded into the present Polish Army. Smaller Czechoslovak and Yugoslav units were activated and sent to the front. A number of French aviators were organized into the Normandie Squadron, which fought with the Soviet Air Force. These organizations had only political significance, as a counterpoise to the various armed forces of the Allied Governments-in-exile in London.

DISCRIMINATION

Although national and racial discrimination is expressly forbidden by the Soviet Constitution, it does exist in the Soviet Union and is reflected to some extent in the Armed Forces.

Anti-Semitism, for instance, is often reported. Jews as a national group served with distinction in the Armed Forces during World War II, and they earned a generous share of decorations and awards. Yet there is evidence that a quota system is now applied to Jews in some military academies. The restoration of many Czarist army traditions and forms during the war apparently carried with it some revival of the old army's anti-Semitism.

Certain nationalities are considered unreliable by the Soviet regime because of the behavior of some of their members during the war. Shortly after VE-day, the Crimean Tatars and the Chechen-Ingush people of the North Caucasus were uprooted and moved en masse to the dumping ground of deep Siberia. Few if any men of these nationalities are now serving in the Armed Forces, and certainly none in responsible positions. The half-million Volga Germans - residents of Russia for almost 200 years - were resettled east of the Urals by the Soviets in 1941 and have scarcely been heard of since.

In general, however, apparent discrimination against members of any nationality is more the result of that nationality's generally low educational and technical level than a matter of outright discrimination. Russians, Ukrainians, Belorussians, and Armenians, for instance, possess more skills of military value in a modern army than do Kirghiz, Tadzhiks, or Yakuts. Therefore, personnel from the four first-named groups get the better assignments. Nevertheless, there are hundreds of generals in the Soviet Army whose names indicate that they are of non-Russian origin.

TRENDS

The problem of nationalities in the Soviet Armed Forces is gradually being solved by outside factors. A third generation of Soviet Asiatics and Caucasians, as well as of Soviet Russians, is growing up. Young members of the backward nationalities are leaving their nomadic and feudal surroundings and are learning to drive tractors, work in laboratories, and make steel. The unprecedented internal migrations within the Soviet Union are producing a great deal of inter-marriage, with a resultant breaking down of ethnic barriers. Asiatics are reported to be settling in Bessarabia, while the restricted areas of Siberia are teeming with transplanted Lithuanians, Ukrainians, and other peoples from the western border areas.

Thus, the need and opportunity to form national units are disappearing while present Soviet policy does not favor the practice.

As circumstances arise, groups of foreigners will continue to be organized into national military organizations as in the past. The so-called Paulus Army and various Rumanian, Korean, and other groups were established to serve as cadres for Soviet-sponsored military organizations in their own countries. On the other hand, since no major opportunity developed to employ the thousands of Spanish Republicans who were given sanctuary in the USSR in 1939 when their Government collapsed these unfortunates were pushed aside and became a diminishing band of unwanted "step-children" of the Soviet Government.

CONCLUSIONS

The USSR is gradually solving her minority problems. Also, with this solution at the national level, the special problem of ethnic minorities in the armed forces is losing significance. Two experiments with national units - - in the 1930's and during World War II - - were both abandoned as impracticable.

Certain minor nationalities, considered unreliable by the Soviet regime, are still largely excluded in the Armed Forces.

The principal type of national unit which may continue to appear in the Soviet Union is the nucleus for a projected foreign Soviet-dominated military establishment. German, Polish, Rumanian, and Korean units of this type have been formed, and later transplanted abroad.

The problem of minor nationalities in the Soviet Army is generally disappearing, and the Soviet Armed Forces are a relatively cohesive whole.

INTEL REVIEW June 1949 REST

THE BOOK SHELF

RECOMMENDED READING
FOR YOUR OFF DUTY HOURS

TITLE:	Outline of Guided Missiles
AUTHOR:	Brig.Gen. W.L. Richardson
SOURCE:	Ordnance July-Aug '49 (34-175 Bi-Mthly); pp-43-44; illus.
ADDRESS:	Ordnance 705 Mills Building Washington 6, D.C.

The significance of the guided-missile program of the National Military Establishment is elucidated. This program has been designed to provide the Air Force with superior weapons with which to accomplish the three prime missions of the USAF. These missions are: The conduct of strategic air warfare; the air defense of the United States; and the support of the other services. Military characteristics for guided missiles have been formulated to serve as goals toward which research and development should strive. Now the scientists and engineers are working to meet the performance objectives. There are two general types of guided missiles available to us today; the rocket, and the air-breathing missile. The latter is capable of much longer ranges than the former. The guidance and control problems connected with the air-breathing missile are not so difficult as with the rocket. In a program as large and complex as the guided-missile program of the N.M.E. it is necessary to avoid undesirable duplication. Co-ordination throughout the services is largely effected by the Guided Missiles Committee of the Research and Development Board.

Cado 1 Sept. 49 Uncl

SOCIOLOGICAL FACTORS IN

STRATEGIC INTELLIGENCE

People are more alike than they are different. However, there are differences in the various peoples of the world, and for that reason, among others, strategic intelligence examines the peoples of foreign nations. It examines them collectively and not as individuals.

Sociology is the study of groups of human beings - their numbers and types, the activities of each group, and their character, habits, and attitudes. The actions of human beings are largely influenced by their social institutions and customs. These include such things as family, religion, education, trade unionism, caste, position of women, aristocratic privileges, and habits of thinking, to mention a few.

Sociology, then, covers a very broad field, and, as military men, we may not be interested in all of its aspects. Hence, intelligence in the sociological field is concerned with groups of human beings, their numbers, types, activities, and character, insofar as they have a bearing on the strategic capabilities and intentions of foreign powers.

For strategic intelligence purposes, it is convenient to study groups of people under four headings: Public welfare, public opinion, labor problems, and population and manpower. Each of these points will be developed, with a somewhat greater emphasis placed on population and manpower.

PUBLIC WELFARE

The public welfare element of the sociological factor embraces the protection of health, living conditions, education, social insurance, police functions, and the like. Though not normally a field of great direct interest to strategic intelligence, a knowledge of public welfare matters may be valuable in the production of other kinds of intelligence. Certainly, they are matters of interest to our troops and to our military government occupying a foreign country.

For a moment, let us examine one specific example under the heading of public welfare, namely, education in the Soviet Union. In the days of the Tsars, the great mass of the Russian people were illiterate and little was done to improve their lot in this respect. The Bolsheviks, however, after the October Revolution of 1917, took a passionate interest in education and did much to raise the educational level of the people. Russia now claims better than 82 percent literacy for a population approaching 200 millions of people. This claim, however, is probably an exaggeration, and by our standards, the level of education is still rather low.

What is the strategic significance of a high literacy rate? The Soviets partially answer that question for us. They stated that the main task of their educational system was to help to achieve the goals of their first 5-year plan launched in 1928. One of these goals was (and still is) "to overtake and surpass in the shortest possible historical period the most advanced capitalistic countries and thus to insure the victory of socialism in its historic competition with the system of capitalism". Certainly a nation with an educational system that produces scientists, technicians, artisans, skilled laborers, and literate soldiers has a much greater war potential than one in which there is much illiteracy, a lack of scientists, and few people with technical skills.

PUBLIC OPINION

The national psychology of a country is an important driving force for peace and war. Many ingrained traits of the people go into what we call national morale and public opinion: National pride, national hatreds, religious beliefs and fanaticism, complacency, hero worship, aggressiveness, greed, and love of comfortable living. Intelligence must be produced on the state of national morale and public opinion (as distinct from the opinions of political leaders) as they bear on questions of national policy. Because public opinion - even in totalitarian countries - does set limits to political decisions, intelligence on public opinion is important. It has been proved that both public opinion and morale may be molded to fit a certain pattern by the clever use of propaganda, as demonstrated in Germany, Japan, and Russia. Such propaganda may therefore give an indication of the ambitions of the men who are directing the propaganda.

Again, consider a specific example: What is the opinion of the Russian people toward war with the United States? A public opinion poll on this question would be interesting. We do not know the answer, but there is certainly evidence that the Communist leaders in the Kremlin are concerned with public opinion, perhaps even on this question.

We know that the Soviet leaders make great effort to reduce the minimum contacts between their people and foreigners, both at home and abroad. Social contacts between the Russian and American soldier in occupied areas are forbidden by the Soviets. The number of Russian nationals who are permitted by them to come to this country, and to other countries outside the Soviet sphere of influence, is limited to those on strictly Soviet business. Those who are permitted to come are carefully screened so as to eliminate possible "deviationists." The Soviet government looks very unfavorably on Kravchenkos and Kasenkinas. Probably the most extreme step is the prohibition against Soviet women marrying foreign nationals, a custom that goes back to the days of barbarism.

Then too, the Soviet press is used to influencing public opinion. The Russian people are given but one point of view, that of the Kremlin. Almost every day we see in our papers quotations from Izvestia and Pravda about Western "imperialism", "terroristic methods", or "hooliganism". These and other actions by the Soviets show their concern for public opinion. Such actions also indicate that the Soviets are endeavoring to form public opinion.

LABOR PROBLEMS

Labor problems are important to the users of strategic intelligence. The willingness of labor to work under conditions fixed by management influences both the effective size and the productiveness of a country's labor force. Intelligence on labor problems is needed in order to determine the effectiveness of a country's labor supply. This kind of intelligence is based on the knowledge of the labor policies of both management and the government; the organization, strength, and control of the labor movement; and labor's attitude toward an actual or potential war effort. Intelligence concerning labor problems is of considerable interest to the researcher in the field of economics

POPULATION AND MANPOWER

The last broad field of study under the sociological factor is population and manpower. From the viewpoint of our top-level planners and policy makers, population and manpower is probably the most important sociological aspect of a foreign nation. Why? Because population is the primary resource of a nation in the conduct of war, both on the battlefield and on the home front. The war potential of a nation's population is determined by numbers and rate of increase; the birth and death rates; capacity to perform work; and the general economic setting - agricultural or industrial.

From an intelligence standpoint, it is the increase, stability, or decline in the size of a population upon which we first focus our interest. The future size of the population of a foreign nation may be of more importance to us than its present size. Knowledge of future size will help us to keep our estimate of a foreign power's war potential correct.

Consider what has been happening to the world's population in the past 150 years. We are living in a period of unparalleled (but uneven) growth in the world's population. Since 1800, the population of the world as a whole has more than doubled. This rapid, almost explosive, growth first started in Europe, where the population since 1800 has trebled. The number of Chinese and Japanese has increased greatly, also, but their increase did not commence until well after the middle of the nineteenth century. In other regions, the timing of rapid population growth has varied.

The clue to rapid population growth is to be found in the changing relationship between birth rates and death rates. Before the Industrial Revolution, high birth rates almost negated high death rates, and there was little natural growth in population. The effects of the Industrial Revolution - the raising standards of living, sanitation, and health, and therefore in reducing infant mortality and in increasing life expectancy - were felt first in Western Europe, the United States, and Canada. Therefore, the populations of these areas increased rapidly during the nineteenth century. However, in more recent decades, because of cultural changes, such as the decline of the large family ideal, for example, there has been a drop in the birth rate. Thus, the margin between birth and death rates has been narrowing. The tendencies in these areas, therefore, is for population to level off, even to decline. With the extension of modern industrialization, sanitation, and medical care to other parts of the world, this same pattern of changing death and birth rates has appeared. Thus, China, India, the Soviet Union, and other areas more recently affected by industrialization are now in the stage of population growth that was characteristic of Western Europe several generations ago. It is likely that they, too, will in time pass into the stage of stable or even declining population.

The question may arise as to why the advent of industrialization, better sanitation, modern health facilities, and other factors, will bring about an increase in population, say in China or India. We think of modern industrial nations as nations of low birth rates, and such is the case.

As a nation develops from an agrarian economy to an industrial economy (as the USSR has been doing for the past 30 years), it goes from a period of high death and birth rates to one of low death and birth rates. In this change, death rates fall faster than birth rates; however, they both eventually reach a rather low level.

The reason for the lag in the fall of birth rates is that people accept material changes more quickly than cultural changes. The introduction of more efficient methods of industrial and agricultural production, improved sanitation, better medicine and hygiene bring about lower death rates. On the other hand, "family form and function, religious doctrine, and community custom are all focused toward the maintenance of high fertility. High evaluations are placed on the perpetuation of the family, clan, or other groups, but low evaluation on the individual and his welfare. These values are deeply inbedded and rigidly enforced by social sanction. Even under the impact of a rapidly shifting environment, they change only gradually."

In contrast, low birth rates have appeared only in those societies "dominated by the values developed in urban life. Such societies set great store by the individual, his health, welfare, initiative, and advancement. They develop a rational and materialistic outlook on life, view man as the master of his destiny, and come to hold the deliberate control of fertility to be as reasonable and desirable as that of mortality. The transition from the earlier set of values to the new individualistic ones is gradual. Therefore, universally, the decline in the birth rate lags behind that of the death rate until both reach rather low levels. The interim affords a period of rapid population growth. Europe is only now coming to the end of its period of expansion". Mortality and fertility rates and changes in them, and population and population changes which result from the mortality and fertility rates are the basic data upon which we base our intelligence studies concerning population and manpower.

Now let us examine the population trend in two nations, one in which the number of people is decreasing and the other in which the number of people is increasing. In 1946, it was estimated that the population of the whole of Germany was about 66 million. This is an increase over the 1939 population in spite of war losses estimated at 2,850,000. The increase was due not so much from natural causes but to immigration, such as the movement of German people from Czechoslovakia to Germany. However, the present population is made up of a disproportionate share of women and old people. There are only 29 males for 37 females. The sex ratio becomes much more disproportionate in the middle-aged group of 18 to 50 years, where the males constitute but 30 percent of the group rather than a normal 50 percent. Bear in mind that it is this age group that is the most important to a nation, not only economically as the producers of goods, but also demographically as producers of children.

Besides the present number of people and the age-sex ratio, there are many other factors which will affect the future size of Germany's population. In general, the effect of these factors will be to cause the population to decline. Germany's food supply has been quite inadequate and it appears that it will remain so for some time to come. There is a great housing shortage, and health and sanitary conditions are unsatisfactory. These are conditions that cause death rates to rise.

In Berlin, in the first quarter of 1947, the death rate was nearly three times as great as the birth rate, 28.5 deaths per 1,000 but only 10.7 births per 1,000. During the same period, infant mortality was 116 per 1,000. Compare these rates with the rates for New York City in 1946; Death rates, Berlin 28.5, New York 10.1; birth rates, Berlin 10.7, New York 19.6; infant mortality, Berlin 116, New York 27.8.

Then, too, economic conditions are and will be, such as to deter people from marrying. Those who do marry will have fewer children than they normally would have. As a result of the present economic and social conditions in Germany, one population expert estimates that by 1980 the German population will have fallen to below 40 million. So, where Germany is only second to Russia in population size in Europe today, in one or two generations her numbers will be reduced to where she is fifth - behind the Russians, the British, the Italians, and probably even the French.

The population of the Soviet Union today is estimated by our Census Bureau of the Department of Commerce at 193 million. This is an increase of more than 20,000,000 over her prewar population in spite of enormous war losses. The increase is due, of course, largely to the annexation of a new territory, the Baltic countries, part of Poland, Bessarabia, and other areas.

In contrast to Germany, the Soviet's population is increasing, and it is expected that it will continue to increase for a considerable time to come. Population projections indicate that by 1970 the Soviet population may reach 250 million. Of this number, 84 million will be men in that important economic productive age bracket of 15 to 64 years, whereas in the United States there will be but 53.7 million men in the same age bracket. It is also estimated that the number of men of military age in the Soviet Union will have increased by 13 million in 1970 over 1940, for a total of 43 million. Again comparing with the United States in this age bracket for the same period, the increase in this country will be less than 2 million or to a total of 24.1 million. On the basis of numbers alone, we are at a considerable disadvantage.

Numbers alone are not sufficient in themselves to properly determine the capabilities of a nation's population. We must know something about the quality of the people - their educational level, industrial skills, and attitudes - subjects that were mentioned earlier in this article. Then, too, we want to know where the people are - how the population is distributed throughout the country. Look back for a moment and consider the distribution of people in this country prior to the recent war, and recall the mass movements of people to the centers of war industries. War production requires a readily available labor market.

Lastly, there is a special demographic problem growing out of intelligence on manpower potential - the size and quality of the labor force. It concerns itself with the numbers having the necessary skills for war production, for agriculture, for the civilian economy. Also of

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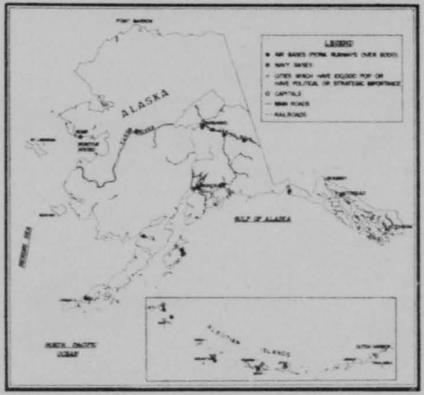
ALASKA AND NATIONAL POLICY



If the predictions that the next war will be fought over the Arctic are correct, it is time for an evaluation of our position in Alaska with respect to the part it will play in any future armed struggle. Some decision should be made either to abandon our half-hearted efforts of the past and get out, or else make intelligent use of the potential which Alaska offers.

Since 1941 our last frontier has loomed large in military planning and has assumed increased strategic importance in global air routes. The exact attention focused on this area (including the Aleutian Islands) has fluctuated from time to time depending upon the imminency of invasion by an Eastern power.

The problem of how much should be done in Alaska to make provisions for polar war would seem to be related to the overall concept of how Air Power will be used. If our strategy is similar to that which won the last war - instead of Major Alexander P. de Seversky's which visualizes a global striking force based in the United States—it could follow that our best bet is to concentrate on Alaska, which we presumably could supply, and learn enough to move to other portions of the Arctic when the proper time comes.

From bases in Alaska we can strike with B-29's, B-50's, and B-36's at most of the vital areas that belong to major powers. With refueling techniques, possibly all vital areas could be reached. Aside from Alaska there are other areas in the Arctic which could be used advantageously for attack or defense. Alaska is the only territory, however, which we own and in which we can experiment and gain the cold weather know-how.

To make Alaska usable to any large force, either air or ground, certain steps must be taken to prepare the territory for the effort. Some of these will be quite far-reaching in importance not only from the military point of view but from the viewpoint of Alaskans and certain vested interests in the United States.

In the past few years the Department of the Interior has drawn up a blueprint for the long-range development of Alaska's economic resources. In some cases portions of the blueprint fit into the plan for desirable military developments, but often there has been little correlation or coordination between the two interested agencies. As in so many instances in the past, the military may be hoping to exploit an artificial economic situation in a country without attempting to bolster civilian economy at the same time.

An excellent example of the manner in which this works is furnished by the Alaska Railroad. Both the Air Force and the Army are interested in rehabilitating the antiquated roadbed and rolling stock of the line. Over $50 million have been appropriated by Congress for the task. Yet no adequate effort is being made to gear civilian economy to the newly developed potential of the railroad. Without sufficient cargo to make the line worth operating, it will relapse into obsolescence as soon as the military forces are reduced for a few years. If the territory becomes "hot" again, the job will have to be done over.

An alternative to this system would be the development of a plan for the economic, social, and educational advancement of Alaska, predicated on the grounds that a larger population would be an asset during time of war. The presence of large numbers of workers and adequate civilian housing would be a decided advantage during the initial stages of any struggle, particularly if operations started during the winter. The existence of already functioning supply lines would be of inestimable value.

To augment the population of Alaska to any considerable extent many ills that now beset the territory would have to be eradicated or alleviated. With outside stimulus these problems may be solved in a comparatively short time. Without such help progress may be slow or virtually nonexistent.

The biggest problem in Alaska, as in any Arctic area, is that of logistics. In the case of our largest air bases, supply depends upon three approaches—the Alaska Railroad, the Glenn and Richardson Highways, and the Alcan Highway. None of these three constitutes any great potential for supplying large forces and each would have to be improved in case of war. All facilities except the Alcan Highway are dependent upon west coast shipping which is peculiarly unsatisfactory at the present time.

Comparatively few lines are engaged in transporting supplies to Alaska by water. Since their ships come back relatively empty, freight rates for cargo going north are extremely high. Canadian ships are prevented from engaging in coastwise trade because of the Jones Act of 1920, which many residents of Alaska feel puts the ships operating out of Seattle in a monopolistic position.

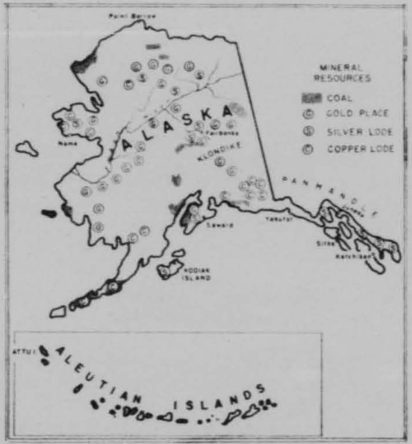
As long as this condition exists, the population of Alaska cannot increase materially. To rectify the situation steps would have to be taken to (1) develop industry in Alaska so that the return ships would have cargo and (2) either remove the restrictions imposed by the Jones Act and allow Canadian carriers to participate in coastwise trade, or subsidize American carriers more liberally so that freight rates could be cut during the interim period. The use of Canadian carriers which would normally operate from Prince Rupert, British Columbia, would result in a 700 mile shorter haul.

Although such steps would help materially in the Panhandle and Anchorage regions, it would be only a beginning so far as the interior is concerned. Continued efforts would have to be exerted to foster improvement of the Alaska Railroad and to make the highway chain more serviceable. To increase carrying capacity and make the roads serviceable the year round, hard surfacing should be provided for all main roads and feeder systems. Similarly, the Alcan Highway should be hard-surfaced and provisions made to keep it open all year.

To augment further the transportation potential, serious consideration should be given to the construction of a railroad from Prince Rupert or Dawson Creek to Fairbanks. If the Canadian northwest could be developed at the same time, the railroad would provide low cost transportation which would be extremely helpful for both areas.

Products to be shipped over both land and sea routes from Alaska to the United States will probably come initially from government sponsored projects. An effort is being made at present to develop a paper-pulp industry in southeastern Alaska. Progress in the past has been hindered by red tape and the difficulty of determining aboriginal claims. Encouragement of the Department of the Interior to settle the claims without further delay would probably lead to numerous projects being started in Alaska which would mean the investment of millions of dollars in the territory.

Other steps to increase production would entail more extensive surveying of Alaskan mineral resources; the establishment of agricultural experiment stations to increase production; assistance in developing resort areas; and development of hydroelectric sites. All of these, however, are dependent first upon transportation, the great basic need.



Finally, Alaska should be assisted in reaching statehood. Attainment of this objective would not necessarily mean a solution to all problems, but it certainly would be a step in the right direction. Senators in Congress, who could trade votes with other Senators, would undoubtedly mean more prompt recognition of Alaska's needs. Benefits which accrue to other states, such as Federal appropriations for roads, would be available. The state legislature could attempt to find more adequate solutions to the problems of territorial finance and taxation. Absentee ownership and exploitation could be more easily controlled and stopped. Congress might be inclined to consider Alaska's application more seriously—if the military requirements could become better appreciated.

Since the USAF is the armed service most vitally interested in Alaska, that organization has a unique opportunity to promulgate and execute a well-planned program for both civilian and military development. Instead of building in a vacuum, why not build something lasting, an economic structure that will endure after the immediate need for the military forces has disappeared?
Air Univ. Qtrly. Rev. Sum.49 Uncl

A real knowledge of supply and movement factors must be the basis of every leaders plan. – Field Marshal Wavell

MILITARY FOUNDATIONS OF PEACE

American foreign policy seeks a durable peace and a stable world order. Realistic thinking agrees that this objective is surrounded on every side by military considerations.

The influence of military factors on world politics can not be realized without first considering the bleak history of warfare. There have been innumerable wars since recorded time. Since the rise of modern culture, wars have grown astronomically in violence and intensity. By every index, wars have increased in magnitude, and by every standard, the terrifying tax paid to Mars becomes more unbearable. In our twentieth century of progress, we have already fought twelve times as many battles as occurred during the ghastly 30 Years War. The actual duration of battles has increased from hours to weeks and months. The number of men engaged in conflict has expanded consistently. Proportional advances can be found in the number of men mobilized, fatalities, and per capita cost.

War is peculiarly a matter of vital concern to the Great Powers. Its major burdens have been increasingly borne by them. The Great Powers paid 90 percent of the world's armament bill in 1937, as well as most of the admission fee to the 1939-1945 hostilities. The Great Powers have been engaged in almost every battle fought in modern times. As a matter of fact, the Great Powers have become great by war and have maintained their position and influence only through resort to war. Up to the present time, history reveals that the decline and eclipse of a great power occurs when the nation in question grows pacifistic and refuses to defend its interests.

In the face of this trend stands the possibility that future war may sound the death knell for victor and vanquished alike. The contention is advanced by many that the very survival of our civilization depends upon humanity finding a method of eliminating war as the final instrument of international dispute.

If one looks objectively at the ascending curve of war frequency and the current allocation of treasure for military purposes, the chances of a permanent peace seem slim indeed. This deduction would be reinforced by two other disturbing characteristics of the world scene. First is the acknowledged and sharp ideological cleavage between East and West. There is scarcely a daily paper which does not carry some story of the conflict between these systems. To this situation, it seems appropriate to apply this observation of Justice Oliver Wendell Holmes: "Between two groups that want to make inconsistent kinds of worlds, I see no remedy except force".

Equally disturbing to the cause of peace is the shift in world power relations so that only the United States and Russia contain within their immediate spheres sufficient strength to wage modern war. Both of these titanic powers are compelled by the nature of separate sovereign existence to observe each other's conduct with discreet and watchful eyes. The United States and the Soviet Union stride the modern power heap in a manner reminiscent of the ancient rivalry between Carthage and Rome. The known Mediterranean world was too small for both those powers. For this reason, some have alleged that the present world, stripped of the buffer service rendered by four or five now defunct powers, will be consolidated by force.

Fortunately, the picture can not be presented so simply. It is a fact that an ideologically split, bi-power world has rumbled on for several years without resorting to the violent form of conflict called war. On the other hand, few have been so rash as to describe the volcano on which the world is so precariously resting as a nesting ground for the dove of peace.

War weariness has been offered as the explanation for the truce we so anxiously enjoy. Doubtless, it plays a significant role in restraining conflict, but a deeper insight into the present absence of war can be found in the celebrated dictum of Clausewitz that "war is a continuation of policy." The policies of separate states, even the most peaceful, are always in some degree of conflict, and war is only the violent expression of conflict between diametrically opposite policies. From this point of view, which history substantiates, there never has been a peaceful period. There have been less warlike times and periods more warlike, but the underlying relationship between peoples has always been one of competition and conflict. Thus far, history reveals that the causes of war have been a permanent condition of human life. Rivalry over a wide variety of issues has always split the world into numerous opposing camps.

Aggressive governments have exploited this rivalry as the basis for war whenever it suited their policies. In a clash of policies, some governments seek to maintain their position. Others strive to advance their power position according to the dominant interest of the day, be it religious, economic, or ideological. Governments which pursue expanding policies are the aggressive governments. All governments, good, bad, or indifferent, have one trait in common; they are formed of men who desire and enjoy power. No timid, retiring violet ever became president, or dictator, or prime minister. The individuals who head governments have a power urge. Since the desires of the aggressor can be realized only at the expense of other governments, demands which require a diminution in national prestige and importance have never been accepted without the use or threat of force.

The expansionist policies of power-seeking men, fortified by their egoism, have been the basic cause of war. Actual wars are fought over concrete issues which mask the real reasons for their appearance. Warlike periods generally coincide with periods of great change, or to use the Russian expression, in times of trouble. In the modern era, the aggressor has evoked war to destroy the balance of power or to export his domestic policies for foreign consumption.

Covering and obscuring the underlying causes of war is the minor detail of incidents. Incidents are really of little importance. Enough incidents have occurred during the last several years to have started a hundred wars during the reign of old style diplomacy. Similarly, incidents will occur or can be manufactured to provide the overt cause for any future war.

If the causes of war are permanent, and if incidents are frequent, why do particular wars break out when they do? The correct answer to this question is that wars never break out. Instead, wars are made. Wars are made by some ambitious, aggressive ruler, whenever general conditions lead him to believe he can advance his interests by war. A potential aggressor seeks a favorable opportunity, such as a political split between his prospective opponents or the acquisition of some knockout weapon which he believes will guarantee him victory.

It is a historical fact that no aggressor ever started a war which he was going to lose. The aggressor enters war to gain more power, not to lose what he already has. Many nations, in self defense have accepted war thrust upon them, knowing defeat to be inevitable, but no country has taken up the aggressor's sword without the firm conviction that it would be victorious. Every aggressor, down to and including Hitler and Tojo, has made war only after a careful analysis of the general military situation. The general staff of a potential aggressor constantly surveys the military strength of his intended victims. When these victims let their guard down, a new war takes its place in the history books.

The aggressor's military estimate need not necessarily be correct. His general staff may make a faulty analysis of a complicated military situation, as Hitler's and Tojo's evidently did. But their mistakes are beside the point. What is important to remember is that, rightly or wrongly, the aggressor willfully undertakes to make war only when he is convinced that he can win.

This fact, so boldly written in the pages of history, may enable America to lead the world to peace. The enormous cost and the immense resources which modern war demands permit the few remaining Great Powers to establish within the United Nations a reign of international law to which the lesser states must subscribe. Disputes between the lesser states can thus be arbitrated. Wars between the lesser states and the Great Powers are likewise unthinkable. The only danger to the peace of the world lies in the fact that there is no authority on earth which can force the major powers to settle their disputes except the mutual respect they have for each other's strength. Every experienced observer has commented upon the unconcealed admiration the Soviet leaders have for power. History has thrown the United States and the Soviet Union to the summit of world power simultaneously. Serious differences exist between these nations. These differences head some Americans to consider Russia as a potential aggressor. Need this fear lead to war?

The untold calamity of such a war can be prevented if the United States will continue to maintain sufficient military strength to convince the Soviet General Staff that war against us would be futile. If this strength were maintained for a sufficiently long time, ways might be found to settle some of the apparently insoluble difficulties that exist between us. Until the hope of a successful major war is eradicated from any possible aggressor's mind, the world may have to continue to put up with recriminations and name calling. But there will be little likelihood of overt war as long as our peace loving nation can flex a bigger muscle than any potential trouble maker. Common sense teaches that no weaker person picks a fight with a Joe Louis either in the boxing ring or in the larger arena of international affairs.

The military path to peace boils down to this: Prevent any potential hostile nation's general staff from ever making an estimate that the United States could be defeated. The United States can walk this path toward peace only if it is willing to maintain in time of peace forces capable of countering the blows of any possible aggressor. Our burden can be made easier if we can maintain an unbreakable association with like-minded nations - if possible, within the structure of the United Nations.

In the past, the American peacetime willingness to protect this nation has never been impressive. Until recently, our intellectual leaders have turned away from the military problems of defense in a manner reminiscent of the fabled ostrich. The opinions of American military men have been ignored. As a result, our defense measures have alternated between periods of total unpreparedness and times of frenzied and wasteful purchase of military might.

In 1937, 4 years after Hitler announced his plans of aggression, we had proportionately fewer men under arms than the 100,000 men which were authorized a disarmed Germany by the treaty of Versailles. That same year, the cost of our military establishment, including benefits being paid to World War I veterans, amounted to 1 percent of our national income. At the same time, the other Great Powers were expending 10 percent of their respective national incomes in preparations for war.

Under the special conditions of the immediate postwar period, a higher percentage of the American national income has been earmarked for military purposes. The military return of this appropriation has been considerably lessened by occupation and other non-military items charged to defense.

The USSR has been spending for military purposes approximately the same absolute amount as the United States. The military value of the Soviet expenditure has been increased by the low pay scales established for the ranks of the Red Army and the absence of occupation costs which have trimmed the other military items in our own budget.

If nations of approximately equal strength remain equal, there is no possibility of war breaking out between them. But if one of these nations invests, over a span of years, several times as much of its entire national effort into military forces as the other, a great disparity in strength will inevitably develop. Similarly, if one nation demands that all of its citizens be trained for war while the other relies on the inducement of decent pay to attract men into its Armed Forces, these two nations will pull further and further apart in relative strength. Somewhere along this easily discernible line, one power will become immensely strong in comparison with the other. If the stronger power happens to be pursuing aggressive policies, the fatal hour will come when its general staff will decide that a military victory over its rival lays within its grasp. If we ever permit this hour to arrive, the responsibility for war can be charged to American inability to read and react to history.

Eternal vigilance is the price of peace, more so now than ever before. To objective thinkers, a realistic program of matching strength to strength in order to guarantee peace makes sense. Yet, there are dangers to such a program. Unless we pursue it prudently, we face the possibility of an arms race which might be instrumental in forcing a war which our security measures are designed to prevent.

This vicious circle can be broken if the United States pledges to use its armed force for the only rational and moral purpose for which any force can be used: Self defense.

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Power allied to moral purpose has never menaced society. In personal affairs, self defense is the first rule of life. In these affairs, a body of law has established the rule that the individual who commits the first overt act against another in a dispute is the aggressor. Mere preparation or mere words and threats never comprise assault - only the actual deed of violence does. If this simple test could be applied to international disputes, there would be chance of a durable peace.

A statement that American forces would never commit the first overt military act would cut the feet from those individuals who contend that necessary American military power is a challenge to world peace and is the main inspiration of the vast Soviet armaments. The United States is preeminently suited for waging a struggle for peace by renouncing aggression. The fact that our government operates within restricted constitutional powers would insure that a renunciation on our part of aggressive war would receive the enthusiastic and sincere support of peoples everywhere.

Such a declaration of national policy would contribute a refreshing moral advance to the confused standards of international conduct. It would be a clear refutation of those in our midst who have lost their sense of balance under the pressure of continuing world crisis. Overawed by the atomic bomb, frightened by the possibility of other novel forms of warfare, and fearful of threats against the United States, some of our citizens plead that the United States consider preventive war. These people reason that, because of the power of modern weapons, the next war will be won by the side that strikes first. This they advocate we do. Needless to say, acceptance of this scheme would speed the world along to that barbarism we hope to avoid. Hostile intent, our ostensible basis for fighting, could never be proved by our own moral standards, no matter what threats we receive. If such a preventive war brought us victory, the United States would stand before the world as a power-crazed giant, its title to global leadership irretrievably lost.

A policy of peace through American strength does not imply military isolation. Isolationism, if carried to its logical conclusion, would reduce the United States to a strategically indefensible position. It is important to realize that the defense of America embraces not only the defense of the land beneath our flag but also the defense of the idea that people who want to have a right to live in freedom.

The advent of modern weapons of destruction places a unique burden upon the people of the United States. Peace cannot succeed unless we continuously demonstrate the utmost determination to defend ourselves. Our planning for peace must not imply that we will lose an unwanted war.

The present period of international chaos may last indefinitely, boring more and more deeply into our nerves, our pocketbooks, and our good sense. We face the prospect of being the first target on some future warmaker's schedule. Despite the nature of modern weapons, the initial defense of an adequately prepared nation is not and will not be an impossibility. The last realizable chance to prove that right makes might in this world depends upon America's ability to absorb initial blows, to recover, and to strike back for ultimate victory. This proposed pathway to peace will be both difficult and exasperating, but it has the advantage of being the only one that can take us to our destination.

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B-47 STRATOJET,

USING MORE POWERFUL ENGINES,

COMPLETES FIRST TEST FLIGHT

The USAF's Boeing B-47 "Stratojet" medium bomber completed its first test flight recently at Moses Lake Air Force Base, Washington using the newer, more powerful General Electric J-47 turbo-jet engines in place of its original General Electric J-35's.

Installation of the J-47 engines will result in a more than 25 per cent increase in thrust power for the six-jet, 600 mile-per-hour-bomber with little or no increase in weight or fuel consumption.

As originally designed, the B-47 was powered by six General Electric J-35 turbo-jet engines rated at 4000 pounds of thrust each. These lower rated power plants placed the 125,000 pound, swept-wing bomber in the 600-miles-per-hour class and gave it a service ceiling of over 40,000 feet.

The J-47 engines which were used in the test flight are rated at more than 5,200 pounds of thrust each and identical engines will be installed in the production B-47A "Stratojets" now being built by the Boeing Airplane Company at Wichita, Kansas.

Newest USAF medium jet bomber, the B-47 last January flew from Moses Lake, Washington to Andrews Air Force Base, Maryland in three hours, forty-six minutes, an average ground speed of 607 miles per hour.

Continued from Page 12

importance are the number of men that can be drained off from the labor force for the armed services. These are but a few of the considerations in this particular aspect of manpower.

Basic population data are expressed by such factors as the total number of people, the size of the various age-sex groups, and birth and death rates. Such data are insufficient as a basis for the intelligence officer to estimate the military and industrial manpower potential of a country. In order to determine the ability of a people to produce goods and to fight, he must examine the public welfare program, the manner in which public opinion is molded, the moral fiber of the people, and lastly the relationship between labor and management.

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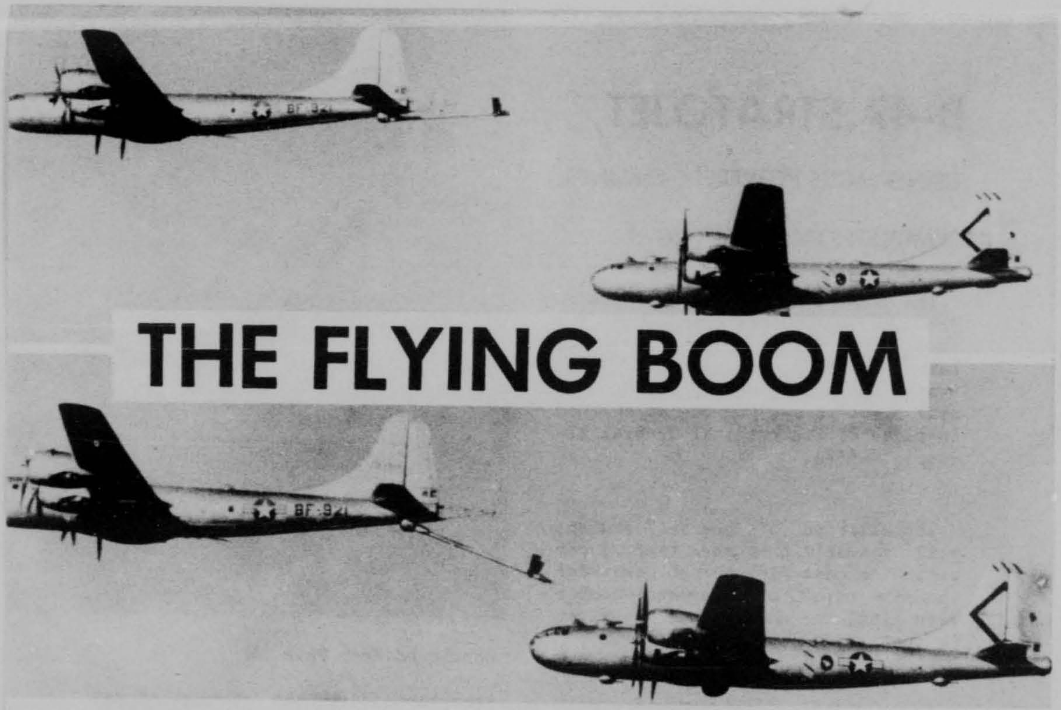

THE FLYING BOOM

NEW "IN-FLIGHT" REFUELING SYSTEMS

A new "Flying Boom" in-flight refueling system - in which a B-29 tanker plane refuels the B-50 and B-29 bombers by means of a telescoping pipe has been announced by USAF.

In using the new technique, the two planes fly in formation and the controlled, telescoping refueling boom carried beneath the tanker plane is inserted into a special socket in the nose of the receiver plane and fuel is transferred under pressure.

It is expected that the new system, developed for the Air Force by the Boeing Airplane Company, will alleviate some of the difficulties of the existing method of gravity feed refueling through a flexible hose extending from the tail of the tanker plane to the tail of the receiver plane.

This flexible-hose method of refueling was used last February when the B-50 "Lucky Lady II" flew around the world non-stop while being refueled in flight by tanker B-29's at four points on its flight of more than 23,000 miles.

The new refueling device is called the "Flying Boom" and consists of a telescoping metal tube which extends from rear underside of the tanker aircraft.

For take-off and landing, the boom extends almost straight back from under the tanker's tail. Internal pumps, fuel lines and control details of the new air-to-air refueling device are classified.

The bomber receiving fuel has a special fueling socket in its nose, just forward of the upper top gun turret. The "Flying Boom" itself is equipped with small v-shaped control surfaces, known as "ruddevators", which control movement of the boom either up or down or to either side. A technician seated in the tail of the tanker "flies" the boom by operating the "ruddevator" controls.

The tanker and bomber must fly in a formation to carry out the refueling with the tankers above and slightly ahead of the bomber. The "flying boom" operator then "flies" the long telescoping fueling tube nozzle into the socket on the nose of the bomber, and fuel is then pumped, under pressure into the receiving airplane.

The new fueling system has been in flight test status since the summer of 1948 when first tests were made by crews from Boeing and the Air Force's Air Materiel Command at the Boeing Wichita Division, Wichita, Kansas.

The "Flying Boom," which is still classed as experimental, is designed to enable bombers and fighters of the US Air Force to refuel in the air at a faster fuel flow rate and at higher altitudes than heretofore was possible.

The U.S. Air Force is also experimenting with an aerial refueling system designed to enable fighter planes to be refueled three at a time from one tanker. Details of this system are classified.

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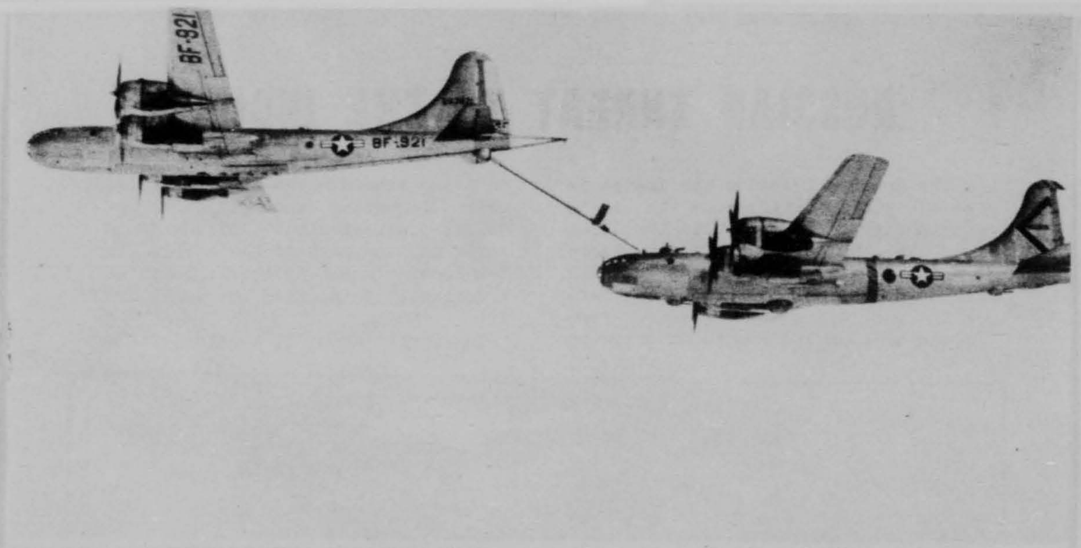
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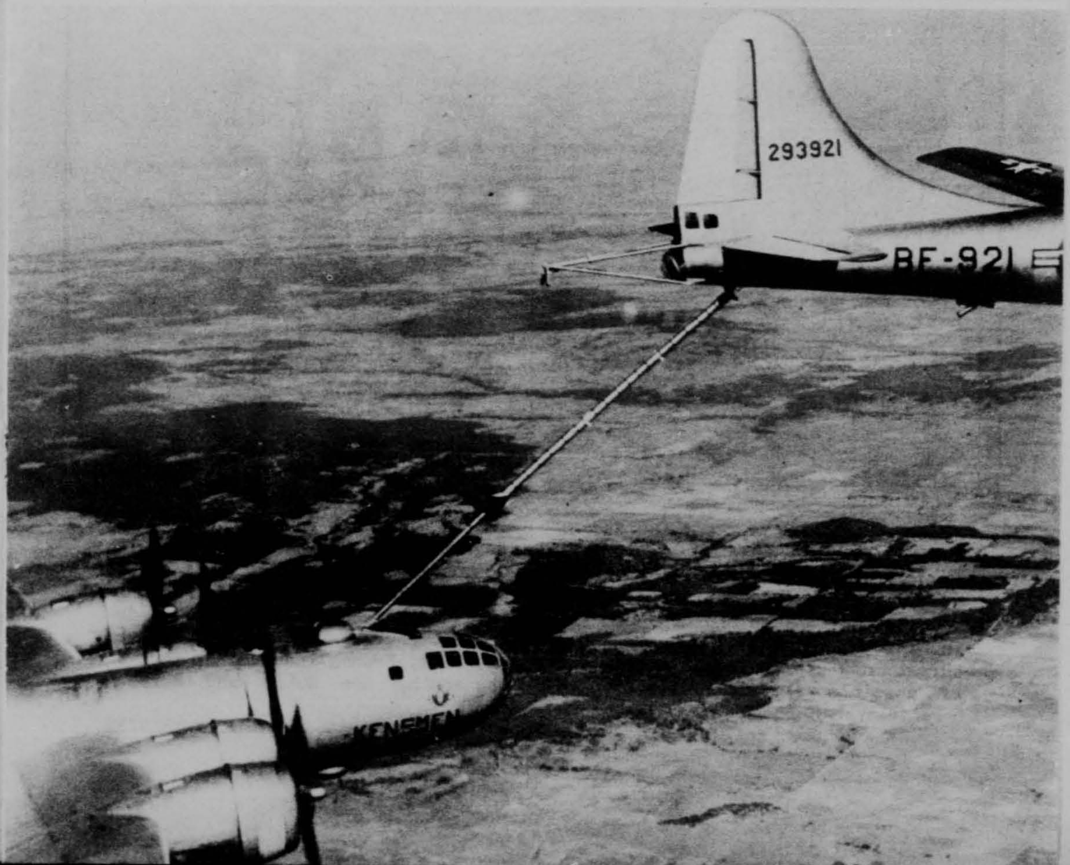
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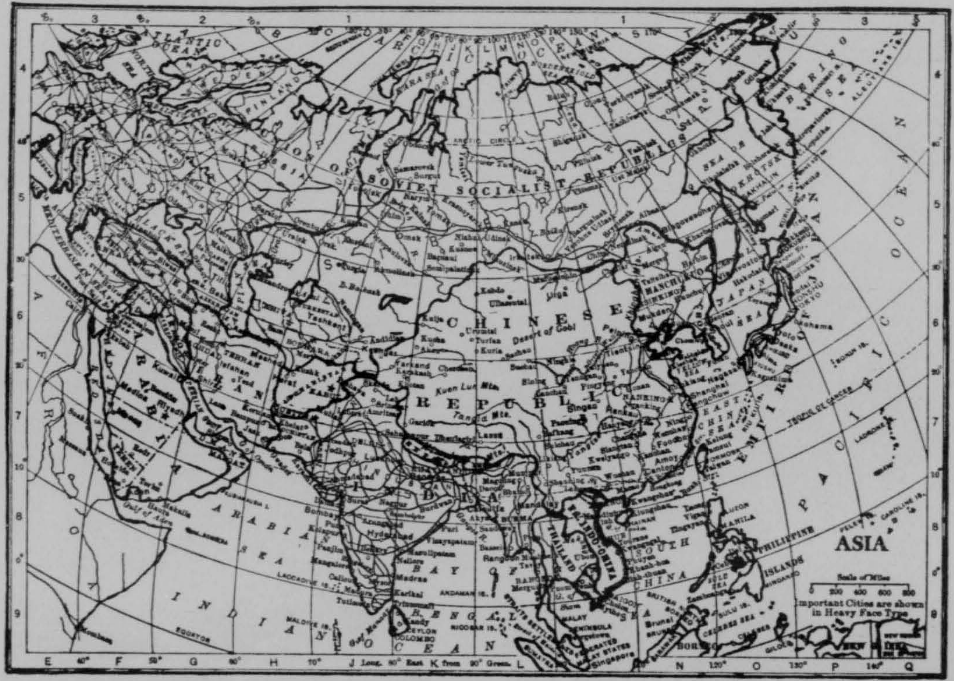
RUSSIAN THREAT TO THE INDIES

The Russian threat to the Indies is an old story, dating from the Tsar's occupation of Turkestan in the 1860s and the building of a strategic railway eastward from the Caspian through the cottonlands on the Persian and Afghan borders. It provided British India with an exercise of arms, diplomacy, and the Secret Service for more than 50 years. It is now one of the crucial problems of the postwar "succession states" and the older states and dependencies in Indo-China and Indonesia. The threat now is no longer merely one of possible invasion but has taken on a new menace in the shape of economic disruption and political upheaval characteristic of the "cold war" in any part of the world. It has been extended by the approach of a communist China from the east.


ASIA
UNION OF SOVIET SOCIALIST REPUBLICS
CHINESE REPUBLIC
PACIFIC OCEAN
INDIAN OCEAN
ARABIAN SEA
BAY OF BENGAL
SOUTH CHINA SEA
PHILIPPINE ISLANDS
Scale of Miles
Important Cities are shown in Heavy Face Type

In South Asia is a group of old lands with new governments. Three of them are dominions of the British Commonwealth-Pakistan, India, and Ceylon. The others include the British Colony of Malaya, newly independent Burma, and the old kingdom of Siam, French Indo-China, and, to the south, the Dutch and British

East Indies.

From all of these, from time to time since the conclusion of World War II, have come accounts of disturbance, subversive activity, and civil war with which, in every case, the name of communism has been associated. Even if the Moscow government be not positively identified with these interferences with peace in Asia, at least, from what we know of its foreign policy, it cannot fail to be agreeably interested.

From late reports, it would appear that the offensive has failed - notably in India, Malaya, and Siam. It never amounted even to a threat in Pakistan and Ceylon. In Burma, however, the situation is still critical. This failure may be attributed to strong action and alertness on the part of the governments concerned, combined with a natural reluctance of the native peoples arising from the religious outlook and pastoral habits of the East. A feature of the struggle has been the activity of Chinese among the disturbers, at least in Siam, Malaya, Indo-China and Indonesia. The struggle began earlier and still continues in Indo-China and Indonesia, two territories in which the presence of strong armed forces of a western power provides rebellious elements with a lever in using nationalism to further their ends.

Russian Forces

While all these "front line" activities of the communist effort to dominate the East have been going on, there lurks in the background the Red Army of Central Asia. Successors to Tamerlane's legions in the fabulous East, Timoshenko's divisions stretch in a long crescent from the Caspian to the Dzungarian Gate, flanking Persia and Afghanistan with a strategic railway and probing the passes of the Himalayas.

Though largely desert and dry steppe or veldt, Russian Central Asia possesses a center of population, economy, and culture in the fertile irrigated lands around Tashkent, the eighth largest city of the Union with a population of 585,000. Tashkent is the headquarters of Timoshenko's Army Group, estimated at 30 divisions, each of about 10,000 men. This Group, like the Far East Group, is self-supporting with its own industrial installations. It is capable of fighting without logistic support from Moscow. The 30 divisions probably include 5 armored, 10 infantry (partly mechanized), 4 cavalry (horse and mechanized), and 4 artillery, with 7 air force and airborne divisions. Of the Soviet Navy, operations might involve the Caspian Flotilla in support.

These forces are situated in the most strategically secluded region of Russia with every sort of terrain available for practice and maneuver, including vast deserts for the secret trial of artillery and guided missiles or atomic projectiles. This accumulation of forces gives continued significance to the revelations, in the captured German Foreign Office records, of Soviet territorial aspirations in the direction of the Indian Ocean.

The Soviet Central Asia Army Group protects Russia's most important Siberian center of Industry, the Ural-Kuzbass combine, and what has been called the "armaments quadrangle," Baku-Terinsk-Stalinsk-Stalinabad.

In the event of war, examination of the topography of the surrounding countries will show that an advance east into China would be feasible. However, any move to the south towards the Indian Ocean and the Persian Gulf would be over rugged mountains,range after range, and through passes and defiles which could easily be held by small forces. It would be through territory deficient in food and other resources and almost entirely devoid of railways and any sort of good road. hardly passable even for combined ground-air forces. In addition, the limited administrative and supply elements of a modern Russian division, though making for mobility, would be a severe handicap to a southward move through the "bad lands" of Afghanistan and Persia. Nevertheless, both Tsar and dictator have pushed their own communications, rail, road, and air, to the very frontier at many points, even across arid desert and high into the mountains. Widely separated customs houses at Kushka, Kerki, and Termez mark the only roads into Afghanistan, which has no railways. The Afghan roads permit only tortuous and difficult contact with India.

RACIAL POLICY

In any invasion to the south, the opposition of the native tribes would be an important adverse factor which it would be highly desirableto eliminate. An attempt at penetration was made since the war in the Azerbaijan dispute, but it was abandoned. Any further advance into these territories would require careful "conditioning" and the absence of Western forces.

Mohammedanism may have something to do with the problem from the Russian point of view. It is significant that in the "Godless" state, where Islam claims more adherents than in any other country, the religion of the prophet has not been abolished or persecuted. Indeed, it was in the dealings of the early revolution with the Mohammedan peoples of Central Asia that the early discounting of nationality was abandoned. To counteract the influence of Enver Pasha in this area and to carry on the fight against the Basmachi, which was not concluded until the trials of 1936-1938, nationality and race were given recognition and made the basis of territorial divisions.

Stalin, himself a member of one of the Russian "nationalities," is officially regarded as the originator of the theory called "ethnic democracy" applied in governing non-Russians,at least in Asiatic countries. In 1920, in reference to this region, Stalin formulated the policy as follows: "In order to put an end to the estrangement of the border regions....it is necessary that all Soviet organs, the courts, the administration, the economic bodies, the direct organs of government - as also the organs of the party - should as far as possible be recruited from among local people acquainted with the customs, life, habits, and language of the native population..Only in this way can the Soviet government become dear to the toiling masses of the border regions."

In 1921, Stalin said: "The fact of the matter is that a number of peoples, mainly Turkish peoples - about 30 million in all - have not passed, have not had time to pass, through the period of industrial capitalism.....As a result, they will have to pass from primitive forms of economy to the stage of Soviet economy without passing through the stage of industrial capitalism."

These ideas have been noticeably developed in the communist activities in China, which has already been discussed as beingthe proving-ground for methods of dealing with Eastern peoples. The events in Southeast Asia during 1948 reveal an effort to make up in successes in the Indies for failures in Western Europe, Greece, Italy, France, and Berlin, and for the defection of Yugoslavia.

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Educating the SOVIET ARMY OFFICER

In old Russia, the doors of the corps of cadets, the military schools, and the academies were tightly closed to workers and peasants. Military knowledge and military leadership were the monopoly of an exclusive caste. The corps of officers, especially the generals, was made up in the main of representatives of the gentry. In 1912, a large percentage of all Russian generals were members of the gentry, and the rest were scions of the upper middle class or of the clergy. Many generals and admirals belonged to titled European families, as princes, barons, and counts, of other than Russian descent.

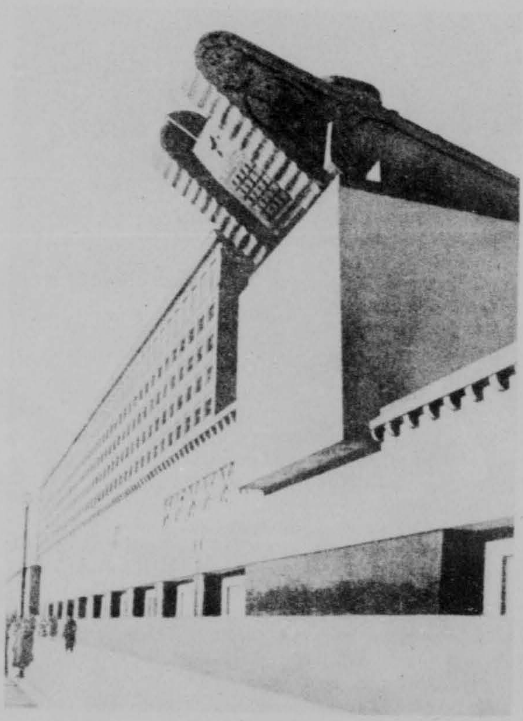
Private soldiers were contemptuously referred to as "cattle" by their aristocratic officers. The private could not even dream of an officer's commission, no matter how capable. In the pre-revolutionary epoch, officers for the most part were promoted to higher ranks, not because they showed talent or had distinguished themselves in action, but because they had titles and money. The system which had existed in the times of Peter the Great and Suvorov, when officers' commissions were given to the most capable privates and non-commissioned officers, had long been forgotten.

The new Soviet general staff studied the weaknesses of the old Imperial Army. Discipline in the old army was such that a mass of men could be drilled in perfect formations, and it could make the formations appear, when led, like a precisely functioning mechanism. But few of the officers could read a map. Few officers had sufficient military knowledge to continue a skirmish on his own initiative. The educational level of the enlisted men was even lower. If an officer fell or was otherwise eliminated from the field of battle, his troops were lost.

Post-Revolutionary Period

During the years following the Revolution, attempts were made to remedy the above situation, but development of educational methods was slow and failed to follow a definite plan. The army, until it could grow together organically, had to undergo the same process as the rest of the country. Everything had to be built up on a new foundation, as Lenin and the revolutionaries were determined to destory all traces of the old imperial regime, and they were initially unwilling to accept anything faintly resembling the Russian Imperial Army.

The establishment of a stable military system finally improved internal conditions of the Red Army, and a period of far-reaching reforms was originated by Frunze, who rose from the ranks of the revolutionaries to become Trotsky's Commissar of Defense in 1924. During the next 3 years, Frunze greatly improved the officer's educational courses. The short-time command courses of the civil war era were supplanted by military schools with courses lasting from 2 to 4 years. The existing academies for higher military tactics were reorganized and enlarged, and new ones were created for the different



The main building of the Frunze Military Academy in Moscow.

branches of service. Thousands of the temporary civil war officers were sent to these schools for much needed training and refresher courses. The material conditions of the army were gradually bettered, while a new stress on discipline corrected the postwar laxity and enhanced the authority of the officers. Orders no longer had to be countersigned by political commissars, although these commissars were retained in the field for years as the authority on political education.

Throughout the whole army, but especially in the groups of officer cadres, class origin now played a decisive role. The majority of the old officers were mustered out, although over 4,000 were retained, many of whom were in high staff and command positions. To attain homogeneity in the army structure, cultural standards for officer candidates were temporarily lowered. This later had to be corrected due to the tremendous growth of the Soviet educational system.

Timoshenko's Reforms

In May 1940, the new Commissar of Defense, Marshal Timoshenko, inaugurated another period of reforms and drastic changes in training methods. The main reforms were toward improvement of tactical standards and leadership of the small units (platoons, companies, and battalions), and toward eradication of routine training methods, classroom instruction instead of field work, and excess paper work. Large-scale maneuvers were abandoned; they were replaced by tactical field exercises, using no units larger than a division.

World War II hastened the process of modernization of the educational system. The Soviet Army, lacking a Soviet tradition of sufficient depth to back up the efforts it was called on to make, invoked the military traditions of Czarist and pre-Czarist Russia. Generals, like Alexander Suvorov, who served under Catherine the Great, became legendary Soviet heroes. Guard units were created. More colorful uniforms, similar to those of the old Imperial Army, were adopted, with the same old shoulderboards. Army pay was adjusted to increase the differential between officers and enlisted men, and additional privileges were established.

Since World War II, the Soviet

government has taken steps to increase the attractiveness of a post-war career for officers in the army. Once the symbol of despised Czarist oppression, the officers' corps has been gradually revived, and it now enjoys a firmly rooted authority based on the success it achieved during the war.

Officer's Life

In Russia, army officers are a privileged class in the literal sense of the word. Their privilege is not, as in many other countries, an irrational, immaterial sham, a glossed-over poverty, or a mere social glamor. All Soviet citizens are employees of the state. Among them, the officer is the best paid. But his pay is not the important thing, for even a well-paid Soviet citizen has a pretty difficult life. It is hard to find a place to live, to be properly clothed - in short, life is full of worries. The important point about the professional army officer is that he is relieved of all these cares. He has everything in his barracks (for everybody - even most generals - live in barracks). He has a comfortable apartment there; he is relatively well-clothed and fed; he participates in all kinds of sports, educational facilities, and amusements. The officer is perhaps the only Soviet citizen who has no cares. All that the state expects in return is study. When duties are over, he must attend lectures, exercises, and seminars. If he wants to remain in the army, he must, every few years, pass an examination in some language or in a more intensive mastery of military science. He is also expected to increase his general knowledge constantly - this, of course, strictly within the framework of the dominant political faith.

The career of the professional officer is strictly prescribed. The privileges attached to a military career provide a wide and careful choice of candidates. Only the best high school students are eligible for the military schools, and these must, at the same time, be especially recommended by the Party. After 3 or 4 years training there, while almost cut off from the world (or, more correctly, in actual daily but closely controlled and supervised contact with it), they enter the army, are transferred to outlying garrisons of the vast Soviet area, and become completely swallowed by military life.

It is a peculiar accomplishment of Soviet organization that it leaves to the officer not a single minute of personal life, not even with his own family. For his family also lives in the barracks and is a member of that "family" which is the Soviet Army. As such, his family partakes of the communal living arrangements of the regiment and belongs to most of the clubs and social organizations of the troop units. This participation is officially a privilege, but in reality a duty. The officers' wives, even when they have their own professions, are given functions in the community life. Large congresses of commander's wives are held in which these functions are discussed. They take an energetic part in military sport; commanders' wives have achieved records in shooting, skiing, and in cross-country rides.

The absorption of the officer's family into military life closes his last loophole to the outside world. He belongs entirely to the state. He is patriotic, but his is a singular patriotism, for it includes the ideal of world communism.

The military schools and academies are the pride of the Red Army. In equipment and training systems, they probably rank among the best in Europe.

Suvorov Military Schools

In 1943, a decree created the Suvorov Military Schools for the purpose of training army cadets. Originally, there were nine such schools provided for, in towns of regions liberated from the Germans, but by the end of the war there were 15 schools. These "Suvorovtsi", as the young cadets are called who successfully complete the 7 to 9 year course, are allowed to enter the military schools for army officers without taking the regular entrance examinations. The Suvorov Schools accept candidates between the ages of 8 and 13; however, the average age upon entrance is 10. The candidates are chosen from among the orphans of Red Army heroes and from sons of high officers and ranking party officials. A few older youths who distinguish themselves on their own are also admitted. The schools are not open to the general public. So great is their popularity that there are a hundred times as many candidates as can be accepted. They are boarding schools; the state furnishes everything, including the uniform of black, topped off with the special white crowned hat. The cadets live under strict military discipline. Uniforms are worn in classes and on the street, the day begins and ends with bugle calls and the military forms of address are compulsory.

Red Star, the Soviet Army periodical, states, "The Suvorov Schools carry out the best traditions of the old establishments, where many celebrated officers and generals of the Russian Army began their careers. The curriculum also closely recalls the famous Tzarist cadet schools. Music, fencing, riding, dancing, physical culture, and drill are part of an enlarged curriculum". The directors of the Suvorov Schools are regular army major generals and the separate cadet companies are commanded by lieutenant colonels or majors.

In 1941, there were approximately 76 branch schools and now there are believed to be more than 100. The scope of their instruction appears to be a combination of our own branch schools and the United States Military Academy. These schools graduate annually about 10,000 new junior lieutenants after the successful completion of a 2-year course.

To qualify for attendance at these schools, the prospective student must have completed the tenth grade (high school in the USSR), must pass a mental and physical examination, must be unmarried and between the ages of 19 and 25. Any young man who aspires to a commission in the army may make application either to the commandant of the school he desires to attend or to the military commissar of his city or political district. If he is a non-commissioned officer in the army, he applies to his commanding officer. Upon graduation, he is sent to troop duty. From this point on, higher military education is by selection only. However, if he is ambitious, he may take extension courses from the correspondence branch of the school of his army. These are similar to our own extension courses.

After an officer has served with troops for at least 1 year and has been commissioned for at least 4 years, and before he passes his 35th birthday, he is eligible for selection to attend the academy of his branch. The courses at these academies represent a combination of those of our army advanced branch schools and the Command and General Staff College and are 3 to 5 years' duration. Graduates are assigned as commanders of battalions or regiments. At the beginning of the war, there were 16 schools in existence, but there are possibly two or three more by now. The academies not only train officers but also take an active part in research and development. They also publish arm and service journals, in which information on new tactical and technical developments is disseminated. As mentioned above, of particular importance is their function of conducting and supervising the correspondence courses for officers on active duty with troops. This has been of considerable significance in raising the standards of officers of the arms, large numbers of whom have received their training for higher command duties in such courses.

Among the branch schools are the Artillery Academy, which trains both line commanders and artillery experts; the Air Academy; the Military Engineering Academy; and the Stalin Military Academy of Motorization and Mechanization, which is one of the youngest of the branch schools. The latter was founded when the successes achieved in the industrialization of the Soviet Union made it possible to supply the Red Army with modern combat tanks and trucks of domestic manufacture. The Academy developed with the expansion of the Armored Force. Eighteen years ago, it had only two laboratories and those were poorly equipped. Today, it has 40 to 50 laboratories with excellent up-to-date equipment.

The Frunze Academy

The Frunze Adacemy is the oldest high-level military educational establishment of the USSR1 Outstanding officers who have served from 4 to 6 years with frontline units of the Red Army, possess a secondary school education, and have a knowledge of either English, French, German, Polish, Japanese, or Persian are eligible for selection to the Frunze Academy. However, all candidates must pass an entrance examination. Officers sometimes spend several years preparing for these examinations, which cover tactics, Soviet Army regulations, topography, and general education. Candidates are given 1 to 2 months leave for final preparations for the examination. Preliminary examinations are usually given at the military district headquarters by Academy representatives, and papers are forwarded to Moscow for grading. Candidates take their final examination at the Academy, where they also must appear before a special commission which thoroughly examines their political background.

The course of the Frunze Academy may be compared to that given at our Command and General Staff College. However, it lasts from 2 to 3 years. Studies are pursued under the direction of various departments, such as the chemistry and physics, military history, tactics, general military education, and intelligence departments. The first year deals largely with the tactics and techniques of the various arms. This is supplemented during the summer months by field exercises. A very interesting fact is that the intelligence course lasts 3 years, whereas most of the others are only of 2 years duration.

The Frunze Academy is equipped with more than 100 laboratories and indoor ranges. The laboratories include equipment for the study of aviation, chemistry, artillery tactics, strategy, military history, mechanization, motorization, camouflage, electronics, searchlights, and hydro-technics. Indoor ranges include ranges for field artillery, antiaircraft artillery, machine guns, and aircraft armament.

Since World War II, all students have been participating in the conduct of research, assisted by the faculty. The lessons of World War II are analyzed and studied, and instruction is based largely on lessons learned in combat. The Academy has a special museum for the history of World War II which is displayed graphically. A series of bi-monthly conferences is conducted on major operations. The transition from defensive to offensive strategy and the pursuit, encirclement, and destruction of enemy forces, from the campaign of 1944 are being studied at these conferences.

The objective of the Academy is to prepare graduates for duty as division commanders and the staff of corps or higher units. After graduation from the Academy, the officer is assigned to field duty. If the officer displays unusual ability in military science, he may be selected to remain at the Academy for research work or duty with the faculty.

General Staff Academy

The highest school for officers of the Red Army is the General Staff Academy or the Voroshilov Higher Military Academy. This Academy prepares senior officers for duty as corps chiefs of staff or higher duty. Although there is no age limit for admission, young officers of exceptional ability usually are selected. The course lasts from 2 to 3 years, with 100 officers in each year's class. Another hundred officers attend special classes designed to improve the general and military education of the officers of the Soviet Army. Thus, 300 students are attending this Academy each year. The Voroshilov Higher Military Academy may be regarded as similar to our own National War College.

The curriculum is prescribed by the Chief of the General Staff, and it generally includes the tactical, operational, and strategic employment of large formations. The course of the special class is similar to that of the regular class with fewer theoretical problems and no field problems. The methods of instruction employed are individual and group solution of assigned problems, lectures, panel discussions, and field exercises. The field exercises are conducted during the summer season. They consist of command reconnaissance of terrain; the tactical or operational decision of the commander; theoretical solutions of the resulting staff and logistical problems; and participation in command or staff functions during the fall exercises of the field units.

The candidates for the regular course must be graduates of the Frunze Academy and have at least 2 years' experience as commanders or staff officers of large units. The candidates for the special class need not be graduates of the Frunze Academy.

In addition to its regular instructional functions, the school conducts extensive research on military subjects. This research also results in the basis for articles published in the Journal of Military Thought, the journal of the Academy.

Conclusions

World War II has shown that the Soviet Army has large cadres of efficient commanders and leaders of men in the field. Many Soviet officers have been through the school of hard knocks in the past few years. Some fought in the Civil War and in the Finnish Campaign in 1939. Others - the overwhelming majority - received their baptism of fire on the battlefields in the war against the Germans.

Since the war, the Soviet Army's educational system is continuing to maintain and raise its professional and technical standards and is helping to overcome the effects of demobilization. It is easy to see that the system is organized on a basis unsurpassed by any other nation and that no signs of easing or letting up have been indicated.

Military Review Dec 49 Uncl

POLAR GUIDE

This is the Fifth in a Series of Chapters on Arctic Indoctrination

Chapter XIV - Preparation For Flight

Polar operations require considerably more preparation for flight than operations anywhere else in the world. Not only must you prepare the airplane and the accessory equipment for proper functioning under special conditions, but you must also prepare yourself for any emergency. If the flight is not properly planned, the mission may be doomed to disaster even before the plane leaves the ground. If you are not prepared for emergencies, even a well-executed crash landing may really be the beginning of a long, slow funeral.

Before take-off, be sure to learn the location of inhabited outposts, emergency cabins, or other shelters, and the whereabouts of crash boats and patrol vessels. Know what rescue equipment is available and what the established search and rescue practices are. Ascertain the proper procedures in foreign territory from your Intelligence Officer. Learn the distress, bail-out, ditching, and crash landing procedures as prescribed by your training and briefing officers. Be sure you know. Don't guess. It's your life.

Polar operations also require careful planning and scheduling of pre-flight ground activities. Arrange the periods of pre-heating so that all equipment will be inspected, warmed, ready, and operating at the time of starting engines or take-off. While necessary pre-heating is taking place, ice and snow should be removed, inspections and operational checks made, electronic equipment warmed up(with external power source connected, of course) and other necessary activities conducted. In general, maintenance crews must know the overall time (including time for pre-heating the heaters) required for preparing the airplane for flight at any given temperature. Similarly, there must be thorough coordination between the Engineering and Operations sections so that there will be no costly delays between the conclusion of the pre-flight and take-off.

Personal Care

The importance of the proper care of your person in the polar regions has been stressed in many places in this guide, but here are a few additional suggestions for your personal comfort and safety.

Many different kinds of polar flying clothing have been devised. Naturally, you will wear what is issued, but, in general, be sure you have the proper clothing to keep you warm in case of a crash landing. Wear a parka, an intermediate jacket, flying trousers, mukluks, and the proper glove and sock assemblies. Dress for the worst possible conditions, not the best. An electrically heated flying suit is very fine in the plane, but if you crash land, it's pretty hard finding a place to plug it in.

In addition, remember the effect of cold metal on your skin. Wear gloves, of course, but just to make sure, wrap tape, cord, or cloth muffs around control sticks or wheels, throat and hand mikes, and any other parts you might have to touch.

Keep out of prop wash. The blast can cause severe frostbite in the polar regions.

Weather

Flying in polar weather is difficult and taxes your instrument flying ability and your knowledge of weather conditions to the utmost. Nowhere else does the success or failure of your mission depend so much on your judgment. However, according to bush pilots who have studied and flown polar weather for years, you can master the technique if you follow a few simple directions.

Review everything you ever knew about meteorology, and then learn some more. The most important document you will ever see during service in the polar regions is a weather map. Fifty percent of a sucussful mission involving bad weather is accomplished on the ground. So work out the entire flight on paper, taking into consideration the conditions at destination, alternate airports, route weather conditions, available aids to flying along the route, time element, load conditions, and your ability to execute the job. Figure on a fair margin of fuel supply and load. Know the limits of your airplane and instruments in weather conditions. However, do not try to gage the weather too closely.

In general, the number of clear days among Alaskan bases is seldom over half the total number and often less than one-third. Nearly all bases, except in the interior, average more cloudy than clear days in the course of a year. The Aleutians, the southeast coast, and Seward Peninsual experience their best flying conditions during the winter, whereas the Gulf coast and the interior have their best flying conditions in summer. The best flying weather for all Alaska occurs in the interior and the parts of the Gulf coast which are well protected from the maritime influence, such as the Anchorage area.

Judging by ceilings and visibilities, the poorest flying conditions exist in the Aleutians and southwest regions. The ceilings and/or visibilities are below 2000 feet and/or 6 miles a little over 10% of the time (annually) in the interior and Anchorage area, and over 50% of the

	% of Time Ceiling and/or Visibility was below					
	1000″ and/or 3 miles			2000′ and/or 6 miles		
	Jan	July	Annual	Jan	July	Annual
Aleutians (Adak)	16	43	23	42	78	54
Interior (Fairbanks)	8	2	7	15	5	14
Gulf Coast (Anchorage)	15	3	8	22	7	12
Southeast Coast (Yakutat)	20	32	25	47	62	51
Seward Peninsula (Nome)	9	44	21	29	48	28

Typical Flying Conditions in Alaska.

time in the Aleutians and southwest coast.

Note the brief comparative summary, shown above of the flying conditions for the various parts of Alaska, as observed at the bases indicated.

Thus, generally speaking, the weather is bad as compared to Zone of Interior conditions. Nevertheless, it is flyable if the airplane and crew are prepared for it. This means airplanes in good condition, fully winterized, with deicing and anti-icing equipment, and with radio and electronic aids for navigation and low approaches. It means also pilots well-indoctrinated in instrument flying, including navigation, letdown and low-approach.

Airplane Check

The particular items that need to be checked in the pre-flight inspection of the airplane are covered in Chapter 10. Here, however, are a few special precautions you must take just before the flight.

Clear all frost and snow from the surfaces of the plane before take-off. Even a very thin layer of hoar-frost an eighth of an inch thick will alter the take-off characteristics of your plane. Loose snow will not blow off during take-off and may cause you either to stay on the ground until you reach a dangerously high speed or worse still, to stall during the initial climb. Remember, the thinnest film of ice forms a base upon which more ice can and will form rapidly.

Frost will usually form on the windows wither during engine warm-up or when you enter the plane. Remove this frost by blowing hot air into the cockpit through a heater duct or by using alcohol, gasoline, or copper or steel wool. However, do not use copper or steel wool on plastics. You can keep windshield frost down to a minimum by sitting well back and not breathing directly on the windshield.

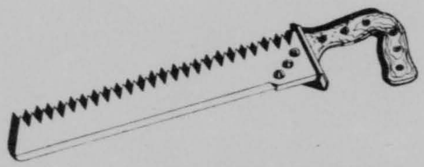
Inspect all main and auxiliary control hinges and surfaces for particles of ice or hard snow that might cause jams. Check all controls to insure free and easy movement and full travel without blockage. Also check the pitot heat control and make certain that heat is available for the windshield.

Emergency Equipment Check

Check all your emergency equipment before starting out on any flight. You may find an important item missing, perhaps the very item you will need if you are forced down. Check also to make sure that the parachute harness fits properly over the clothing you're wearing at the time. Different adjustments may be necessary for different missions.

Store the emergency equipment securely in an easily accessible place so that it can be removed rapidly in an emergency. Make the lashings simple and anchor them by small loops of rope. This makes it possible, in an emergency, to cut the loops, remove the equipment quickly, and preserve the main rope for later use.

The standard emergency kit is the E-18. One of these kits is supplied for each three men in the airplane up to a maximum of three kits per plane. The E-18 is a basic emergency kit which contains supplies for emergencies anywhere in the world. To make it applicable to the polar regions, replace the items in the kit that are not appropriate for cold-weather survival with such items as



Ice-saw Snow-knife.

you will need. For example, replace the machete with an ice-saw snow-knife made up as illustrated. It is good for digging snow caves as well as cutting ice blocks, or sawing driftwood or forzen timber. In winter, also replace the gloves in the kit (which are really for protection against mosquitoes) with the glove assembly for cold-weather wear. Similarly with the other items in the kit - take along such as are most useful in the region over which you are flying.

Wear a C-1 or C-2 emergency vest. Here, too, replace or supplement particular items according to the season of the year and the region over which you are flying. Check with your Personal Equipment officer as to the best things to take along.

Take along one or more barren land tents depending on the numberof persons aboard. These tents, which even inexperienced personnel can erect easily, each accommodate three or four men and can withstand winds up to 100 mph.

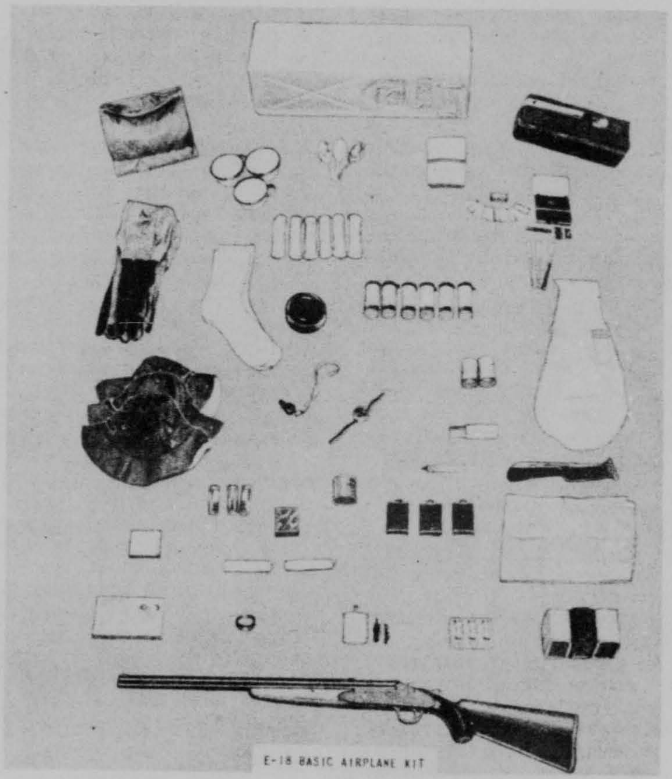
If conditions permit, it's a good idea to take along also an E-12 kit, normally carried by rescue planes. This will provide you with many items you will find useful in case of an emergency. If you can't get an E-12 kit, be sure to take along extra clothing, sleeping bags, emergency rations, and the like.

When flying over regions where mountains and glaciers are widespread, carry crampons;snowshoes; packboard, one for each two men; blankets; a plywood sled with collapsible runners; rain suits and shoepacs for summer;windproof parka and trousers; extra mitten shells; manila rope, 120 feet for each four men; ice ax, one for each four men; tarpaulin; and extra gasoline cooker (for heating shelter).

When flying over water areas also carry anti-exposure suits,Mae Wests, life rafts, and life raft kits as emergency equipment.

Even in a fighter, you can carry some emergency equipment. Seat and back packs to hold the maximum amount of survival materials compatible with cockpit space are being developed. These packs will probably not come filled with pre-selected materials. Instead, the various kinds of survival equipment will be available in supply, and (unless there is a local regulation stipulating what should be taken) it will be up to you to select the items you deem most important. Be sure to take along as much as you can. In some fighters, a shelf of sheet steel has been built into the rear of the canopy for emergency supplies. If at all possible,have such a shelf built in your plane. You can hold the emergency equipment in place on the shelf by placing the bed roll in front of the smaller articles.

At present, some fighter pilots are working out arrangements to carry blankets or a sleeping bag on their backs. However, research is progressing in the development of a compactly packed sleeping bag that can be put into a seat or back pack.



E-18 BASIC AIRPLANE KIT

Chapter XVI - Navigation

Problems

Navigation in the Far North falls into two categories - navigation in the continental areas (as in Alaska and Canada), and navigation in the polar regions proper (as over the ice pack above the 75th parallel). The first type of navigation - that is, in the continental areas - is practically the same as in the States. Of course, changes in variation and longitude are proportionately greater, but anyone competent to navigate in the States can do so in the continental areas of the Far North. In fact, many flights are made daily between such points as Fairbanks and Nome, and Anchorage and Adak, without any navigators at all.

Flight over the polar ice pack, however, is another story. There, because of the difficulties involved in maintaining and measuring courses and doing dead reckoning, you will have to resort to all the tricks of the navigator's trade. While it does not require knowledge of any new principles, it's quite a detailed

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job, and most polar flights carry three navigators who are kept busy more than 90% of the time performing the great variety of necessary tasks.

One of the navigators maintains DR, keeping up the log and charts. He receives most of his information from the other two navigators, but does his own sighting for celestial. A second navigator watches the scope making wind runs and obtaining radar fixes. The third navigator is the astro-navigator. He does the computations, sighting, and logging for the astro-compass. To vary the tasks and minimize strain, these navigators switch jobs about every hour. The logging procedure varies with the squadron, but in general, because of the frequent shift in navigators, you must maintain the log with all the precision you used when you were an eager cadet.

Measuring Courses

Measuring courses in the standard latitudes ($0^\circ - 60^\circ$) is fairly simple, for the meridians provide ready references for measuring course angles. If you tried the same methods in the higher latitudes, however, you would find that, due to the convergence of the meridians at the Pole, the course would change rapidly. For example, heading east or west at 75° N latitude, the course would change 1° for very 15 nautical miles. At higher latitudes, the change of course would be more rapid. If the course crossed the Pole, you would be even more baffled. At the Pole, there would be only one direction - South. But which way would not be south?

Maintaining Course

Maintaining course is not particularly difficult in the lower latitudes. After establishing true course, all you need to do to maintain this course is to apply magnetic variation, compass deviation, and drift (wind) correction to the compass heading.

Maintaining course when flying in the higher latitudes is quite another matter. In the first place, so many and so rapidly changing are the magnetic irregularities that the magnetic compass is practically worthless. In the second place - and this is more important - in polar navigation you are so close to the magnetic reference point (magnetic North Pole) that even if the magnetic field were perfectly regular you still could not use the magnetic compass effectively.

Dead Reckoning

With the magnetic compass useless, with course direction changing rapidly, with visibility frequently zero, and with landmarks few and far between, it takes complete coordination of all navigational procedures to determine ground speed, drift, and position. Dead reckoning in the polar regions is therefore an involved and arduous task.

Solution

Obviously, since polar flights are an almost daily occurrence, there are practical answers to all the problems of polar navigation. The two items that are different about the way navigation is handled in the polar regions are the use of a grid system to eliminate the difficulties caused by the convergence of the meridians and the use of the gyro compass as the basic directional instrument in place of the magnetic compass. For the rest, polar navigation requires only thorough planning, careful logging, and efficient utilization of radar and celestial procedures.

The "G" System

The "G" system is the directional reference system that simplifies high latitude navigation and alleviates its numerous uncertainties. This system has worked effectively for quite a while now in polar navigation.

The grid system substitutes a grid for the meridians and parallels of the aeronautical chart and grid directions for geographic directions. Make the grid by first drawing a line along the 0 and 180th meridians and marking the direction away from the Pole along the 180th meridian as "grid" north. Then draw a series of lines on the chart parallel to this meridian. Consider each of these lines as "grid" north-south lines. Using the same spacing, draw a series of lines perpendicular to the "grid" north-south lines. These will help you in measuring and in celestial. When you finish the grid, your chart will look like the illustration below.

Now compare plotting and logging a flight on a standard chart and on a "grid" chart. Using the standard chart, there is a continual change in the course heading which complicates every factor that has to be taken into consideration in navigation. Using the "grid" chart, the course heading remains constant. Similarly with wind. On the "grid" chart, wind azimuth is always the same as wind direction, and when the wind is constant, wind azimuth is constant. Thus, the "G" system simplifies most of the navigational problems in the polar regions.

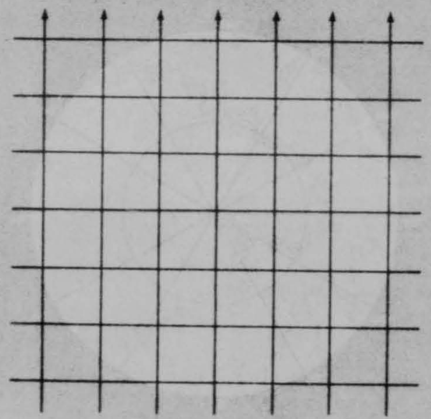
Directional Gyro

Just as the "G" system helps solve the problem of plotting course in the polar regions, so does the directional gyro help in maintaining courses there. It is not affected by magnetism and is so constructed that, with due correction for precession, it will steer a true line in space. Consequently, it is free from the difficulties besetting the

Convert true direction to "grid" direction as follows:

True Direction + West Longitude = "Grid" Direction.

True Direction − East Longitude = "Grid" Direction.



magnetic compass and provides a practical instrument for maintaining course in the higher latitudes or polar regions. The most important procedure with reference to the gyro compass is, of course, correction for precession.

The value of this precession rate is not absolutely constant throughout the mission. Instead, it is subject to random fluctuations about a mean value, as well as to a small variation due to changes in latitude.

Of the two errors, the random changes are the greater and the more erratic. For gyros now in use, the standard deviation of these random changes over a 10-month observation period is approximately 2°. Thus, you should not take errors of this order to indicate an unreliable gyro.

While better gyros are presently being developed and should be available in the future, it is believed that there will always remain the necessity for accurately logging astro-compass and gyro information for the determination of precession rate. To date no official form has been established for logging astro-compass and gyro performance data, but the squadrons operating in the polar regions have developed their own form of a log and procedure to follow in order to reduce the labor of determining and applying the gyro precession rate and to provide a record of gyro performance which may be used with fair reliability if an overcast prevents further astro-compass checks of heading.

Mission Planning

Because the areas over which you fly in the polar regions are generally devoid of navigational aids, landmarks, and emergency landing fields - and because of the vast amount of work that must be done by the navigators during flight - it is particularly important that you prepare a thorough and complete plan for each polar mission. In addition to the things you would normally plan for in a flight, you must prepare in advance such things as the azimuth and altitude of good stars. Plan, for example, on the time to switch from using tables to using the Pole as the assumed position in obtaining celestial LOP's. It's a good idea also to plan for meridianal altitude shots to save yourself time and trigonometrical solutions.

Above all, plan your flight so that, during twilight, you will not have to take any important celestial shots, such as those involved in a radical change in course, determination of gyro precession, take-off, or approach the home base. Having made your plans, see that you stick to the time schedule closely enough to avoid the necessity for celestial shots during the twilight period.

Dead Reckoning

In the polar region, as in any other region, dead reckoning is the foundation of navigation. The big difference in the polar region is the necessity for the continual use of radar and celestial in order to keep DR navigation accurate. Naturally, you must keep a detailed and accurate log in order to derive full benefit from these procedures. Furthermore, since the primary purpose of most flights over the polar regions is reconnaissance, detailed and accurate logs are needed in order to evaluate properly all other records of the flight. Thus, the fact that successful observations or photographs were made during the flight will mean little at the end of the flight unless it is possible to determine accurately the position of the plane at the time of the observation or photograph.

Celestial

Polar celestial is like celestial anywhere else, in that there are many ways of obtaining an LOP. HO 230,which is similar to the HO 218's here, makes it possible to shoot and solve for as low as 1° of altitude, which is excellent for the polar regions where the sun is at low altitude much of the year. In addition, the American Air Almanac now has polar sky diagrams, which give the approximate altitudes and azimuths of the planets, the moon, and the most important stars. Tables are available to supply plotting corrections for shots when the Pole is the assumed position.

For quick LOP's, meridianal altitude shots can be used. Above 80° N you can shoot them when the LHA of the body is within 30° of your meridian, provided the altitude is below 20°. For shots between 20° and 50° altitude, you must choose bodies with an LHA less than 20° from your meridian.

Corrections are about the same as anywhere else, but two types of corrections are quantitatively greater- the correction for refraction (on shots), and the correction for Coriolis force (on LOP's). Be sure to apply them properly.

You need not worry too much about the lack of celestial bodies for observation. Even during the period of daylight, which lasts for six and one-half months out of the year, there are generally one or two bodies available for observation - the sun and the moon -which should give sufficient information for LOP's and steering. The moon is available for approximately two-thirds of the time. Although the sun is visible continuously in the summer, there will be times when its altitude remains very low. During these times you may still use some LOP's provided you apply proper corrections for Coriolis force and atmospheric refraction.

During the three months of continuous twilight (sun not more than 18° below the horizon, yet not visible above the horizon), there is only one good body available for LOP's and steering - - the moon - and - then it is not present continuously. During this period you may also use the brighter planets for LOP's, but they are difficult to see because of the refracted sunlight. If you are careful you may be able to locate and use the brighter stars, pre-computing the azimuths and altitudes before trying to shoot these bodies. (Daylight sextants will be available soon).

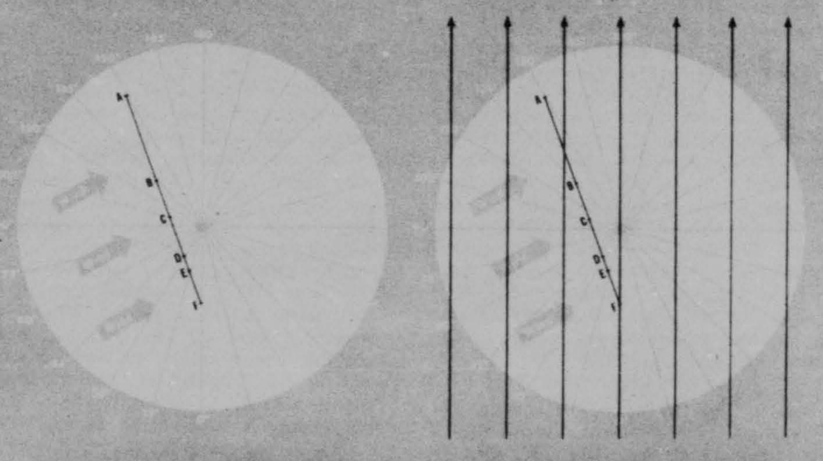
Total darkness exists for about two and one-half months of the year. During this period,of course, celestial is at its best and a real boon to the navigators.

Radar

Radar is the chief source of DR information in the polar regions. When undercasts make pilotage and drift readings impossible, or when overcasts prevent celestial shots - and both conditions occur frequently over the ice pack - radar comes to the rescue. It allows you to "see" the ground in the heaviest undercast and, if there are landmarks, enables you to obtain a fix regardless of how much of the sky is covered.

The procedures for using radar in pilotage, wind runs, and fixes on landmarks are, of course, the same as the procedures without radar, except that you observe the scope in-

Compare plotting and logging a flight on a standard chart and on a "grid" chart.



True Course at A 010°; Wind 090°/10K
True Course at B 025°; Wind 105°/10K
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True Course at D 115°; Wind 195°/10K
True Course at E 145°; Wind 225°/10K
True Course at F 160°; Wind 240°/10K

Grid Course at A 160°; Wind 240°/10K
Grid Course at B 160°; Wind 240°/10K
Grid Course at C 160°; Wind 240°/10K
Grid Course at D 160°; Wind 240°/10K
Grid Course at E 160°; Wind 240°/10K
Grid Course at F 160°; Wind 240°/10K

stead of the ground and that you can see much more on the scope than with the unaided eye. As for fixes based on beacons, radar is simple. A number of X-band radar beacons are already set up in the Far North and more are planned. With these radar beacons you have to receive only one to get a fix. Giving coded returns for identification purposes, they respond to radar search sets of the APS-10 type as well as to sets like the APQ-13 and APQ-23. The distances at which you can receive them depend on your altitude - their range is the line-of-sight distance. The X and S-band beacons, together with their location and identification, are listed in CCBP-13, Racon List, which you can get from your Communications or Briefing Officer.

Radio

Loran stations are gradually being established throughout the polar regions. A chain of standard-frequency Loran stations centered about the Aleutians, with a range of about 700 miles in the daytime and 1400 miles at night, is already in operation. In addition, three low-frequency Loran stations have been established near Pt. Barrow, at Victoria Island, and at the mouth of the Mackenzie River. Except along the base line extension, they have a fairly reliable coverage up to 1000 miles of the more distant station of the pair you are receiving. You can receive both the standard-frequency and low-frequency Loran transmissions with either your APN-4 or APN-9 set, provided it includes Coverter CV-27. More Loran stations are being planned, and as the Loran chains are flight checked and become operational they will appear on the Loran charts which you can obtain through the Aeronautical Chart Service.

Pilotage

You cannot rely much on pilotage in the polar regions. The maps are constructed from very sketchy data, especially in the interior of land areas. The coast lines, fjords, and river mouths are generally reliable, but mountains are inaccurate in location, shape, and altitude - be careful to clear any possible mountains. Rivers and lakes are generally inaccurate, particularly in the inland area. Terrain features are very scantily sketched, many large areas being described only as "gently rolling land", "tundra", "Arctic waste", or "glacial".

Much of the land in this region is void of distinct landmarks, hampering attempts at pilotage. Although the coast lines may be very accurately charted, extensive areas of fast ice may alter their appearance sufficiently to render them unrecognizable. Such shore ice formations, especially when near snow covered coastal lands,make it extremely difficult to identify the actual shore lines. It is then safer to fly farther inland, where the more prominent terrain features may be revealed.

Visibility is often restricted by low clouds, blowing snow, and fog. Blowing snow seldom reaches altitudes of over 2000 feet, but when it occurs you must resort to means of navigation other than pilotage. Fog generally exists over the coast lines when the wind is blowing in from the sea and over the open sea when the air mass is cooler than the water. Under these conditions, continue on course, as the fog areas are generally of a local nature.

The polar regions however, are not entirely disadvantageous with respect to pilotage. Pitch darkness is seldom encountered except over large areas of open sea. In the summer, there is abundant daylight with long twilight; in the spring and autumn, there is nearly continuous twilight. Though direct sunlight is absent in these regions in mid-winter, the ground is usually covered with snow, and the refracted light from the atmosphere makes it possible to see dark objects at considerable distances. The moon aids visibility during these periods of darkness so that pilotage, although difficult, is not impossible.

Sky maps are polar phenomena which can be helpful if properly interpreted. A uniform overcast with clouds at a very high level reflects the surrounding terrain. Areas of level ice uniformly covered with snow show up as uniform white on the sky map. Broken surfaces, such as pressure ridges,pack ice, and drifted snow areas are indicated by grayish patches on the sky map. Open water, timber, and snow-free terrain show up as black areas in the cloud reflection. A careful study of the sky map may frequently help you determine the proper direction to reach open water, snow-free areas, or heavy timber.

You can determine wind direction over snow covered areas by reference to sastrugi. These are ridges of hard-packed snow, a few inches to two or three feet in height, which always develop with an axis parallel to the prevailing wind direction. The sastrugi also give possible reference points for reading drift and checking ground speed by timing. Over open water areas, you can read drift from floating ice, ridges in pack ice, or white caps.

Instruments

No matter how good your methods and careful your computations, they can be no better than your instruments. Take good care of them. Electrically heated flying suits affect direct-reading aircraft compasses principally because of the single-wire direct-current supply on which these suits are operated. Before taking off on a mission on which electrically heated suits will be used, swing the compass with all electric circuits and all suits, except your own, switched on. It is essential that you turn off your suit before reading the compass; turn the rheostat to the OFF position or pull the connector from the extension cord socket. Electrically heated flying suits do not affect remote reading compasses.

Gyro fluxgate compasses now incorporate a low-temperature starting button on the amplifier. When this button is depressed, additional power is supplied so that the gyro will start at extremely low temperatures.

The type A-10 sextant is the only type for low-temperature operation. When properly winterized, this instrument will give excellent results at low temperatures. However, there are two things that you must do in extremely cold weather:

Keep the flashlight batteries warm by carrying them inside your flying suit. Below -4°F, a dry cell will not generate sufficient current to cause a light to glow.

Avoid breathing directly on the surface of the index prism to prevent the formation of ice. If ice or frost forms on the prism, warm the surface with your hand until the ice melts; then very carefully clean the prism with a soft, clean cloth or cleaning tissue. This operation will not be necessary if you use caution and don't let your breath come in direct contact with the prism surface when the instrument is colder than the surrounding air.

A winterized type B-3 driftmeter will operate satisfactorily down to -65°F. Permit the gyro to warm up for thirty minutes after starting before uncaging it. If necessary, you can make drift measurements with the gyro caged. However, you will not have the advantages of gyro stabilization. It's impossible to turn the rheostats on these driftmeters at a temperature of -45°F or lower. So adjust the reticle light to the desired intensity before the airplane is exposed to low temperatures. A low-temperature starting button has been added to the B-3 driftmeter to provide additional power to the gyro for low temperatures.

Most precision watches are unreliable at temperatures below -40°F. Carry your master watch in an inside pocket and refer to it only to check your hack watch. You should have no difficulty with the hack watch as long as you wear it on your wrist. Do not wear the watch outside your clothing or leave it attached to the sextant for periods greater than fifteen minutes.

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AIR FORCE LETTER)
NO. 205-25)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 30 MARCH 1949

SECURITY

Disclosure of Classified Information to Reserve Forces Personnel

(Effective until 30 September 1950 unless sooner rescinded or superseded.)

	Paragraph
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1. Purpose. To provide uniformity, this Letter outlines the policy of the Air Force with respect to the dissemination of classified military information to Reserve Forces personnel.

2. Scope. This Letter applies to the Air Force Reserve and the Air National Guard, and in addition, its provisions will be followed in connection with activities concerning the Air Reserve Officers' Training Corps and the Senior Division of the Civil Air Patrol. This Letter does not apply, however, to personnel on extended active duty.

3. Policy. In compliance with the provisions of AFR 205-1 regarding security of military information, Reserve Forces personnel may be entrusted with classified information as follows:

a. RESTRICTED information may be disseminated for official military purposes to any Reserve Forces personnel.

b. Except as authorized in c below, information classified no higher than CONFIDENTIAL may be disclosed to Reserve Forces personnel not on active duty who are actively participating in official training activities, provided that possession of the information is essential to the training course or program.

c. SECRET information may be disclosed to Reserve Forces personnel on active duty for training purposes and personnel not on active duty who have a mobilization assignment, provided that possession of the information is necessary in the performance of official assigned duties.

d. TOP SECRET material will not be used for training purposes in connection with Reserve Forces training programs. As authorized by paragraph 7, AFR 205-1, 14 March 1949, however, individuals serving on short periods of active duty whose assignments require it may be given access to the TOP SECRET information essential for the performance of their assigned duties.

e. Documents containing information classified higher than RESTRICTED will not be disseminated for retention by individuals. Such documents will be stored in military files only.

f. Reserve Forces personnel not on active duty who receive classified information will be informed that the information affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation or transmission to an unauthorized person is prohibited.

g. Upon termination of active duty training, personnel will be briefed on the necessity for maintaining security of their professional knowledge while on inactive status.

4. Investigation and Clearance. Commanders concerned are responsible for requesting personnel security investigations and clearing personnel referred to in this Letter whenever required or necessary in accordance with separate Regulations.

5. Residents of Foreign Countries and Foreign Nationals. The provisions of AFL 182-4 and 8f, AFR 205-1, 14 March 1949, will be observed regarding dissemination of military information to persons residing in foreign countries, or to foreign nationals as defined in paragraph 2i, AFR 205-1.

6. Requirements. Although it is the desire of the Air Force to make available to Reserve Forces personnel such classified information as is required for training purposes within established training programs and courses, it is of primary concern that no breach of security will result from this policy. Commanders concerned will review continuously all classified material required by or of direct value to Reserve Forces activities, and whenever appropriate, will initiate down-grading action thereon in accordance with paragraph 27, AFR 205-1, 14 March 1949.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

- - - - - -

*This Letter supersedes AFL 205-25 (formerly 46-7), 31 March 1948.
This Letter has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.

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THE FLYING BOOM. PAGE 22

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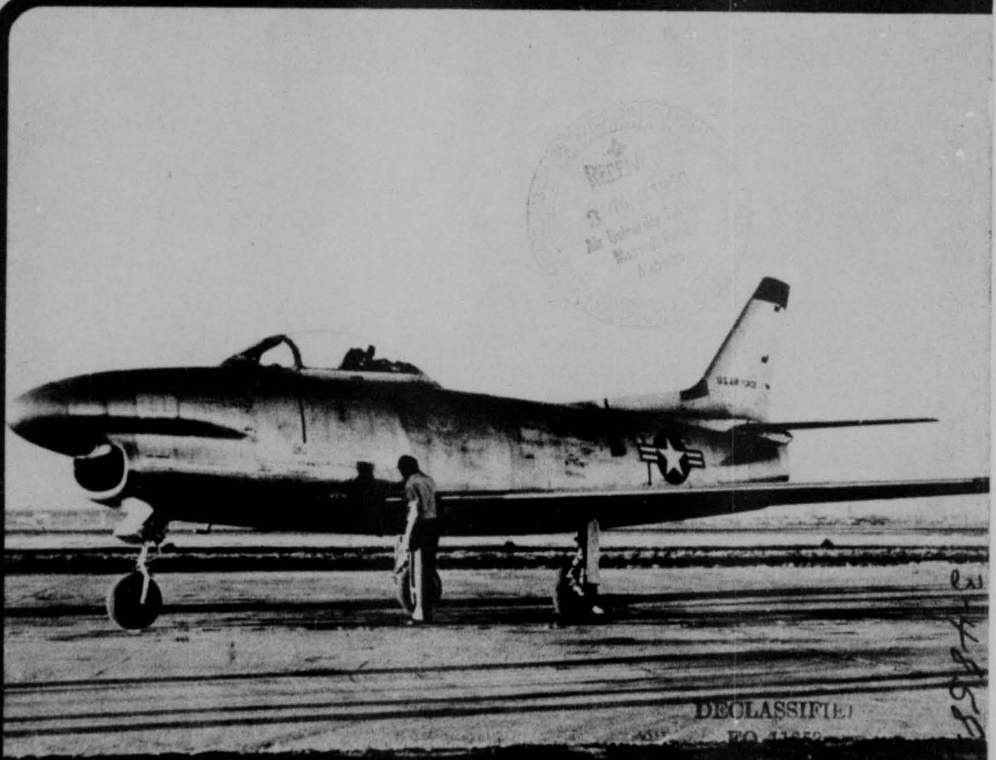

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YF-86D, see page 38

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1. Mobilization
2. Atomic [illegible] Defense
3. Russia -- War Potential
4. War Plan against Russia (Title)
5. Population density chart of the world

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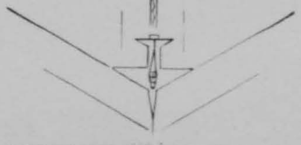

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1. To provide timely data regarding new techniques, practices and general information whereby intelligence personnel can maintain proficiency.
2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

Two types of material are solicited for publication:
1. Stories and pictures relating to the intelligence activities being conducted within an organization.
2. Original articles of a noncontroversial but informative nature.

Material submitted must include sources utilized and the authors name, rank and present military affiliation. Mail stories to: The Editor, "Air Intelligence Review," ConAC, Mitchel Air Force Base, New York.

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An Introduction to the ECONOMICS OF MOBILIZATION

In war, the belligerent with the greater industrial potential has an enormous advantage over its enemy. A nation whose economy in peacetime employs efficiently and on a large scale an abundance of human and material resources, is also strong in its industrial potential for war. But even the biggest human and material resources and the most advanced industrial technology do not, of themselves, guarantee victory. In some respects, specific preparations in the fields of resources and techniques must be made a part of a nation's peacetime security measures. For example, stock-piling of raw materials, development of substitute materials, and provision of certain facilities and equipment may be required.

Beyond all this,however,a nation's ability to shift its economic system quickly and efficiently to war conditions is of vital importance. The industrial requirements of war are so different from those of peace, and they are so urgent and large, that (except for nations constantly on a war footing) a special organization of the industrial system for war is necessary. That is, the potential of population, materials, and technology must be organized and operated for the particular purposes of war. The ability of a nation to solve this problem is a big part of its over-all war capabilities.

The purpose of this article is to present briefly certain of the basic organizational and control requirements of a war economy.

CENTRAL CONTROL

Few persons today, other than conscientious objectors, dispute the government's obligation to take charge of military manpower mobilization. Left to themselves, individuals would not volunteer their services quickly enough nor in sufficient numbers to meet the needs of the armed forces. Moreover, the uneven flow of volunteers from various walks of life would tend to disrupt industries whose continuous operation is essential to the war effort. Similar considerations point to the need for governmental mobilization of the industrial labor, materials, and machinery of the nation.

Put in simplest terms,the argument for national governmental control and coordination of industrial mobilization in wartime rather than dependence upon individual actions is this: The decision made by individuals for themselves, however reasonable they might appear from the individual standpoint,are likely to be insufficient, or too slow, or wrong, from the standpoint of the nation as a whole, when the nation is faced by the overwhelming problem of survival and victory in war.

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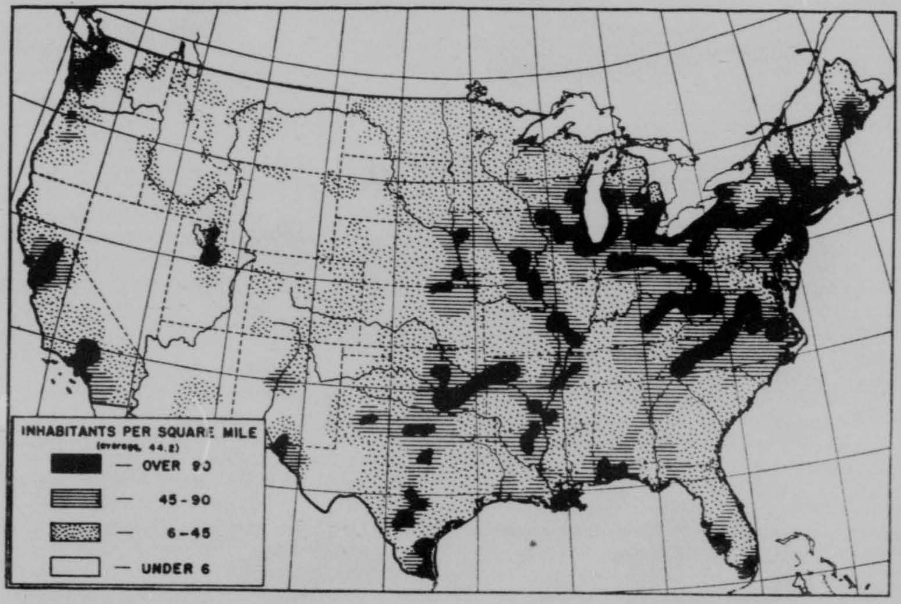

MOBILIZATION TASKS

What, then, are the tasks of national government in economic mobilization for war?

The aim of a war economy is to insure the maximum utilization of the nation's resources of manpower, materials, and equipment in the effort to defeat the enemy. In order to make an adequate supply of manpower available to the armed forces, and, at the same time, to allot a sufficient number of workers to the production of war materials and essential civilian goods, it is necessary to utilize all available labor power. Labor must be directed into the necessary production fields through a system of priorities and drafts.

In order to curtail civilian production and expand war production, the flow of raw materials must be controlled so that essential production is adequately supplied. As an aid to financing the war and the smooth operation of the economic system, it is necessary to establish a system of price controls. The rationing of scarce civilian items is imperative in order to insure the maximum efficiency and morale of the population. In addition to stressing domestic war production, it is also necessary to undertake measures that will lower the war production of the enemy — that is, to engage in economic warfare.

To sum up, the essential tasks in economic mobilization are:

1. To allocate properly labor, materials, and facilities.

2. To curtail civilian production and expand war production.

3. To control prices and ration scarce goods.

4. To undertake economic warfare.

INCREASING WAR PRODUCTION

When war comes, there is a tremendous increase in the demand for many civilian and military goods. Yet, in the face of this rising demand, a number of obstacles which may put a heavy brake on industrial output are likely to arise if left alone. One such obstacle appears when there is a heavy-handed general mobilization of manpower for the armed forces. That is, many skilled workers may be withdrawn from mines, factories, and railways at the very time that their skills are most urgently needed in the operation of war industry. Their places may be taken by older and younger workers, by women, and by recruits from non-essential industries. But these people will at first be less efficient than the former workers. At the same time, a speed-up of labor and higher prices of goods may lead to unrest, high labor turnover, and reduced produc-

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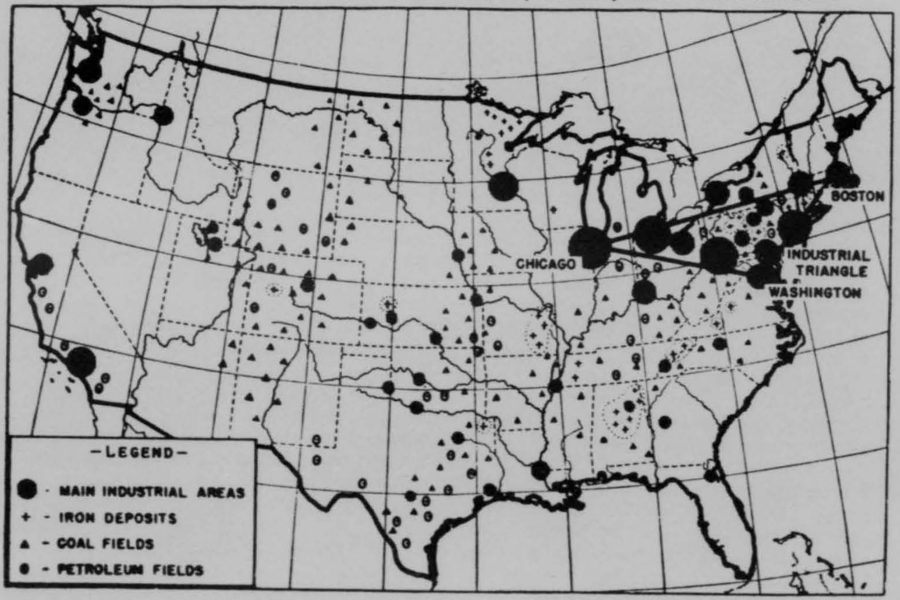

tivity.

Steps have to be taken to counteract all this. For one thing, overmobilization of manpower for the armed forces must be avoided. On the basis of a detailed study of national manpower requirements, certain age groups and certain occupations must be made exempt from military conscription, at least for a time. Furthermore, activities of labor and management that hinder the expansion of essential production have to be restricted. It will probably be necessary to recruit unskilled workers, older men, women, and young people for work in war industries. These new workers must be trained. If they are brought to centers of industry, they must be housed. At the same time, labor must be withdrawn from the less important trades and industries. Obviously, if the pressure of war is heavy enough, conscriptive measures will be applied as much to industrial manpower as to military manpower.

It is also necessary that the production of non-essentials — like elaborate houses, pleasure automobiles, and jewelry — be curtailed ant that the output of munitions, machines that make munitions, and other essential supplies be greatly expanded. The prime means to this end is a system of priorities. Under a priorities system, a specific ranking is attached to the various industrial orders, processes of production, and supplies of materials, in accordance with a scale of their importance to the war effort. Furthermore, under this system, materials, transportation facilities, and loans are allocated by the government to the various industries in accordance with the importance and urgency of their war production.

WAR FINANCE

The government needs a vastly increased amount of money, or purchasing power, during war. How can the government get this purchasing power? It can be obtained either by borrowing or taxing.

Outright, straightforward taxation is the most logical method. The taxpayer's purchasing power is definitely and quickly curtailed. This has the effect of reducing non-essential consumer demand for goods that should go into war production.

But taxation has its limitations. It is a slow way for the government to get money. In war, the government needs money in a hurry. This is the main reason — together with the largely incorrect notion of many people that war can be financed less painfully by means other than taxation — that governments in wartime resort in large measure to borrowing.

The big danger in large-scale borrowing, or loan financing, is not that the government has to pay interest on war bonds and eventually pay the principal back. The main trouble is that it makes for price inflation. Most of the purchasing power that the government gets by borrowing is provided by the banks, and it is an addition to the purchasing power already available to the country at large. Moreover, the government bonds held by the banks may be used by them as a basis for expanding their credits to individuals and business firms. Thus, there is a tendency for the total purchasing power in the nation to rise more rapidly than the amount of goods available for purchase.

The name we give to this situation is inflation. Prices of goods and wages of labor rise, some more, some less. The government, business firms, and individuals, compete for labor, raw materials, and finished goods. Some people stand to profit from the mounting prices. Others, whose incomes lag behind the rise of prices, make heavy sacrifices. These are the people who live on more or less fixed incomes -- receivers of rent, interest, salaries, and, to a smaller extent, wages. In other words, inflation results in a hidden kind of taxation, a taxation that is uneven and haphazard in the burdens it places on the people.

Much the same thing happens if the government goes in for the old-fashioned method of obtaining more money simply by grinding more dollar bills out of the printing presses. Currency inflation is an easy but an inequitable and dangerous method of war finance. It is dangerous because it leads to inefficient production and low morale. The conclusion is that, if the government in wartime supplements tax measures with loans, it must take steps to prevent inflation.

PRICE CONTROLS

Obviously, it is desirable to avoid the spiral of higher and higher prices. Rising prices of munitions will complicate the problems of war finance. Rising prices of essential consumer goods will lead to labor unrest and wage increases. Higher wages mean increased costs of production, and manufacturers will soon raise their prices further. The changes in prices will cause many economic and social troubles. These reasons make price control necessary. By the same token, wages must be regulated, in order to eliminate labor disputes and to hold down labor turnover in industries.

Under a system of price fixing, the quantities of goods demanded will be in excess of the quantities supplied at the fixed prices. That is, there will not be enough goods available to meet all demands. In order that the scarce goods may go to the people and industries that need them most in the interests of the war effort, action must be taken to withhold them from less important ones. This is achieved by means of priorities. In orther words, the systems of price control and of priorities supplement each other.

RATIONING

When the supply of consumer necessities - food, clothing, shelter -- falls below prewar levels, rationing of these necessities has to be introduced so that they will be distributed fairly. Otherwise, people with plenty of money, old friends of the grocer, and persons who have nothing better to do than shop will find means of getting more shoes and meat than people who have less money and time and more patriotism. Although rationing is necessary to the fair distribution of scarce goods in time of war, it leads to black market operations, by which purchasers obtain goods not available at ceiling prices or in excess of the quotas alloted to them. No government has succeeded in eliminating the black market entirely, and it is likely to persist until free trading is restored.

ECONOMIC WARFARE

In addition to these measures taken to maximise domestic war production, it is also necessary to undertake measures that will lower the war production of the enemy -- that is, to engage in economic warfare. Economic warfare is another aspect of military economics. Essentially, economic warfare attempts to reduce the enemy's war potential by destroying or capturing the materials and facilities necessary to his war effort and by blocking the movement of supplies to him from abroad. It requires a blending of military and economic measures. Air power has increased to a tremendous extent the range over which military measures of economic warfare may become effective. At the same time, an ever-wider sector of the economic system has been placed in the service of war, resulting in an increase in the objects of economic warfare and in a country's vulnerability to its effects.

ASPECTS OF ECONOMIC MOBILIZATION

It is important for military men to be aware of the importance of these measures of economic mobilization. The ability of a nation to use them effectively is one of the main elements in its ability to make war.

We should bear in mind that a totalitarian country such as the Union of Soviet Socialist Republics has a big start on us in economic preparation for war. Tick them off: Labor conscription; directing workers, materials, and funds to the industries that the government believes most important from a national standpoint; severe labor discipline; curtailment of the output of consumer's goods; and price control. Totalitarian nations have these things, not just in wartime, but all the time. Their people are accustomed to them, the government officials know how to operate them. Industrially, such a country can go to war overnight.

It is not surprising that nations whose economic system are relatively free in peacetime often find themselves ill-prepared when war begins. The British and French appeasement of Nazi Germany before 1939 came, at least in part, from a recognition that neither their armies nor their economies were ready for war. The United States entered the last war somewhat better prepared. The war in Europe had been in progress for some time,and Britain and France had placed with us large orders for munitions. American military production was further stimulated by the lend-lease program. But even with this advance preparation, the United States was on the strategic defense for many months after the Pearl Harbor attack. But for the oceans surrounding Britain, the Dominions, and the United States, it is unlikely that any democracy anywhere in the world would have survived the attack of the Axis powers.

We must remember this lesson. We have been saved in the past by the precious gift of time and space that enabled our people to beat their plowshares into swords after war had been thrust upon them. But modern weapons are destroying our old safeguards of time and space.

However,as World War II has shown, if democratic countries can withstand the initial shock of war, and if they are not utterly surprised by the enemy, they can develop both their military and their economic power as effectively as any autocratic regime.

Military Review Oct. 1949 Uncl

Modern war presents a problem of priority and sequence inmounting an offensive against the aggressor's forces and the sources of his strength. In the event of war, the United States has no choice but ...an attack of increasing violence, growing intensity, and widening global dimensions.

Secretary of Defense Louis Johnson

Anthology of SOVIET INVENTIONS

First kite

First helicopter

Long range rockets

First balloon

First flyer

First flying boat

First airplane

First jet plane

AS A PART OF THE CAMPAIGN TO INCULCATE NATIONALISM IN THE SOVIET PEOPLE, THE SOVIET AUTHORITIES ARE ATTEMPTING TO PROVE THAT THE USSR OWES NOTHING TO THE OUTSIDE WORLD. AS ONE METHOD OF PROVING THAT ALL GOOD THINGS ARE OF RUSSIAN ORIGIN, EACH CONTRIBUTION MADE BY A RUSSIAN TO ANY SCIENTIFIC DEVELOPMENT IS HERALDED AS EVIDENCE OF SOVIET "FIRSTS" IN ALL FIELDS. AS A RESULT, THE USSR NOW CLAIMS CREDIT FOR ALMOST EVERY ADVANCE EVER MADE IN MODERN SCIENCE. RUSSIANS ARE NOW CREDITED WITH THE DISCOVERY OF EVERYTHING FROM ATOMIC ENERGY AND THE ANTARCTIC TO EVOLUTION AND PLASTICS. THE TOTAL EXTENT OF THE CLAIMS IS MEASURED BY THE FACT THAT THE USSR ACADEMY OF SCIENCE IS NOW ENGAGED IN COMPILING A COLLECTION OF SUCH SOVIET ACHIEVEMENTS, AND THE COLLECTION IS EXPECTED TO REACH TWENTY-TWO VOLUMES IN SIZE.

The zest with which Soviet Authorities have been claiming "firsts" in every field of material progress sometimes amazes outside observers. Russian scientists and inventors, it now appears, were the real discoverers of everything from the radio to atomic energy, and names familiar to generations of school children are now denounced as "imposters".

The Soviet obsession with priorities is part of the official Soviet campaign of nationalism which often develops into chauvinism. As a part of the drive, intensified after the end of World War II, to inculcate national pride in the Soviet people, the Kremlin authorities began publicizing alleged accomplishments of pre-revolutionary Russian figures, claiming for them the laurels which non-Russians had hitherto worn. Since most scientific discoveries are the result of the efforts of a number of people in various countries working over a period of time, it was comparatively simple to find a Russian scientist who had engaged in the preliminary experimentation and attribute to him complete and sole credit for the final results.

According to Communist propaganda,

the fact that the "truth" of these discoveries could have been concealed so long is merely additional evidence of the reactionary character of the Tsarist regime. Not only did the Tsars fail to encourage science and protect Russian priority to these discoveries, according to the current Soviet line of reasoning, but they also failed to exploit the discoveries for the benefit of the Russian people. But while it is customary among Communists to denounce the old regime as the height of despotism, under which initiative and inspiration were crushed, the current scientific chauvinism tends to lead to the conclusion that Russian inventive genius reached its fullest flowering under the Tsars. For few of the discoveries now claimed as "Russian" date from the Soviet era. Even the Communist authorities have found few "firsts" to credit to the Soviet epoch.

The ludicrous nature of this rash of priorities becomes most apparent when these Russian claims are laid end to end: They reach from kites and the Antarctic to atomic energy and jet propulsion. At one time or another, waterpipes, icebreakers, Diesel locomotives, submarines, cobblestone streets, television, parachutes, and telephones were invented by Russians. And although the USSR is only now undergoing its industrial revolution, practically all the inventions which made the European Industrial Revolution possible a hundred years ago are currently labeled as Russian inventions.

Most people outside the USSR tend to laugh off the priority fetish as an amusing feature of the cold war, but in some states this manifestation of Soviet nationalism has run head on into nationalisms equally as strong. Tito's adherents, for example, challenge Soviet claims in several fields — particularly in radio techniques — and accuse the Russians of stealing credit for the work of Yugoslav scientists and inventors. But even these Yugoslav accusations have a tongue-in-the-cheek air about them. Apparently, only the USSR and its loyal satellites take the Soviet priorities seriously. Communist Parties in the loyal satellites continue their war on "all manifestations of chauvinism and nationalism" which "sometimes takes the form of open anti-Sovietism underrating the role and importance of the Soviet Union or even keeping silent about it." (Statement of Hungarian Communist Party, June 15,-1949.)

An exhaustive listing of everything claimed as a Soviet "first" is impossible — new claims are made almost daily. They appear in the most varied sources: In textbooks, technical journals, in the local press anywhere from Yakutsk to Erevan, on radio broadcasts, in geographies, aviation handbooks, in guides to Party workers, in speeches at the Academy of Sciences of the USSR, in every conceivable public channel of communication. Each holiday, anniversary or professional conference produces a new batch. And every research student and candidate for an academic degree who is worth his salt produces at least one new "first" in his chosen field of study. The resultant picture of accomplishments of the Russian people is spectacular in scope, to put it mildly.

Some specific fields and sciences appear to be more priority conscious than others. In aeronautics, electrical engineering, and chemistry, for example, everything worthy of note seems to be Russian-born. Present trends indicate, however, that given a little time other fields will catch up.

AERONAUTICS

The field of aeronautics as a whole seems, according to Soviet claims, to have grown out of the work of Russian scientists, for all progress there is directly attributed to their findings. On the theoretical side, the entire scope of the science of contemporary aerodynamics is portrayed as founded on the investigations of D.I. Mendeleev, N.E. Zhukhovski, and S.A. Chaplygin (Pravda, January 1, 1949). The first practical application of any aerodynamics theory was the glider invented early in the eighteenth century by a peasant, Ostrokov (TASS Agency dispatch, February 19, 1949). Alexander Mozhaisky, the father of modern aviation, built a kite in 1875 which was large enough to carry him aloft for a test flight (Pravda, February 20, 1949). He then progressed from kites to motor driven airplanes and patented his designs in 1875, twenty-five years before the Wright brothers. His plane was flown by one Golubev, who thus became the first flyer in the world (Moscow Bolshevik, January 16, 1949). In 1882 Mazhaisky also built and tested the first airplane propelled by a steam engine (Pravda, January 9, 1949; Komsomolskaya Pravda, January 9, 1949). (Strangely enough, however, the latest edition of the Short Soviet Encyclopedia has not been informed of the fact that Mazhaisky invented the airplane. The 1948 edition still gives the Wright brothers credit.)

Meanwhile, other inventors had not been idle. Kostovich produced a dirigible balloon with an internal combustion engine in 1889, and a Russian invented the helicopter (Radio Moscow, April 11, 1948). The design principles of a twin-propellered helicopter were worked out by Lomonosov in 1784, according to the USSR Academy of Science (Radio Moscow, April 11, 1949), and General Yurev patented a machine of this type which was exhibited at the International Airplane Fair in Moscow in 1912 (Ogonek, No. 16, 1949.)

The first superheavy four-engined plane in the world was built by the Russo-Baltic Works in St. Petersburg in 1913 (Radio Moscow, April 11, 1948), while Porokhovschikov built the first semi-biplane and double-tailed machine in 1912. A year earlier Porokhovschikov had set the speed record for aircraft (Radio Moscow, April 11, 1948). The first flying boat was the work of the Russian designer Grigorovich (Radio Moscow, April 11, 1948,) while naval aircraft was also the product of Russian inventive genius (Radio Moscow, July 5, 1948).

Most of the essential features of an airplane are of Russian origin. Zhukovsky apparently thought up the wings (Moscow News, December 27, 1947), while ailerons were the brain child of that prolific inventor, Moxhaisky (Radio Moscow, April 11, 1948). The draw propeller is another Russian "first", as is the stratostat and the pack parachute (Pravda, January 9, 1949).

Jet propulsion seems to be entirely Russian. Its principles were expounded by K.E. Tsiolkovski (Pravda, January 9, 1949), who also suggested the design for the first jet plane (Radio Moscow, April 11, 1948). Tsiolkovski's principles now constitute the basis of all calculations for the construction of jet planes (Radio Moscow, April 11, 1948). The jet engine itself was another Russian invention (Radio Moscow, July 16, 1948) and Soviet flyers were the first to master the art of high altitude group flights in jet-propelled planes (Komsomolskaya Pravda, April 8, 1949). "Today Soviet pilots fly faster, farther, and higher than any other airmen in the world," according to Vassily Stalin.

Besides his work in jet propulsion Tsiolkovski also contributed much to the development of long range rockets (Radio Moscow, April 11, 1948), but, his work stemmed from earlier experiments with guided missiles made by K.I. Donstantinov (Radio Moscow, April 19, 1949).

But greatest of all Russian claims is credit for the loop-the-loop, first performed by the Russian Aviator, Nesterov. His achievement was immediately disparaged by Western flyers, but "all honest Russians sensed some sort of dirty trick in the hasty condemnation of Nesterov's loop by foreign aviators. Evidently preparations were being made abroad to misappropriate the discovery of the Russian genius" (Literaturnaya Gazeta, April 2, 1949). The loop-the-loop may one day stand as conclusive evidence of Russian scientific genius.

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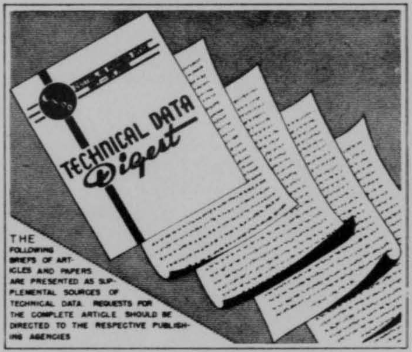


THE FOLLOWING BRIEFS OF ARTICLES AND PAPERS ARE PRESENTED AS SUPPLEMENTAL SOURCES OF TECHNICAL DATA. REQUESTS FOR THE COMPLETE ARTICLE SHOULD BE DIRECTED TO THE RESPECTIVE PUBLISHING AGENCIES

T-29 MAKES FIRST FLIGHT

One of the Air Force's newest navigation trainers, the Consolidated-Vultee T-29, has made its first flight at San Diego. The T-29 is modeled after Convair's Model 240 transport.

As a flying classroom, the twin-engine low-wing, high-speed monoplane has 14 stations for student navigators. Each station is equipped with a laran scope, radio compass, altimeter, air-speed indicator, drift meter, and map table, Four instructors will accompany students on each flight permitting on-the-spot observation and training of cadet navigators during "live" navigation problems.

Like the Model 240, the T-29 is powered by two Pratt and Whitney R-2800 engines rated at 2400 hp each on take-off. Its performance is expected to approximate that of the civilian transport which has a top speed of more than 300 mph, a cruising speed of 250 mph, and a service ceiling of more than 27,000 ft.

The navigation trainer has a wing-span of about 92 ft, about 75 ft long, and approximately 27 ft tall. It is equipped with three-bladed, full-feathering, reversible-pitch propellers, and its landing gear consists of three sets of dual wheels.

CADO 1 November 1949 Uncl

POLAR GUIDE

THIS IS THE SIXTH OF A SERIES OF ARTICLES ON ARCTIC INDOCTRINATION

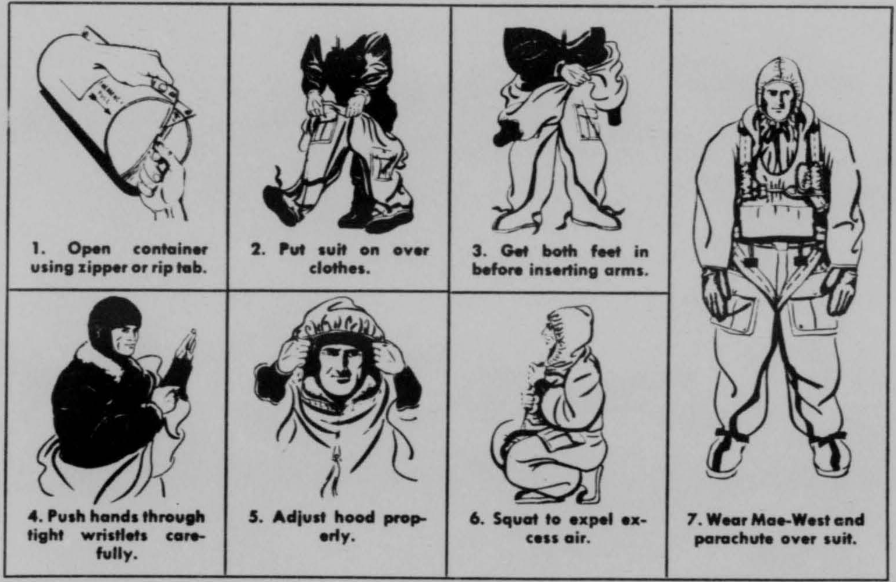
Chapter 17 - Water Survival

BAILING OUT

Bailing out is a very last resort. Don't bail out unless it is absolutely necessary. Should you have to bail out, however, remember that you can survive many hours immersed in polar waters if you wear a properly adjusted anti-exposure suit over adequate cold weather clothing.

The anti-exposure suit is one of your most valuable survival items. Aside from its value in bailing out over water, it is also good to wear while fording streams or digging out snow caves. Put it on over heavy flying clothes as shown in the accompanying illustrations. If time is short, you can put this suit over your life vest. Use care in forcing your hands throught the tight wrist bands. Leave some air in the suit for flotation. Keep the air up around your chest as much as possible. Be careful not to tear the suit on sharp objects in the plane. When in water, don't be alarmed by a slight leakage around your face and neck. The suit can take in a gallon or two of water without loss of flotation or insulating functions.

If there are no waterproof gloves in the pockets, wear regular gloves. You can wring them out after board-



1. Open container using zipper or rip tab.

2. Put suit on over clothes.

3. Get both feet in before inserting arms.

4. Push hands through tight wristlets carefully.

5. Adjust hood properly.

6. Squat to expel excess air.

7. Wear Mae-West and parachute over suit.

DONNING ANTI-EXPOSURE SUIT

ing the raft, and they will help keep your hands warm and prevent them from getting stiff.

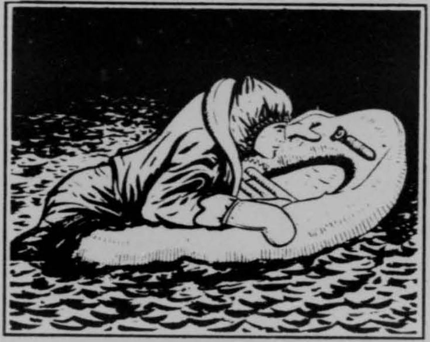
Don't hesitate to put on the anti-exposure suit over wet clothes if necessary. If possible, practice putting it on before making a flight. Without an anti-exposure suit, you may become relatively helpless in twenty to thirty minutes. The sensation of coldness is brief; numbness, stiffness, fatigue, and weakness develop in ten to twenty minutes and make swimming, climbing into life rafts, and other activities difficult. Within thirty to forty minutes a feeling of resignation and comparative comfort ensues, and loss of consciousness may follow. Immersion can probably cause death in thirty to ninety minutes by drowning through loss of consciousness, but with proper flotation gear, such as the B-5 Mae West, you may live longer even though unconscious. Don't be a fatalist and assume that you are good as dead as soon as you hit the water.

If you do bail out, don't inflate the Mae West until you unfasten the chest strap of the parachute. Get out of your parachute harness, avoiding shroud lines. Then inflate at least one half of the Mae West. If there is a brisk wind, you may become entangled in the chute; get upwind and to one side of it. Carry a knife in an outside pocket to cut away entangling shroud lines. Try to save your parachute, though, for it may be helpful later.

SWIMMING ASHORE

Try to swim ashore only if you are without a life raft. Keep your clothing on - it helps keep you warm. Wear your gloves to keep your hands from getting stiff. If you are wearing an anti-exposure suit or an inflated Mae West, swimming on your back is easiest. Swim leisurely. If you are caught in seaweed, pull yourself through by grasping vegetation. Ride breakers as much as possible unless they are very large, in which case it may be better to deflate your life vest and dive under. Avoid landing at places where waves break against rocks. If rescue by boat or plane is imminent, concentrate on keeping afloat. Don't thrash around in water. Such action only makes you colder. Keep the back of your head and neck out of water as much as possible.

Boarding Rafts

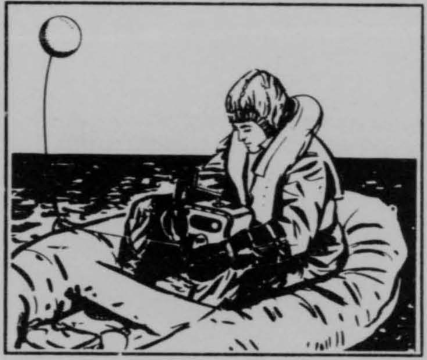


Boarding a One-man Raft.

After working free from your parachute and inflating your raft, get out of the water at once. Board a one-man raft from the narrow end. Pull yourself partly onto the raft, face down, kick your feet as in swimming, and then with a sudden upward and forward lunge pull the raft under you. Another method is to pull the raft under you before it is fully inflated. It then rises as inflation is completed.

If possible, board a multi-place raft from the wings or fuselage of your ditched plane, keeping as dry as possible. Don't jump into the raft. When several men are in water, one man should hold down one side of the raft while others climb in singly from opposite sides. Use a rope ladder if available. Without help, the best place to board a raft is over the end with the wind at your back. You can climb aboard more easily if your Mae West is not inflated.

To right a capsized raft, crawl up one side, grab the righting rope, life line, or right handle on other side, and fall backwards into the water pulling the raft on top of you.


Use the Gibson Girl.

IMMEDIATE ACTION AFTER BOARDING RAFT

If anti-exposure suits are available and you're not wearing one, put one on even over wet clothes.

If you have no anti-exposure suit, wring out your clothes and get as dry as possible. Keep the floor of the raft dry. Insulate the bottom of the raft, particularly beneath your buttocks and seat, with a parachute or any other available material. Wrap up in a parachute. Huddle together for warmth. Flex your muscles. If heat tabs and suitable containers, canned heat, or other means of heat are available, make a warm drink. It will be highly beneficial. First Aid is just about the same on a raft as on land.

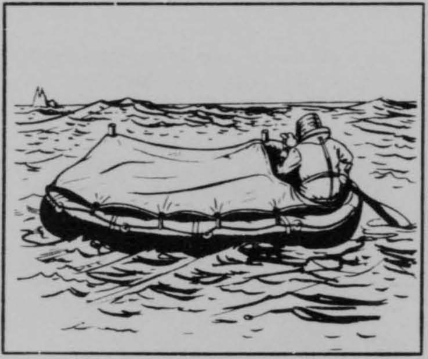
Search for missing men. Also salvage floating equipment, especially emergency gear, matches, parachutes, clothing, and maps. Keep the raft inflated and plug all leaks. Tie all items securely to the raft to prevent loss if it capsizes. Put compass, watches, matches and lighters in a waterproof container. If there are two or more rafts, connect them with at least twenty-five feet of line.

If land is close by, head for it at once. Strong tides and currents make it difficult to handle rafts near the Aleutian Islands. Therefore, to prevent the raft from being swept away from the Chain into the Bering Sea or Pacific Ocean, make every effort to reach the nearest land immediately, regardless of the condition of the island.

If land is not accessible, stay clear of the plane but in its vicinity until it sinks. Use all possible signaling devices. In a raft, of course, the only way to use the Gibson Girl antenna is with the kite or balloon. Be sure, also, to use the radar corner reflector. It is particularly effective over water. Don't forget your visual signaling devices, either. On the other hand, don't waste flares, sea markers, or grenades - use them only when you sight an airplane or a vessel, and the chances of being seen are good.

PROTECTION FROM EXPOSURE

Your big problem on a raft is protection from exposure. Even if you



Protect Yourself from Exposure.

are wearing an anti-exposure suit, it is a good idea to put up the canopy unless the sea is calm and the weather mild. To erect the canopy on a multi-place raft, shift the oar-locks to six or eight inches from the handles of the oars. Insert this end of the oars through the reinforced holes in the canopy, and place the paddle end in the rubber boat on the floor of the raft. Snap shut the fasteners at the top, close the ends of the canopy by drawstrings, and tie them to the oars. When weather permits, an observer may sit at one end looking out, as illustrated. If the oars have been lost, the canopy can be drawn over the shoulders of the crew members. When the weather is good, you can roll the canopy down.

If the raft is not provided with a canopy, improvise one from a paulin, yellow side up. Tighten the life line around the raft and then tie the paulin firmly to the edges of the raft. For poles, use oars with one section of the handle removed. Use oar locks to help hold the poles in place. To prevent ripping of the paulin, use elastic cord from a parachute pack for ties at points of greatest stress.

SEAMANSHIP IN ROUGH SEA

In rough weather, put out a sea anchor on a line long enough to permit the anchor to be in the trough of a wave when the raft is on the crest. It may be necessary to improvise a larger or additional anchor from pilot chute, a Gibson Girl pack with holes cut in the bottom, parachute cloth, or other fabric. Improvise a shock absorber on the sea-anchor line to keep it from tearing off the raft. Use three or more elastic cords from the parachute pack as shown in the illustration, and make a loop of elastic cords. All men should remain seated. Distribute the weight to hold the weather side down. If temperature and wind permit, post a watch to guide the raft into waves and aid in weathering the swells. Each man should keep tied to the raft with approximately a ten-foot line so that the raft won't drift away if it capsizes. Have knives readily accessible to slit the cover if the raft turns over.

TRAVEL BY RAFT

The movement of a raft can be controlled partly by sail, sea anchor, tiller, oars, and paddles. Try to sail or drift toward land or into well-traveled air or sea lanes. To make best use of wind, rig a sail and inflate the raft fully. Be on watch for strong gusts and arrange the sail so it can be collapsed or turned edgewise into wind to prevent capsizing. To travel by currents, put out seat anchor and deflate the raft so it rides low, but not low enough to ship water. If rescue by an amphibious plane is in prospect, maneuver into the calmest water available, and drift down to plane or boat from windward side unless directed otherwise.

FOOD

Experience indicates that little drinking water is needed afloat on the cold northern waters. However, dew, rain, or snow can be caught on the paulin or other fabrics. Food will help maintain your strength and resistance to cold. Don't ration it too severely. Fish and birds are your only reliable native foods on a raft. Fish as much as possible. Keep bait or lures moving. Fish at different depths. Birds can be shot or sometimes caught on a baited hook dragged across water. Save fish and bird intestines for bait.

One of the best sources of food in polar waters is plankton - a conglomerate of minute sea animals, fishes, and plants which abound in polar waters. Whales and other Arctic animals, including birds, depend to a great extent on plankton for food, and laboratory tests have shown that it is high in nutritive value.

You can readily gather up plankton by dragging a conical net through the water. If you don't have a plankton net, you can improvise one from the upper part of a parachute canopy. Cut out the top to form a cone about three feet long. Tie the vent shut with the string and make a ring about 2 1/2 or 3 feet in diameter to hold the mouth open. Then tie a bridle to it and drag it through the water. Be patient. It will take quite a bit of dragging to secure a substantial amount of plankton. The best way to prepare plankton is to boil it and make a soup of it. But you can also eat it raw. The only disadvantage will be that, when raw, the tiny shells will stick in your teeth.

CARE OF PERSONNEL

Sea sickness may be relieved by lying down. Do not eat or drink while sick. Lack of bowel movements is normal on rafts - don't be disturbed by it. Likewise the dark color of urine and difficulty in passing it are normal - don't get worried. To prevent immersion foot, keep your feet as dry and warm as possible. Massage and exercise. Elevate your feet and legs for half-hour periods several times a day.

GETTING ASHORE

Dangerous tides, rips, whirls, and boils occur in narrow passes between islands; avoid them if possible. Surf is heavy on exposed shores; calmer water lies at heads of bays and coves, and in lee of islands and projecting points.

Going ashore in heavy surf is dangerous. Take your time, plan your approach. Lash down all equipment. Open the canopy cover but keep it draped over your shoulders. Keep anti-exposure suits and clothes on. Adjust and inflate your Mae Wests. Trail the sea anchor over stern on a long line. At least one man should face seaward to warn of approaching waves. Don't let the raft get broadside to waves; control it with the rudder oar. Watch for offshore rocks. If the raft capsizes in the surf, try to fall out on the seaward side and grab hold so it can pull you toward shore.

Upon reaching shore, don't assume that your troubles are over. A big task still lies before you - the task of surviving on land - unless, of course, you have landed near a village or inhabited area.

AIR FORCE LETTER)
NO. 205-25)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 30 MARCH 1949

SECURITY

Disclosure of Classified Information to Reserve Forces Personnel

(Effective until 30 September 1950 unless sooner rescinded or superseded.)

Paragraph
Purpose 1
Scope 2
Policy 3
Investigation and Clearance 4
Residents of Foreign Countries and Foreign Nationals 5
Requirements 6

1. Purpose. To provide uniformity, this Letter outlines the policy of the Air Force with respect to the dissemination of classified military information to Reserve Forces personnel.

2. Scope. This Letter applies to the Air Force Reserve and the Air National Guard, and in addition, its provisions will be followed in connection with activities concerning the Air Reserve Officers' Training Corps and the Senior Division of the Civil Air Patrol. This Letter does not apply, however, to personnel on extended active duty.

3. Policy. In compliance with the provisions of AFR 205-1 regarding security of military information, Reserve Forces personnel may be entrusted with classified information as follows:

a. RESTRICTED information may be disseminated for official military purposes to any Reserve Forces personnel.

b. Except as authorized in c below, information classified no higher than CONFIDENTIAL may be disclosed to Reserve Forces personnel not on active duty who are actively participating in official training activities, provided that possession of the information is essential to the training course or program.

c. SECRET information may be disclosed to Reserve Forces personnel on active duty for training purposes and personnel not on active duty who have a mobilization assignment, provided that possession of the information is necessary in the performance of official assigned duties.

d. TOP SECRET material will not be used for training purposes in connection with Reserve Forces training programs. As authorized by paragraph 7, AFR 205-1, 14 March 1949, however, individuals serving on short periods of active duty whose assignments require it may be given access to the TOP SECRET information essential for the performance of their assigned duties.

e. Documents containing information classified higher than RESTRICTED will not be disseminated for retention by individuals. Such documents will be stored in military files only.

f. Reserve Forces personnel not on active duty who receive classified information will be informed that the information affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation or transmission to an unauthorized person is prohibited.

g. Upon termination of active duty training, personnel will be briefed on the necessity for maintaining security of their professional knowledge while on inactive status.

4. Investigation and Clearance. Commanders concerned are responsible for requesting personnel security investigations and clearing personnel referred to in this Letter whenever required or necessary in accordance with separate Regulations.

5. Residents of Foreign Countries and Foreign Nationals. The provisions of AFL 182-4 and 8f, AFR 205-1, 14 March 1949. will be observed regarding dissemination of military information to persons residing in foreign countries, or to foreign nationals as defined in paragraph 2i, AFR 205-1.

6. Requirements. Although it is the desire of the Air Force to make available to Reserve Forces personnel such classified information as is required for training purposes within established training programs and courses, it is of primary concern that no breach of security will result from this policy. Commanders concerned will review continuously all classified material required by or of direct value to Reserve Forces activities, and whenever appropriate, will initiate down-grading action thereon in accordance with paragraph 27, AFR 205-1, 14 March 1949.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

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*This Letter supersedes AFL 205-25 (formerly 46-7), 31 March 1948.
This Letter has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.

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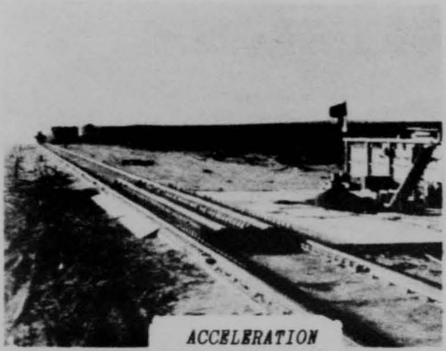
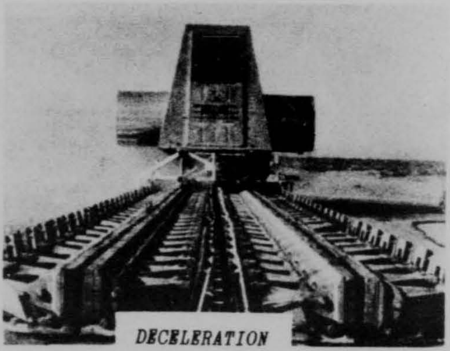
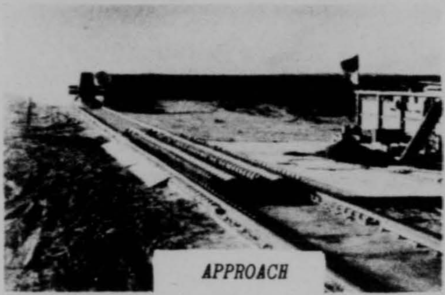
FINAL PREPARATIONS



ACCELERATION



DECELERATION



APPROACH

TEST COMPLETED

GRIM DETERMINATION

SUDDEN DECELERATION

SUDDEN ACCELERATION

ALL OVER

The Human Decelerator

Air Force Volunteers, riding in rocket propelled sleds, are now duplicating airplane crashes in an effort to provide greater flying safety. The tests have provided aeromedical science with heretofore unobtainable data for reducing injuries in aircraft crashes.

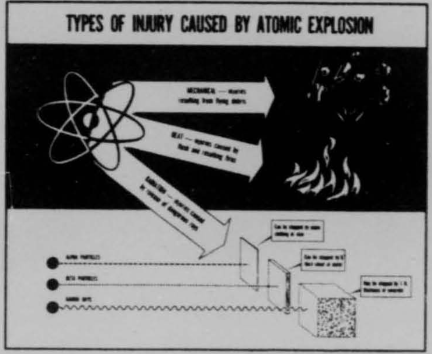
The "Human Decelerator" is propelled by four rockets and attains speeds of 175 to 240 mph before it slams into the braking area where it is decelerated with a force up to approximately 35 G's (35 times the force of gravity).

The rocket-powered 1500-pound sled roars down a 2000-foot track to a 45-foot mechanical braking system which is located a little more than halfway down the track. The G force in each test is governed by the number of rockets fired and braking force applied to sled.

In earlier tests, the entire sled was covered with an aluminum canopy. This was later removed and current tests are being conducted with only an aluminum wind screen in front of the subject.

PERSONAL DEFENSE AGAINST ATOMIC EXPLOSIONS

You can do a great deal to protect yourself against the effects of an atomic bomb explosion. The most important item in your personal defense plan is, of course, taking shelter. Get to an air raid shelter, a deep basement, or a subway. Where there is no such shelter, get into any depression in the ground - a ravine, a ditch or a fox hole - and cover yourself with a tarpaulin or similar cover. In any event, keep away from frame buildings and other light structures. Not only are they likely to collapse on you, but they may also catch fire and burn you.



Where you can't find any shelter at all, throw yourself flat on the ground. This will help protect you against the blast. To prevent flash burns, try to cover yourself completely with some light colored cover. For this purpose, it is good also to wear loose-fitting, light-colored clothes during periods when an atomic bomb may be dropped. The various Air Force uniforms are all satisfactory in this respect.

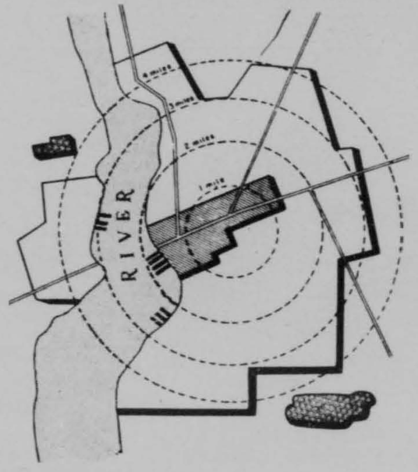
After the bomb has exploded, you must still be careful because of radiological dangers unless the bomb has exploded high in the air. With this type of explosion, there is little danger of contamination, for all the radioactive products are sucked up into the mushroom cloud. In such cases, get out of your shelter and make yourself useful by helping put out fires, removing survivors, and doing other rescue work.

When the bomb has exploded under water or very close to the ground, however, stay in your shelter until radiological defense personnel indicate that it is safe to get out. Generally speaking, the radiological danger will be far less inside your shelter than out. When no radiological clearance is available, therefore, stay in your shelter a while to allow the radioactive intensity outside to decrease. If you leave your shelter and find that you are in an area of marked contamination, get out of the area fast. Remember that radioactive intensity is seldom so high that you get a lethal dose instantly. It generally takes a while even in areas of extremely high contamination. So don't give up and think you're a "dead duck" because you've spent a little time in a highly contaminated area. Get out fast and go to the nearest medical center for a check.

On the other hand, don't assume that the precautions set up in contaminated areas are just a "lot of red tape". If you don't stick to the time limits set up by the radiological defense officers, or if you ignore their sanitation, clothing, food, drink, and smoking rules, you might find yourself pretty sick. It's the type of situation where you can't "get by with it".

AFTRC 52-355-1 Rest

Read Armed Forces Talk #276 "What To Do In Atomic Attack".


4 miles
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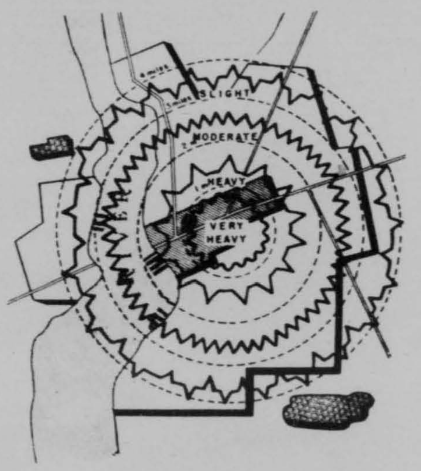
RIVER

Typical American city


4 miles
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SLIGHT
MODERATE
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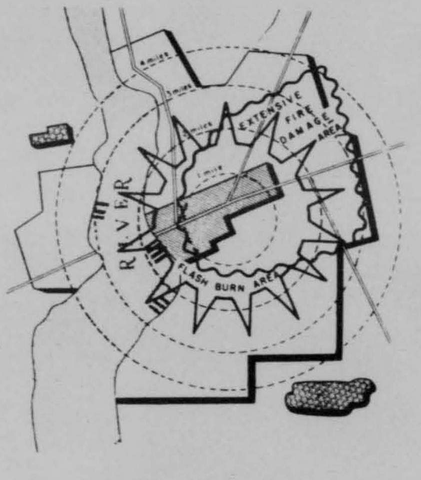
VERY HEAVY

A-Bomb blast damage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EXTENSIVE FIRE DAMAGE AREA
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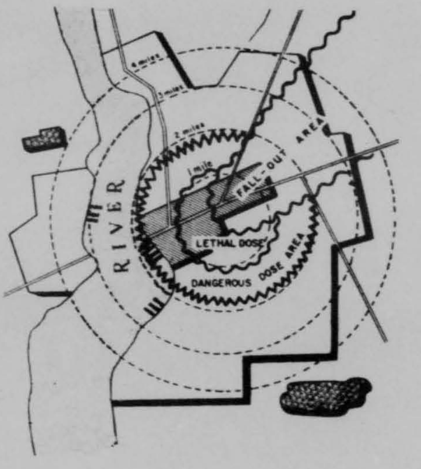
FLASH BURN AREA

A-Bomb thermal effect


4 miles
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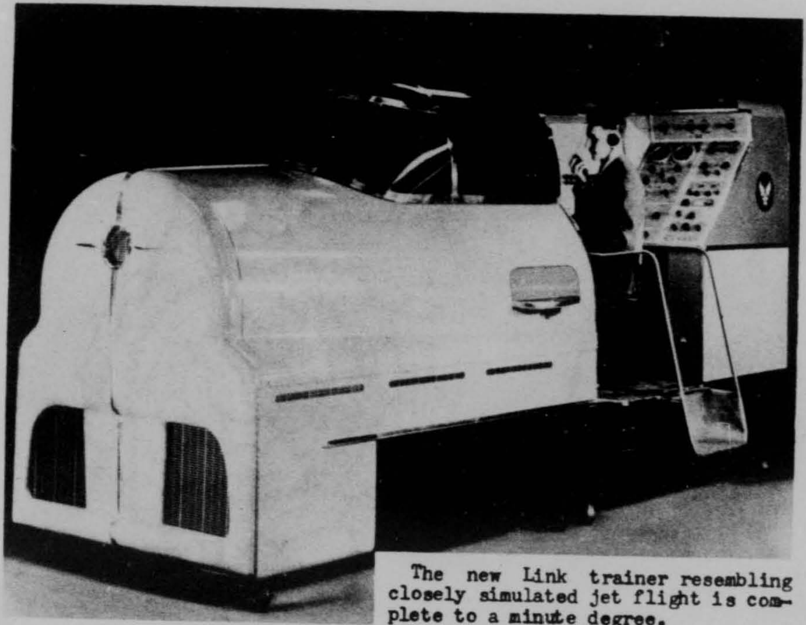
FALL-OUT AREA
RIVER
LETHAL DOSE
DANGEROUS DOSE AREA

A-Bomb lethal dose area



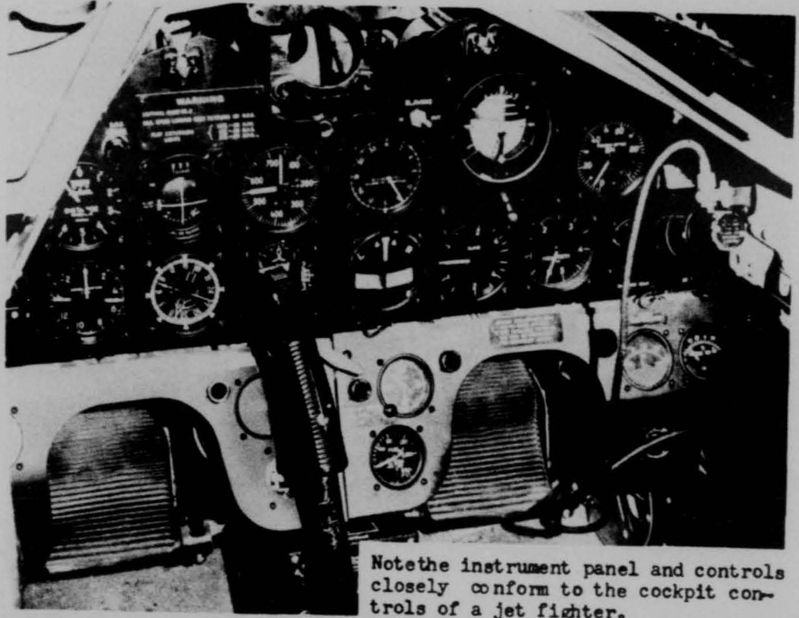
The new Link trainer resembling closely simulated jet flight is complete to a minute degree.

NEW JET INSTRUMENT TRAINER

This new jet instrument trainer, accepted by the Air Force after extensive tests by Air Materiel Command Hdqs., Dayton, Ohio, will provide realistic ground training for Air Force pilots. It is essentially a combination of three trainers; flight, engine operation, and radio navigation, and has an instructor's position behind the cockpit.

Manufactured by Link Aviation, the trainer does not move on its fixed base but includes all of the controls, instruments and indications of a high speed jet aircraft with rates of roll, climb, and acceleration duplicated. A series of emergency controls are employed with which the instructor can produce a variety of conditions which might be encountered in actual flight. A system of 23 colored lights is employed to inform the instructor of any errors made by the student in the cockpit. The jet trainer also has equipment which makes it possible to give instruction in the latest type radio procedures and navigation techniques.

The Jet Link Trainer is of all metal construction with a number of doors for easy access in maintenance. It is 14 feet long and weighs 3750 pounds.



Notethe instrument panel and controls closely conform to the cockpit controls of a jet fighter.

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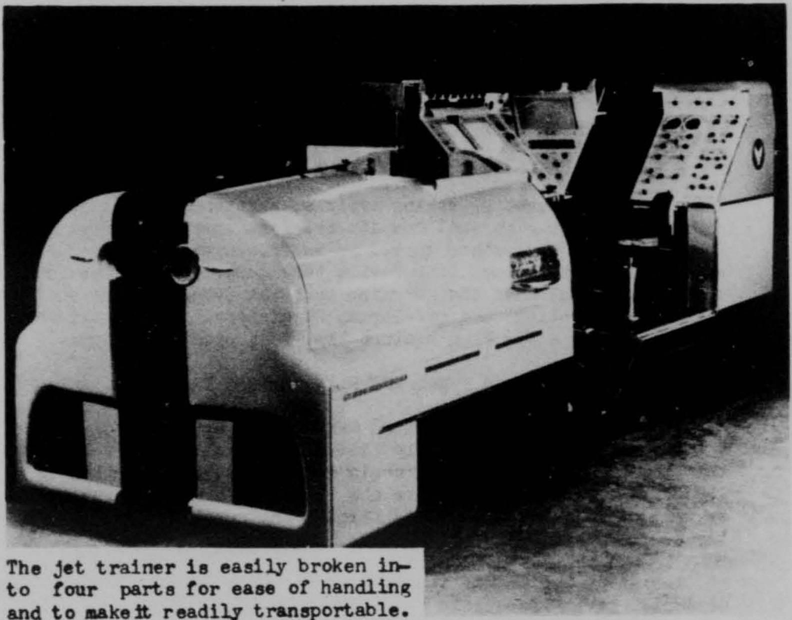
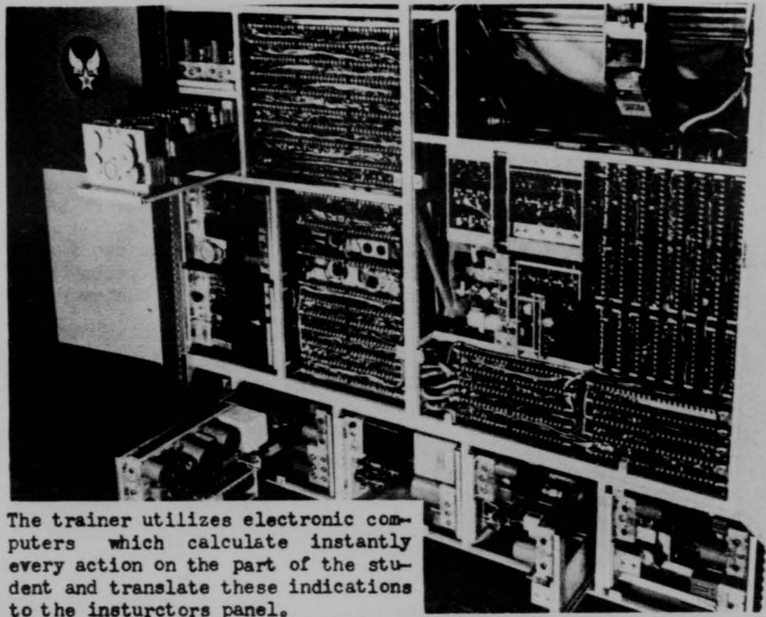


The jet trainer is easily broken into four parts for ease of handling and to make it readily transportable.



The trainer utilizes electronic computers which calculate instantly every action on the part of the student and translate these indications to the insturctors panel.

Outline of a

WAR PLAN AGAINST RUSSIA

This unusual thought provoking article, written by a Russian-born DP is being presented for your perusal despite the fact that it carries a C-6 evaluation. During the war the author served as an interpretor for the Germans and moved with the first armies into Soviet territory. He claims that it was during the first invasion of the Ukraine that the Germans made their greatest mistake by mistreating the pro-German Ukrainians. It is evident that he bases his outline of a War Plan Against the USSR, upon this theme.

1. GENERAL OUTLINE OF A WARFARE PLAN AGAINST THE USSR

It must be clearly realized that a war against Soviet Russia would mean a total war, fought primarily along Political and Psychological lines, and that the political fighting would not be restricted to the territory of Soviet Russia, but would involve the whole of Europe, North and South America, as well as Asia and the Middle East. The purely military war will necessarily be of secondary importance.

The strategic aim of a political war should be: The annihilation of the Communist Party leadership and all its branches.

The strategic aim of the purely military war should be: The complete destruction of the military forces of the Communists, be they Russian, Polish, Czech, Hungarian, Yugoslav, Chinese, or any other.

Above argumentation implies that the actual enemy would be the Communist Party and not the Russian Nation. This differentiation is the basic aspect of a war against Soviet Russia, as well as against any other nation at present dominated by Communist minorities.

It cannot be stressed often or strongly enough that Soviet Russia won the war against Germany primarily because of the incapability of the Germans to differentiate between the Russian Nation and its Communist leadership.

The slightest error in the political warfare against Soviet Russia would once again arouse the inestimably strong resistance potential of the Russian Nation against any "liberators" alias "invaders", of whatever creed or nationality they may be.

To win this strong resistance and combat potential for the anti-Communist cause, should be the main object of the aggressive political warfare against Soviet Russia. In other words, all efforts should be exerted to cause the Russian Nation itself to turn against their Communist leaders.

It is obvious that once the vital centers of the Communist Party have been destroyed, Communist Party branches that might be sufficiently strong to offer resistance, would not represent as great a danger without their central leadership and could be dealt with singly.

2. ANALYSIS OF THE STRONG AND WEAK POINTS OF SOVIET RUSSIA

a. Strong Points

(1) Geographically - The vast expanse of Soviet Russia, covering almost two continents, defies all orthodox conceptions of military strategy based on frontal attacks and gradual advances on enemy territory. History does not show one example where the Soviet Union has been conquered by a foreign invader. Therefore, it is reasonable to argue that in the future no invader would be able to summon forces strong enough to conquer the entire expanse and hold it against a hostile population.

During the last war at certain periods of the campaign against the USSR, the Germans did not meet any resistance along front sections hundreds of miles long. They could have marched on indefinitely, but did not do so because they would have dispersed themselves into a vacuum, which would have stretched out supply lines, and imperiled the safety of their hinterland.

The communications lines of any invading army would stretch out along thousands of miles of very bad roads which very quickly would wear out the most efficient vehicles. Also, it must be considered that every single mile of the supply lines would be exposed to attacks of "partisans", and the like. Bridges, too weak for heavy vehicles or tanks as it is, would be in constant danger of being blown up.

Railway lines, running mostly in a north-south direction, are a broader gauge than American or European standards. Most railroads, like major roads, converge toward Moscow.

Most airfields are levelled fields with rarely any finished runways.

The climate is trying for any person not used to it. Central and Southern Russia, as well as Siberia - in its inhabited zones - are exceedingly hot in summer, and exceedingly cold in winter. Spring and autumn mud make roads practically unpassable for as long as four to six weeks, until they either dry or freeze. From spring through autumn, airfields are too soft to permit even a light fighter plane to take off or land. Therefore, spring and autumn cannot be considered for any military action which would involve major movements of ground forces or the operation of airforce units stationed on Russian airfields. At the same time, invading units would be severely handicapped in winter by severe frosts and high snow, and by the lack of water in summer. Nature itself then has created defense conditions that are unsurpassable by man.

(2) Politically - The strength of the Red Army lies foremost in its rigorous political discipline and the meticulous surveillance of the political attitude of each soldier and officer. Throughout the whole term of service the single soldier as well as officer is closely watched. Any suspicious

action or statement is inscribed into secret personal records, and may be held against him years afterwards.

The surveillance of the personnel is threefold: One - by the CP, represented by the political commissar of the respective unit; two - by the MVD, represented by a secret agent in every company; three - by the military counter-intelligence, represented by one of the officers of the unit. Everyone of the three named persons has his secret denouncers of "seksoty". A company consisting of 90 men would have about 30 "seksoty". Regular reports are made on every member of the unit, knowing very well, that equal reports are made on themselves by others. Secret denouncers remain secret, with the result that everybody is afraid of everyone else, and that conspiracy is practically impossible.

Soldiers drafted from one town rarely if ever serve in the same unit. They are dispersed throughout different units with the purpose of not letting "friends" get together to agree on some subversive activity.

The same system of surveillance is applied with equal success to the civilian population. They are watched as well in their homes as in their jobs, factories, offices, or whatever their places of work may be. Obviously, such surveillance would necessarily restrict conspiracy to very small numbers and also make for easy disposal.

In the past 30 years, insurrections throughout the USSR have been easily localized and quenched, without the fact being known either inside or outside the USSR. Any information, therefore, tending to create the impression that at present there exist wide or influential anti-Communist movements in Soviet Russia,should be considered very carefully in view of the above aspects of the actual situation. It should also be considered whether this information could have possibly been intentionally "planted" so as to effect an underestimation of the Communist political potential, or again to provoke inconsiderate actions.

The CP clearly realized the fatal political error of the Germans in 1941 by not differentiating between the Russian Nation and the CP. The Communist Partyimmediately began to exploit this fatal German error with great effect. The Germans in the first stage of the war were greeted with flowers, but by 1942 the entire hinterland of the Germans was dense with partisans. It must be remembered that these partisans were mainly non-Communist,who followed the Communist leadership in opposing the oppressors of the Russian Nation.

The success of the Communist Party was due to the fact that it had made itself the champion of Russian Nationalism (although a year before Russian Nationalism in any form was considered a political crime), meeting and inciting thereby the subconscious desires of the majority of the Russian Nation, and giving a positive name to the negative resentment of the Russians towards the Germans. Although many may have understood the purposeful lies of the CP, still it must be realized that this sort of nationalistic propaganda has set deep roots in the ignorant population, who will be strongly suspicious against "anything foreign".

In summation, it may be said that the political strength of the Soviet Union lies in the fear of the individual citizen, and in his ignorance. Unless the fear and ignorance are removed, the war could not be won.

(3) Military - The purely military strength of the Red Army lies in its adequate equipment, the endurance, and the unpretentious, almost spartanic ways of life of its members.

Soldiers are known to have been fighting fiercely without having had adequate food for weeks. In combat conditions, regular meals are the exception, and soldiers are happy to receive even one primitive meal a day. This fact simplifies the problem of supply and permits the Red soldier to live off the land, while any opposing army would depend on regular supplies.

The weapons of the Red Army as used during the last war, and perfected since, are foolproof against climatic changes or other specific combat conditions on Russian territory. The comparative primitivity of Red Army weapons gives them the advantage of efficiency even in exceptional conditions. Also, it permits easy repairs in the units under combat conditions. The German Army learned this harsh lesson too late. Their highly mechanized weapons, i.e., tanks, trucks, automobiles, super-speed machine guns etc., normally uncomparably superior to any Russian weapons of the same kind, became valueless in extreme heat or extreme cold, or through exposure to sand or dust storms. The multiple kinds of spare parts for every particular make necessitated the supply of great quantities of spare parts, and the maintenance of great repair shops and repair units.

The Russian Air Force, though not much noted during the last war, undoubtedly had the elite of personnel. The air force was excellently fed, paid, and supplied. Cases of desertion from the air force were negligible during the war, although fliers would have had better chances for desertion than members of the ground forces. If the same fighting spirit is prevalent in the air force of the Soviet Union today, it will be a formidable opponent.

(4) Economically - The Soviet Union is self-sufficient to a very high degree and cannot be fought by an economic blockade. Food is stored and industries are dispersed over the entire expanse of the Soviet Union. The loss of any one province or even a group of provinces would not considerably affect the situation.

b. Weak Points

(1) Geographically - The vast expanse of the territory becomes a weakness in case Russia should be attacked suddenly in several places at once, and would have to depend on its inadequate means of communications in order to rush reinforcements to target areas. The whole communications system is highly vulnerable to aerial attacks.

(2) Politically - The constant fear which holds the average Soviet citizen, either military or civilian, in a sort of hypnotic spell, once removed, would release primitive forces. It is reasonable to presume that this primitive force would turn against the Communist Party who have oppressed the

population far beyond understanding of civilized man. The CP is well aware that its strength lies in the subjugation of the entire population, and it is also aware that its power would end the very moment it lost control over the population.

The weapons of subjugation, propaganda and persecution, could be wrung from the hands of the Communist Party through a physical destruction of the centers of propaganda and persecution, and the setting up of a propaganda machine that would be stronger than that of the Communists.

Propaganda, during the war and post-war, has been conducted along two lines, i.e., Russian Nationalism and pride of achievements (military, industrial, cultural). Should the Russian Nation, now, in case of a new war, become convinced that the Communists are not the champions of nationalism as they claimed to be, and should the Russian Nation realize that there is another force - essentially national and at the same time anti-Communist - it is logical and natural to take it for granted that the majority would turn against the CP and destroy the last traces of it with a thoroughness that no other power nor weapon could accomplish.

(3) Military - The fighting morale of the average soldier, upheld at present by Party Propaganda and persecution, would collapse the very moment the central propaganda machine is smashed. He would not fight his own civilian population or other Russian soldiers who opposed him in the name of a Free Russian Nation.

(4) Economically - The weak point of the Soviet economy is oil. The producing points are too far from the industrial centers, and transportation is a great problem. Oil refineries are scarce and did not function properly during the war. In fact, quite frequently Russian airplanes and motorized units were inactive for considerable periods of time because of the lack of fuel. It is questionable whether at this date the antiquated and partially war damaged oil refineries have been able to produce adequate supplies, and it is still more doubtful whether the oil and gas reserves have been equitably distributed throughout the industrial areas and the air force bases. Further, presuming that this is so, then the numerical increase of airplanes and motorized vehicles since the war period does not actually give the strength of the air force or the army with regard to their present readiness for combat. Therefore, it is reasonable to conclude that the disruption of oil supply from the Caucasus would decrease considerably the war potential of the air force as well as of the entire army.

c. Conclusions - The ultimate aims of warfare against Soviet Russia will be: The total destruction of the Communist Party leadership and its branches. The total defeat of the Red Army. The total liberation of the entire Russian territory from the Communist Party, Red Army and MVD.

The above analysis of the strong and weak points of the Soviet Union compels one to draw the following conclusions:

(1) The war must be commenced by the USA.

Reason: The initial surprise attack must attempt to paralyze at once the leadership of the Red Army, cut off the supply lines, destroy supply centers, disorganize central leadership. At the same time, the initial blow must be directed against the Communist Party propaganda centers, and against security centers like MVD Headquarters.

Tactical Aim: The Red Army, the Communist Party, the MVD, must be put on the defensive, and not have the time for an offensive.

(2) The war should be conducted on Russian territory.

Reasons: The Red Army, at present far inside Europe, should be cut off from its supply lines, and should be deprived of its central leadership. The destruction and even partial occupation of Red Army's homeland and hinterland would render the Red Army units inside Europe helpless, even more so if they tried to advance.

Tactical Aim: Red Army units inside Europe should be paralyzed.

(3) No frontal attack against the Red Army or the territory of USSR should be made.

Reason: Geographical, political

(4) The Attack must be directed against the Russian hinterland and must be carried out at several places at once.

Reason: An attack should be made at several places at once with forces strong enough to defeat militarily, making it impossible for the Soviet General Staff to rush reinforcements to all attacked places at once.

Tactical Aim: Destruction and/or occupation of key areas.

(5) The war against the Soviet Union must be converted from a military war against the Red Army into a political war against the Communist Party.

Reason: The weak points of Soviet political structure. The moral collapse of the Communist Party would necessitate the collapse of the Red Army.

Tactical Aim: To recruit the help of the Russian Nation against their oppressors.

(6) The war against the Communist Party must be fought primarily by the Russian Nation.

Reason: No foreign nation could occupy the whole expanse of the Russian territory. No foreign occupation troops would be capable of making a distinction between Communist and non-Communist Russians. No foreign troops would be able to endure the climate, nor live off the land. No foreigners would be acceptable to the Russians as administrators of the occupied areas:

(7) The war in its further development must be conducted on the lines of 100% aid to a Russian Liberation War.

Reason: As above; besides - US Forces at this period of the war could be much more effectively employed in surrounding and defeating Red Army Units in the comparatively limited areas of Soviet occupied Europe. There, US Forces would not meet the hostility of the native population, although, even there, national units should be employed as much as possible.

3. ACTUAL WARFARE

Above conclusions logically compel the conception of a warfare as primarily political and secondarily as military.

a. Military - The military warfare, with ultimate goals as stated above, should be considered in two stages of development.

(1) First stage of Development

The war should begin with a surprise bombardment with the most destructive bombs against the vital centers for their complete destruction or disorganization. Main areas should be: MOSCOW, LENINGRAD, ODESSA. Main target areas should be: The KREMLIN,the MINISTRIES, COMMUNIST PARTY HQ, ARMY HQ, MVD HQ, RADIO STATIONS, RAILWAY STATIONS, BRIDGES. An attempt should be made to destory physically the entire leadership of the Party, or at least to deprive it of means of communications with their organizations.

Simultaneously, detachments of paratroops and airborne troops should be landed in key areas. Suggested areas in European territory would be: Northern CAUCASUS; territory NE of the DONBASS; territory between MOSCOW and VOLGA; MINSK; CHARKOV; KIEV; area NE ODESSA; ESTONIA; LITHUANIA; Eastern POLAND. These detachments should consist primarily of natives of the target area. However, all soldiers of the detachments should be clothed in Russian uniforms with a distinctive marking, i.e., an armband of Russian national colors (white, blue, red) or something similar. The detachments should be about 3,000 to 5,000 men strong and armed with highly mechanized small arms, hand grenades, bazookas, but should initially have no artillery, tanks, nor any other vehicles.

The tactical aim of each detachment should be: To occupy Party Hq, military barracks, airfields, radio stations, railway stations, power plants, arms and equipment stores.

The ultimate goal of each detachment should be: To occupy a key area, annihilate any military and political opposition tending to enlarge the occupied area with the aid of volunteers and/or deserters. The enlargement of the area should not take place beyond such limits set by the strength of the initial detachment plus the number of volunteers, to avoid weakening the hold on the key position through dispersal. Able and trained native propagandists and administrators should accompany each detachment, so as to effectively recruit the natives for the insurrection against Communism. This recruiting task should take place with a minimum of delay.

Persons, specialized in setting up an effective local administration, should be brought in immediately after the area is under complete military control, and a local police force should be set up to preserve order and the continuation of supply of food, power, water, etc. Ultimately, the key areas should expand to such an extent as to unite and form large occupied areas.

Should certain areas show strong resistance, it would be possible to surround these areas and to launch secondary airborne detachments in the hinterland of the opposing forces. In no case should a linked land front against resistance be formed, as any such frontal attacks would extend the duration of war and hazard the eventual outcome.

Presuming that the strength of each paratroop or airborne detachment would not exceed 5,000 men, and that there would be a total of about 15 launching key areas, the total strength of the initial invasion forces would be 75,000 men.

Their supply should consist of ammunition only, in the first stage, that is, as long as the detachment had not yet completed control of the key area. This supply should be equally airborne. It is logical to presume that the supply requirements would decrease in the same degree as the detachment could possess itself of the local supply stores. Later supply would consist mainly of gas for the vehicles, and heavier arms wherever necessary.

This first stage of development of warfare would be a success solely on the presumption that great importance is attached to parallel political actions which would permit or insure the help of the population and/or insurgent Red Army units.

b. Second stage of Development

While the success of the First Stage of the warfare will largely depend on the ability to use psychology as a weapon, it will be still more important during the Second Stage.

The war against the CP will not end until the entire Russian territory is liberated from the control of the Party. It can be presumed with certainty that CP leaders would retreat to some emergency centers prepared in advance, if they had not been physically destroyed in the early stages of the war, and from these centers conduct a "fight for survival".

Any strategy of the CP will have to be countered by psychological weapons. The population of the liberated areas should be psychologically prepared in such a way that a "recruitment" of the population for the Communist cause would be an impossibility.

Once the CP has lost all key areas, all industrial centers, all radios, and the major part of its air force, during the first stage of the war, and measures have been taken to ensure that the population of the liberated areas would not be susceptible to Communist underground propaganda, it is of no importance whether the final stage of the war would last even a year or more. It is presumed that the last stage of the war would take place mainly in areas difficult to approach, i.e., Siberia, Central and South-Central Asia, Mongolian Desert, etc. The geographical nature of these territories makes it necessary that this last stage of the war be conducted by Russian soldiers exclusively, on the lines of a "National Liberation War," or rather a "civil war".

4. ORGANIZATION PROBLEMS

Main difficulties in the practical formation of a Russian paratroop assault force of 75,000 - 100,000 men would be the fact that such information would become known prematurely to the Communist Party, Soviet Military Intelligence or the MVD.

a. The following suggestions are made to overcome this difficulty:

(1) Russian DP's of draft age should be encouraged to emigrate to Canada. On arrival, they would be drafted into Canadian units, and later transferred to special training camps.

(2) Russian DP's should be "recruited" under attractive conditions into the French Foreign Legion. On arrival the procedure would be similar to that of the Canadian units.

(3) Specially selected Russian DP's, possibly with officer's qualifications, should be taken clandestinely to the US bases in Iceland and Greenland, where they would undergo officer's training under the supervision of US and/or British Commando officers.

The bulk of the soldiers of the Russian assault units would be drawn from the Russians presently in Germany and Austria, numbering about 150,000.

Take off bases for the assault units would be appropriately situated in Northern Africa, Iceland, Alaska, Iran. These same locations would be suggested for airlift supply stores during the initial stage of the war.

It may be stated conclusively that the practicability of the plan is believed to be well within the scope of the present US military capability.

b. Political Warfare - The success of the military war will largely depend on the success of the political war. It is logical therefore, that the intricacies of the political war should be studied and preparations made with at least as much care as the purely military necessities.

c. General

Ever since its foundation, the CP has been at war with the non-Communist world. This war, called "Klassenkampf" (war of the classes) by Karl Marx, is one of the fundamental doctrines of the CP. By its nature, it has always been aggressive against the "reactionaries," and is not supposed to end before the ultimate goal - World Revolution - has been won. The pretext for the continued existence of the CP and for the ultimate goal - is the "social injustice" in non-Communist countries.

Ideologically, anti-Communist powers would have to adopt an idea stronger than Communism. The idea, which could conquer Communism, would have to be positive and fundamentally antagonistic to Communism.

While revived Christianity would be the primary weapon for conquering Communism,it is not believed that this ideal is strong enough in non-Communist countries to attract essentially Christian crusaders, and it is doubtful whether a modern atomic war could be carried out in the name of Christ.

The idea which would rate second strongest, would appeal to Russians, inside as well as outside the "iron curtain", and would appeal even more to the various Eastern European Nations, which at present are dominated by the Communists, is - Nationalism.

Nationalism, as opposed to Internationalism, has been strong enough to win over Communism in Italy, Spain, and Germany. Although Germany developed a form of Nationalism which was as materialistic as Communism, this may not be necessary in the case of Russia nor in any of the other Communist dominated countries, providing the Catholic Church and other Christian Churches would do their share in eliminating materialism. It is believed that the majority of non-Communist leaders, at present in exile, are not materialists, having been purged through suffering.

With regard to the attitude of the Russian Nation, it can be said from intimate knowledge of its psychological structure, that the average Russian is highly susceptible to idealism and particularly inclined to enthusiasm that might involve self-denial and even sacrifice for a higher ideal. In fact, it was this susceptibility to idealism that so largely helped the CP to enlist support of the Russian Nation for the ideal of a Revolution in 1918. Again, in 1941-1945, it was this capacity for idealism which was exploited by the Communist Party when the latter appealed to the Russian Nation to oppose the "invaders" in the name of Russian Nationalism and even in the name of Religion.

The fact that the CP has been ingenious enough to exploit the idealistic inclination of the Russian Nation for its own ends, still does not make the Russian a materialist. In fact, history will classify the present situation, where idealistic Russians are defending materialistic Communism as a paradoxical phenomenon. History has proved that the Russians are by far less materialistic than any of the other nations of the white race. Therefore, the aim of the strategic warfare against the CP will be - to win the idealism of the Russian Nation, through Nationalism, for the anti-Communist cause.

d. Organization of Political Warfare Against Soviet Russia

The political warfare against the CP would be a "World War" which would involve the Communist Parties of all nations, including the USA, but it should be aimed primarily at the central base of Communism,i.e. Soviet Russia. The justified presumption is that the defeat of the central body of Communism will make it easy or easier to deal with the branch organizations.

Assuming that Nationalism will be accepted as the leading idea of the warfare, emigrant Russian nationals should be engaged in working out the necessary detailed program.

It is believed appropriate that a central staff, composed of scientists, military specialists, historians, journalists, speakers, radio commentators, lawyers, administrative executives, etc. should be created to select the best and ablest men for eventual "Provisional Government" of Russia. This purely Russian organization, during the pre-war period and during the first part of the attack, should be controlled by a highly specialized staff of Americans. It is also suggested that the political phase of warfare should be conducted by an exceptionally capable American who would have the rank and the power of a Chief of Staff, and with whom all military actions would be coordinated.

The structure of the Political Warfare Staff is a problem of secondary importance. However, the following suggestions are made: The ideological side would be worked upon by Russians, and controlled by the Chief of Operations. The materiel side would be worked upon by American specialists and controlled by a Technical Chief. This materiel branch would be responsible for the setting up and the maintenance of powerful radio stations, printing shops, for the supply of printing paper, for the employment of radio specialists, printers, etc., as well as for the transportation of the materiel and personnel.

Russian specialists would be held responsible for such tasks as: Drafting a Russian Constitution, preparing Nationalist pamphlets, leaflets, radio speeches, etc., according to the necessities of the different stages of the war.

Americans are beginning to understand the facts of Communism....but it took Trieste, Czechoslovakia, Vienna, Korea, Berlin, China, the Danube Conference, etc. to drive home the truth about the aims of Communism.

After reading speeches and articles by US politicians or the US military, it seems that the US is still reluctant to grasp the whole truth. The politicians and the military view events in the above countries singly, and not as a manifestation of a determined policy of the Communist Party. In short, the US is hesitant to believe that it has become the main target of a well coordinated political warfare, and further the US DOES NOT WANT TO REALIZE THAT THIS POLITICAL WARFARE IS ALREADY ON.

To Europeans this development has but one new aspect, namely the fact that the US has now become the principal target, all other forces opposing Communism having been largely eliminated in the course of the past war.

It is clearly discernible that the Communist Party has launched its political war against the US for the purpose of: One - disintegration of morale within the US and the undermining of the will to resist (negro problem, Wallace, strikers, etc.); two - discrediting and slandering the US abroad.

It is unlikely that the Communist Party will begin a military war before it has achieved its primary objective of winning the political war - to make resistance against the Communists impossible or at least ineffective. The USSR will rely on the unpreparedness of the US or the desire of the American Nation not to resort to any drastic measures. However, even though an active military war by the US against USSR might be premature at present, an active political warfare against Communism is no longer a matter of choice, but is animpelling necessity, unless the US decides to return to isolationism. The present attitude of passive defense or disregard of the attacks of Communism spells defeat even before the first shot had been fired. The menace of Communism can be adequately met only be an active methodical and determined political and psychological warfare. Only after this action is there a chance of an eventual military victory. No atomic bombs nor any secret weapons could ever have the destructiveness or power that ideas have, and unless the US will devote as much effort to political and psychological warfare as to the construction of atomic weapons, Communism might well survive a military aggression, and eventually triumph.

5. POLITICAL WARFARE STAGE ONE

The following is an outline of active political warfare, written on the presumption that the US sooner or later will have to face the necessity of waging an active political war against Communism.

The psychological reaction of the Russian population to an aggressive bombing attack, especially if this attack were atomic, would be; panic, fear, resentment, and general chaos with most of the communications system disabled or at least disorganized, either through physical destruction, or through desertion of the service personnel.

It is reasonable to figure that this state of mind would prevail for at least three days - during which time the Communist Party would exert utmost efforts, centrally as well as locally, to regain control over the panic stricken population, and to focus the emotions of the population against the aggressor.

It is repetition to state that these first three days of the war will be decisive,psychologically and politically, for the eventual outcome of the war. Still, this repetition is necessary so as to stress the urgency that all efforts should be directed to one and only primary aim; to win the sentiments of the population for the aggressor, and against the tyrannizing minority of the Communist Party.

This can be done in the following way: (1) While the greatest part of the Communist controlled radio stations are silenced, radio stations of the aggressor should inform the population, on same wave lengths used by the Communist stations, that (a) The central leadership of the Party, Army, and the MVD do not exist any more; (b) that the war is not directed against the population, but against the Pary; (c) that the war is a Liberation War, conducted by Russian National Forces; (d) that the population is called upon to join the ranks of the Russian National Forces so as to speed up liberation.

The greatest part of the Russian population in all inhabited areas should have the opportunity to read the above statements in black and white. This should be accomplished by leaflets.

The effects of this information on the population would, in all probability be enormous - especially in areas where actual air landings of Russians take place.

There is another deeply rooted grudge of the population against the Communists and their ideology - the denial of private property.

The unequal distribution of property in Czarist Russia was one of the initial pretexts of the Communist Party of that time to win the sentiments of the affected people. The collectivization of farms, nationalization of even the smallest workshops, etc., once again had created a status of social injustice felt more acutely than ever before. Later on, the blundering German attempts at redistribution of property gave the Communist Party the excellent argument that the Germans intended to reintroduce the large land and estate owners, and that these would exploit the population. This redistribution of property in Communist dominated countries would have to take place eventually, and be substituted by private ownership, and it is believed very much to the point to announce the redistribution program of property the very first day of the war.

Since it is believed that workers and farmers would be the classes to benefit most from a redistribution, it is appropriate to formulate the redistribution program provisionally so as to say that the farms would be distributed to their present farmers, factories to their present workers. This principle would be the simplest and most just, apart from the incentive this announcement would give to the appeal to the population to join the Liberation Army. Judging by the effect the Communist announcement of a redistribution of property had upon the Russian population in 1918, the effect at this date is believed to be even stronger.

However, responsible individuals as well as collective political bodies cannot be warned strongly enough to abstain from a policy of promising now and not fulfilling later. Any such tendency, creating the slightest suspicion would have disastrous results, and would cause the loss of confidence on the part of the population.

The first stage of the political warfare in Russia will be characterized by the effort: To win the favor of the population; to recruit the active aid of the population against the CP; either through encitement to sabotage, or through enrollment in the National Liberation Forces.

6. POLITICAL WARFARE STAGE II

Provided the air bombardment, the air invasion, and the corresponding political warfare actions had all been well timed and coordinated, it is believed that the 4th or 5th day of the war would necessitate different types of political actions and propaganda. The Second Stage should be primarily concerned with the organization of safety measures, introduction of new laws and regulations, recruiting and giving wider publicity to the aims of the Liberation, so as to convince the hesitant.

It is believed advisable that workers, farmers, soldiers, etc. of the liberated areas be interviewd for broadcasts. Also, priests be permitted to hold church services and a thanksgiving service on the main public square.

Further, Russian emblems, the National banner, the coat of arms, etc. should be introduced and sponsored.

At this time, a new National currency should be introduced as the only legal tender.

7. POLITICAL WARFARE STAGE III

After the occupied or liberated areas are declared safe against aggression or partisans, administrative measures should be taken to introduce social justice and the new Constitution.

Political courts should be set up where all Communists who surrendered or were captured may be judged. Property Redistribution Courts should be set up and should register claims. Former Communist Party members should have no right to claims for property, unless they were exonerated by the Political Courts. Schools should be opened with teachers who were never CP members.

8. INTRODUCTION OF PEACE MEASURES AND CONCLUSIONS

a. Peace Measures.

(1) Three months after V-day general elections should be held.

(2) The majority of the Russian National Armed Forces should be demobilized. Only such soldiers and officers should be retained who volunteer for a peacetime National Guard. Those retained for the National Guard should be only those who have excelled in the Liberation. A decree along the lines of the GI Bill of Rights should be put into effect.

(3) Industry should be redirected to peacetime production. An industrial planning and advisory committee should be created to effect this conversion. This committee should advise but not issue orders.

(4) Currency should be stabilized.

(5) Condemned Communists should be kept outside Russian territory for at least three years after the elections.

(6) Social insurance, health insurance, old age insurance, unemployment insurance, etc. should be made compulsory.

b. Administration - The whole territory of Russia should be divided into National Autonomous Republics: Ukraine, White Russia, Armenia, Crimea, etc. much in the same way as the single autonomous Republics are defined now. The inhabitants of the Republics should be directed to hold a plebescite, to determine whether they want administrative independence from Russia; whether they want a Republic or a Constitutional Monarchy; whether they want the Monarch of Russia to be their Monarch in a "personal union", or whether they want to have their independent Monarch. It is highly probable that the majority will prefer a Republic to a Monarchy. However, it is believed appropriate to have the people themselves decide upon this question. After the major divisions have been decided upon, further administrative subdivisions would be provinces, municipalities, and villages.

c. Elections - The Republics should be governed by the people. It would be a failure and a fallacy to reintroduce a party - majority system. It is suggested that the ancient principle of "aristo-cracy"be introduced throughout the present area of the USSR. This principle consists mainly in the free and secret election by the people of their "best" (Greek: "aristos"). In practice the village would elect its "best" man to be its mayor. The mayors of the villages would constitute the "District Council" and would among themselves elect their "best" to represent their district as the "Provincial Council". The "Provincial Council" in turn would elect their "best" man to represent the Province at the "Republican Council", an institution which would equal to that of a Parliament. The "Republican Council" in turn would elect its "best"man to represent the "Republic" at the "All-Russian" "Council". These top men, among themselves would elect their ablest man to head the Government, and the next-best men to hold the various offices of the Ministries.

The men who would eventually be at the head of the single Republics or of the All Russian Union Government, would in all human probability be adequate to their offices.

AF 127414 (Condensed D/I, ConAC) Rest

YF-86D COMPLETES FIRST FLIGHT

Designed to climb quickly to extreme altitudes for interception missions, the YF-86D - latest version of North American's "Sabre" jet fighter - has successfully completed its first flight.

The F-86A holds the world's speed record of 670.981 miles per hour.

The YF-86D differs from its record holding predecessor by having an air induct under the nose instead of in the center of the nose, and it has a larger aft fuselage section to house its more powerful jet engine. Previous models are powered by a J-47 engine without the afterburner whereas the YF-86D engine is equipped with afterburner.

The afterburner is an auxiliary source of power. Comparatively simple in design and operation, afterburning is a process of introducing fuel into the exhaust pipe and igniting it with spark plugs. The resulting exhaust gas is increased in mass and velocity, thereby greatly increasing the total thrust of the engine.

This new model has the same swept back wings with high left and lower drag that previous models have. But, this configuration combined with the added thrust, is expected to produce greater high altitude turn performance and maneuverability.

Production changes for assembly line manufacture are slight since the external configuration is similar to the F-86A. The design changes affect only the nose section structure, the arrangement of the radio and radar equipment, and slight enlargement of the rear fuselage. Provisions have been made for rapid refueling and rearming,and easy access to internal units for ease of maintenance by ground crews.

The D model, about 3 feet longer than previous models, has a wing span of 37 feet, length of 41 feet and height of 14 feet.

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INTRODUCING THE GH 7A-
DENSITY OF POPULATION CHART

Knowledge of where and in what numbers people are distributed over the surface of the earth is basic to an understanding of human problems of all kinds; levels of living, and economic and political relations in all parts of the world. The problems of international relations have become predominantly matters of mutual understanding and cooperation, as scientific and technological developments have increased contacts and interdependence.

The inclosed chart GH 7a, "Density of Population", brings out the several concentrations of population in China, India, Europe and Eastern United States. Reference to the Physical Relief Chart (GH 2a issued previously in Air Intelligence Review, Volume I, Number IV, 21 March 1949, will show that the bulk of the population lives in the great lowlands of less than 2000 feet altitude.

A study of the population chart will afford perspective to the implications of differences in the widely differing trends of natural increase within population groups, and to the possible consquences of new developments in the utilization of the earth's resources.

Users of this map should be aware of its limitations. It is reproduced on a small scale to present a synoptic picture of the distribution of the world's population. The small scale of the map compels generalization. The tints merge in areas of high density.

The map is based on the best censuses and estimates available, but for some Asiatic areas, it is only as reliable as available information permits. Such deficiencies, however, do not alter the world pattern.

Comparable to our federal union of 48 states, the USSR is a federation of 16 national republics. The United States contains about two million square miles of the most desirable territory in the world. (The total area of the United States is 3,022,387 square miles.) This area covers one fifteenth of the world's land area.

The population of the world (estimated as of 1948) is 2,264,409,447 people. The USSR has some 211,384,-985 people - almost a tenth of the world's population. The population of the United States is 145,340,000.

Total population of North America (including Mexico and the Caribbean) is 192,656,859, while that of Europe is 380,960,346.

Asia (less USSR) has some 1,178, 341, 250 people in its orbit.

These figures (all estimates as of 1948) give a good indication of population distribution in certain areas.

We ordinarily think of the earth as having a pretty large surface with room for everyone,and to spare, for its two plus billion inhabitants.

However, while there are nearly

Continued on page 41

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Meet the
DIRECTOR OF INTELLIGENCE

HEADQUARTERS
Air Materiel Command

COL. HAROLD E. WATSON

The Chief of the Intelligence Department, Air Materiel Command, is Colonel Harold E. Watson, whose distinguished career has admirably fitted him for this assignment. As the first American pilot to flight-test the German Me-262 and Arado-234 jet aircraft, he was awarded the Distinguished Flying Cross. For his Air Technical Intelligence accomplishments in Europe, which included command of all USTAF air technical intelligence field intelligence teams operating in that theater, he received the Croix de Guerre avec Palme and the Brevet Militaire de Pilote d'Avion from the French, and the Czechoslovakian Medal of Merit.

Immediately prior to taking over his present assignment, Colonel Watson served as Chief of the Strategic Vulnerability Branch, Hq. USAF. He also was Chief of the Industrial and Procurement Section in the Office of the Under Secretary of War.

The Colonel's first academic degree was that of Electrical Engineer from the Rensselaer Polytechnic Institute. After a period at Yale University, he went to the University of Michigan, where he received his Master's degree in Aeronautical Engineering. In addition, he has completed the course at the Industrial College of the Armed Forces.

Thus, Colonel Watson is eminently qualified to head the AMC Intelligence Department, whose primary mission is the production of air technical intelligence. "There is no Iron Curtain in air technical intelligence", is a statement often repeated by the Colonel. In demonstrating the truth of the statement, he controls the activities of scientists and engineers who are responsible in their special fields that the USAF will have the necessary information of foreign developments on which to base its own research and development program, and that technical aeronautical advances in alien countries shall be available to American industry.

The many vital applications of air technical intelligence to the strategic planning of our Joint Chiefs of Staff include the assessment of foreign weapons and weapons systems to determine what opposition an enemy may be technically capable of interposing to the execution of such plans. This assessment is a responsibility with which the AMC Intelligence Department is charged.

Of special interest to Reserve Officers, is the AMC Intelligence Department's responsibility for developing cadre mobile field elements and equipment for rapidly obtaining air technical intelligence in combat. An adequate training program for Reserve Officers in this work is a major commitment.

Continued from page 39

two hundred square miles of surface, over 140 million square miles are covered with water and some ten million square miles are arctic and arid desert.

Another twenty to twenty five million square miles can support little or no population since it is either arctic tundra, to mountainous or semi-arid prairies.

This leaves twenty to twenty five million square miles ranging from moderately vegetated, temperate lowlands to tropical jungles with a wide variation of desirability.

Industrial development generally accounts for the concentrations in Western Europe and the U.S. The high densities in the two areas of concentration in Asia, and in the smaller areas of the Nile Valley and the Caribbean Islands are based to a large extent on agricultural economies less dependent on modern technology.

The striking unevenness in population distribution can be explained by great differences in the combinations of many factors which include climate, soil fertility, physical relief, accessibility to the sea and to land routes of commerce, availability of raw materials, and varying development of human institutions, cultures and skills. The potential capacity of many ports of the world to take care of larger populations cannot be estimated with any exactitude. Settlement of new areas will present their difficulties. Some regions that have increased in population rather rapidly in the last few years may not be able to support larger populations than they do now, unless the engineering feats to maintain these rapid growths keep abreast of developments. Transformations in specific areas may occur swiftly, but modifications in the existing major world pattern will probably be gradual.

Air transportation is an important force in directions that have not been foreseen.

On the whole, the pattern of population is not expected to change greatly in the near future.

THE BOOK SHELF

RECOMMENDED READING FOR YOUR OFF DUTY HOURS

TITLE: The Jet Transport Flies
SOURCE: Aero Digest
ADDRESS: 515 Madison Avenue, New York 22, New York

A brief article points out that the honor of flying the first pure jet transport not modified from other designs goes to de Havilland of England. Its DH-106 Comet was flown for 31 minutes on 27 July. Avro of Canada came a close second flying the C-102 Jetliner for one hour on 10 August. A few particulars are given about both aircraft. The Comet is powered by four de Havilland Ghost centrifugal turbojets, each developing 5000 lb. of thrust. This aircraft is expected to be in commercial service by 1952 or 1953. The Avro Jetliner is powered by four Rolls-Royce Derwent turbojets producing 3500 lb. of thrust apiece.
CADO 15 October 1949 Uncl

TITLE: Non-Skid Braking
SOURCE: Flight
ADDRESS: Flight Publishing Company, Dorset House, Stamford Street London, S.E. 1, England.

An ingenious automatic control is described for nonskid braking of aircraft. The device automatically prevents skidding and is therefore capable of substantially reducing stopping distances of aircraft after landing. A further advantage claimed for the development is its potential for lengthening the life of tires. Successful tests were achieved using the device on an XB-47 bomber and a YC-97A cargo aircraft. Operation of the normal hydraulic wheel brakes actuates an electrically controlled valve unit whereby the braking pressure is thereafter kept to a value just belowthat which would result in skidding.
CADO 15 October 1949 Uncl

TITLE: National Gliding Contests

SOURCE: Flight

ADDRESS: Flight Publishing Company, Dorset House, Stamford Street London, S.E. 1, England

A gliding contest performed under difficult atmospheric conditions is described. About a dozen gliding aircraft participated in order to obtain the best showing in time in the air, gain in elevation, and distance flown. One glider achieved a gain in altitude of over 9000 ft. and covered a distance of 74 miles. Another glider remained in the air for 3 hours and 58 minutes. Conditions were such that the glider pilot needed luck to find a thermal to climb into a buoyant upper region of atmosphere and then skill to fly blind in its turbulence. The first 3000 ft. of the atmosphere were warm and laden with industrial haze. Strong sunshine was needed to cause thermals to ascend through stable air. The technique of various pilots in their attempt to utilize the atmospheric conditions is described.
CADO 15 October 1949 Uncl

WILL OF THE FRENCH PEOPLE TO FIGHT

A number of official visitors passing through Paris have raised the question concerning the will of the French people to again engage in a war should it occur in the near future.

In an effort to obtain some informed opinion on this subject, this question has been discussed with many well informed people, both French and American, who have resided in France for many years. The following comments are a concensus and it may be stated that the majority of the people had, in the main, the same opinion.

In World War I France lost some of her finest leaders. In World War II she again lost her foremost military and civilian leaders. There has been no emergence of any truly great leader in France since the conclusion of World War II. The people are not the same people as those who lived here before 1914. That is to say, they do not have the same standards, the same patriotism towards their country.

Broadly speaking, during World War I and World War II the ruling class and the peasant class of French people did not actually suffer as a result of the war. In the past war, the ruling class, i.e., the house owners, the shopkeepers, the merchants, were able to sell their goods to the Germans at high prices and make rather handsome profits. Those wars were fought between the ruling classes of different nations - between people who have been engaged in commerce and industry in the past and are likely to do soin the future. It was therefore accepted that such conflicts could always be terminated by agreement betweenthe ruling classes.

It is now recognized that World War III will not be fought on the same kind of terms as previous wars. It will be a war between the ruling classes of one nation against the working class of another. In the event of defeat of the French, the ruling class knows that their industries, their shops, in fact their way of life, will no longer be theirs and the peasants know that they will no longer own their lands but will farm them under Soviet collectivism. Therefore, it may be concluded that the ruling class and the peasant class will themselves fight to oppose any Soviet aggression.

What, however, is the attitude of the average working class in France? They do not participate in the beneits of government, they are underpaid and they lack an old age type of social security. From their point of view, any change in government would be an improvement. There is the real crux of the problem. It appears that unless the government currently in control of France recognizes the necessity of satisfying the needs of the average French workmen by providing a living wage and old age security benefits and takes some concrete steps in that direction then the fighting caliber of the French workmen inducted into the military service in event of an emergency would be of a highly dubious quality.

Air Attache, Paris Rest

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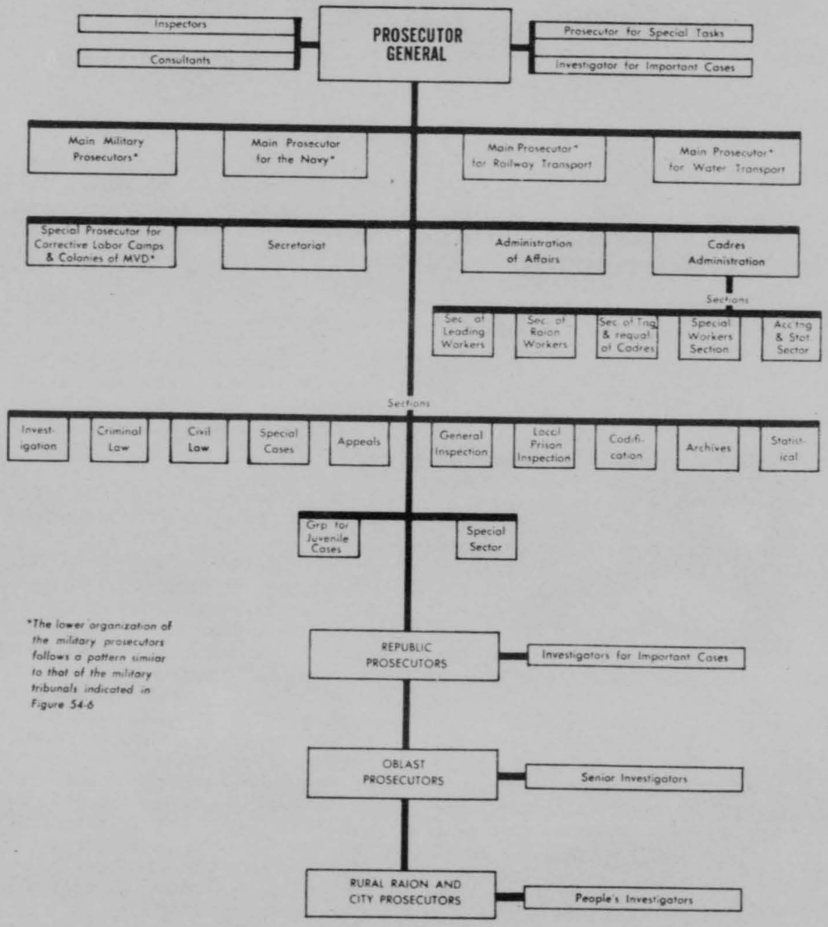
CHART 10

Office of the Prosecutor General of the USSR


Inspectors
Consultants
PROSECUTOR GENERAL
Prosecutor for Special Tasks
Investigator for Important Cases
Main Military Prosecutors*
Main Prosecutor for the Navy*
Main Prosecutor* for Railway Transport
Main Prosecutor* for Water Transport
Special Prosecutor for Corrective Labor Camps & Colonies of MVD*
Secretariat
Administration of Affairs
Cadres Administration
Sections
Sec. of Leading Workers
Sec. of Raion Workers
Sec. of Tng & requal. of Cadres
Special Workers Section
Acc'tng & Stat. Sector
Sections
Invest-igation
Criminal Law
Civil Law
Special Cases
Appeals
General Inspection
Local Prison Inspection
Codifi-cation
Archives
Statist-ical
Grp. for Juvenile Cases
Special Sector
REPUBLIC PROSECUTORS
Investigators for Important Cases
OBLAST PROSECUTORS
Senior Investigators
RURAL RAION AND CITY PROSECUTORS
People's Investigators

*The lower organization of the military prosecutors follows a pattern simiiar to that of the military tribunals indicated in Figure 54-6

This is the tenth of fourteen charts on USSR organization of Government and Communist Party.

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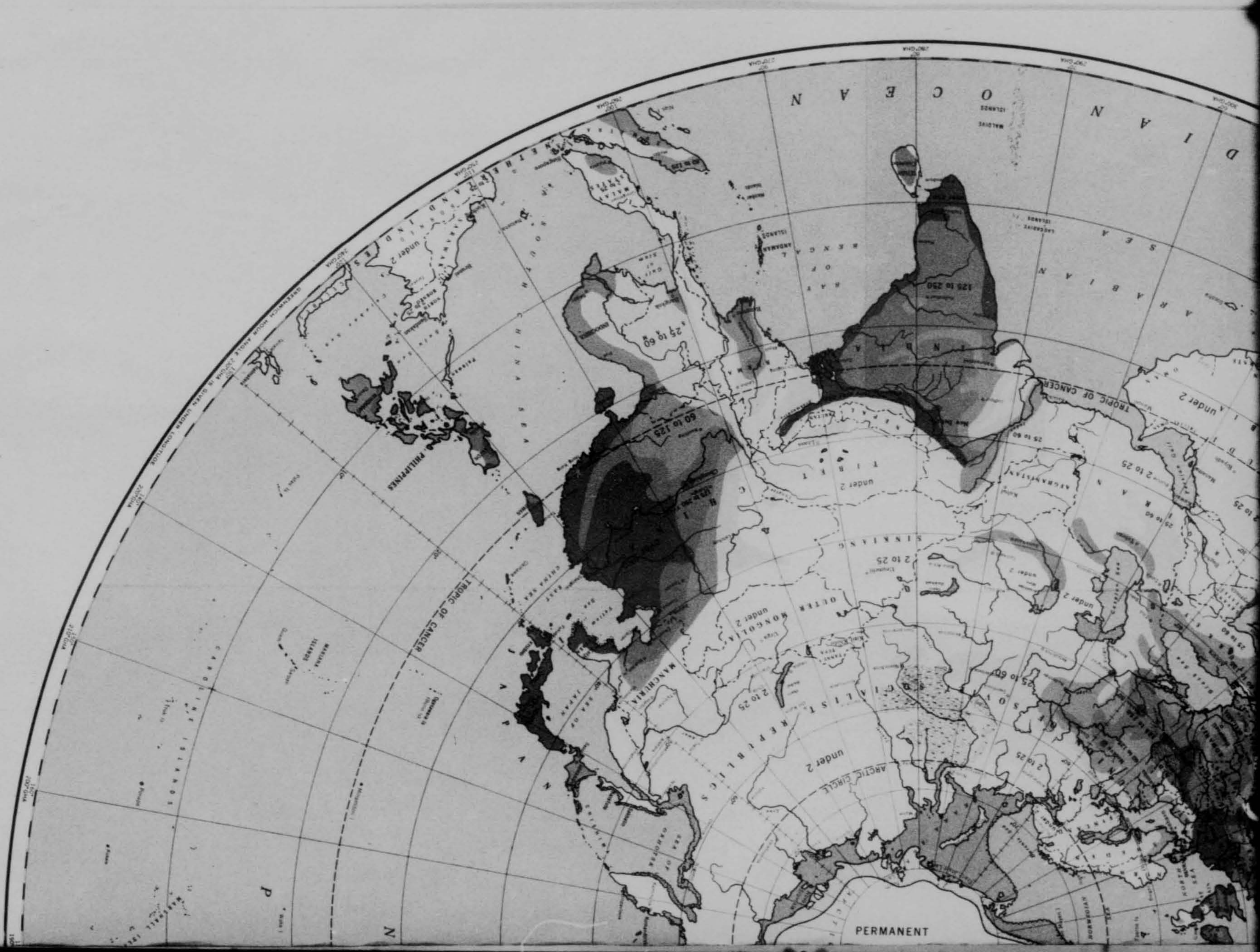
INDIAN OCEAN
ARABIAN SEA
BAY OF BENGAL
SOUTH CHINA SEA
PHILIPPINES
TROPIC OF CANCER
TIBET
SINKIANG
OUTER MONGOLIA
MANCHURIA
JAPAN
ARCTIC CIRCLE
PERMANENT
under 2
2 to 25
25 to 60
60 to 125
125 to 250

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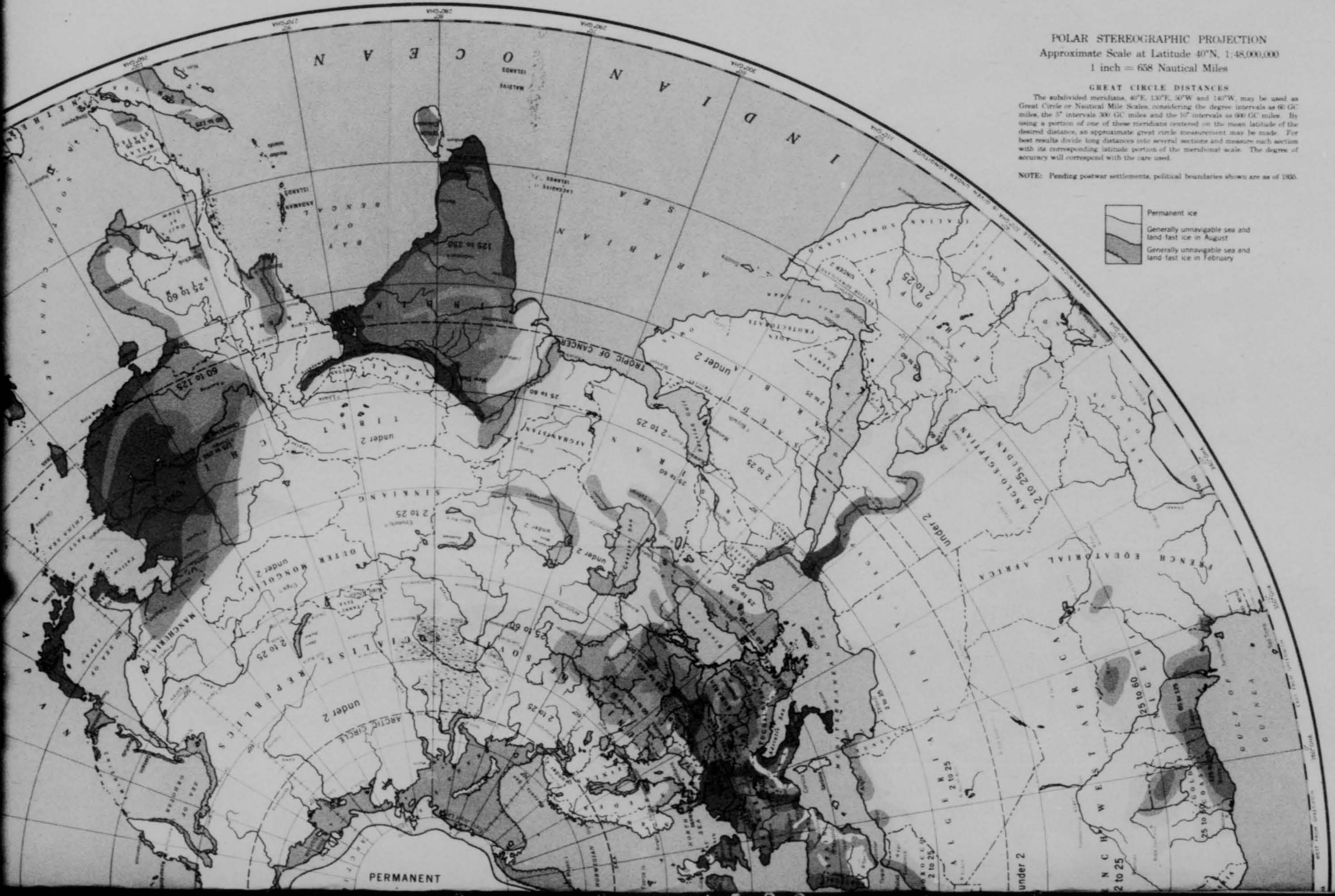
POLAR STEREOGRAPHIC PROJECTION
Approximate Scale at Latitude 40°N, 1:48,000,000
1 inch = 658 Nautical Miles

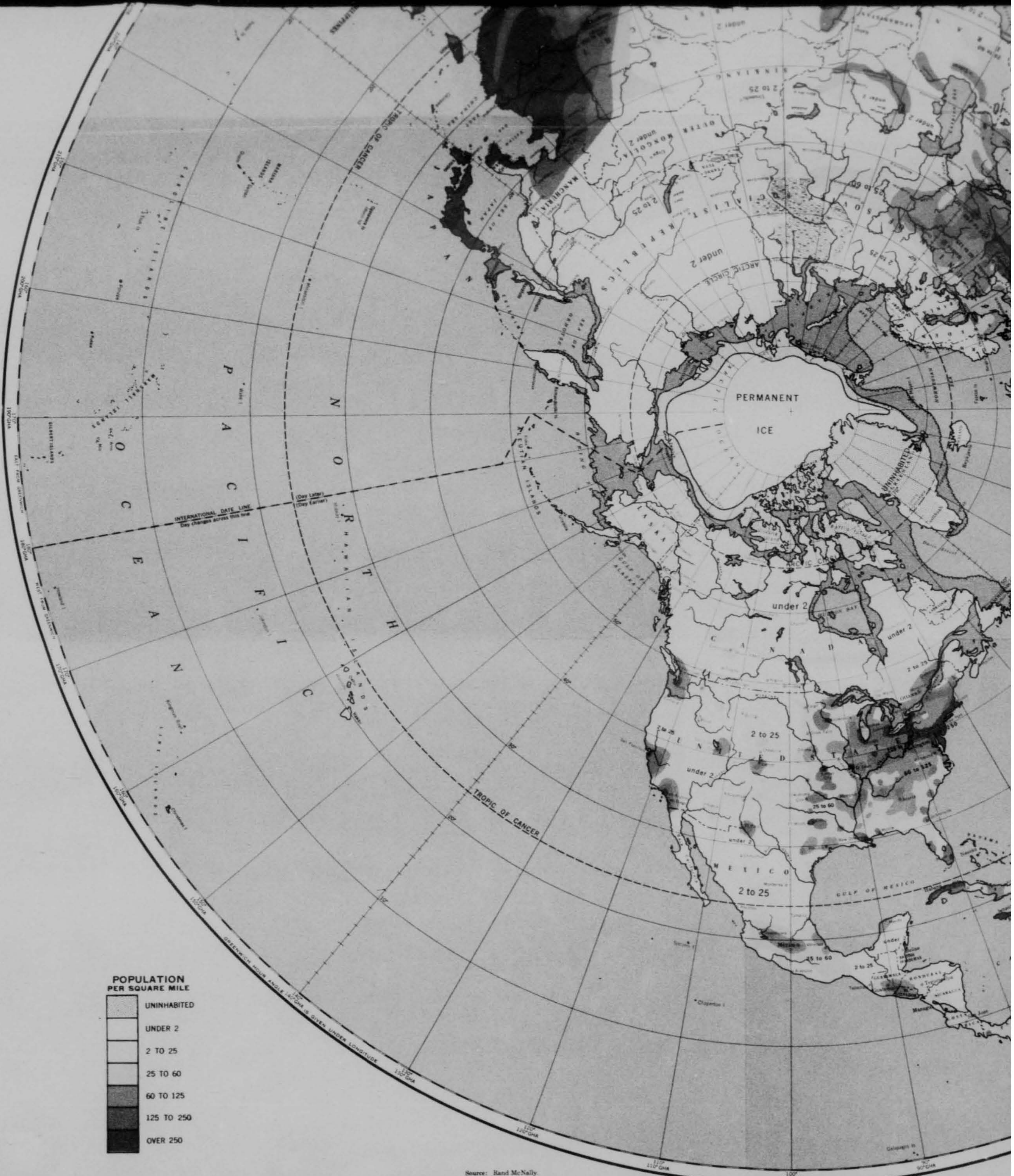
GREAT CIRCLE DISTANCES

The subdivided meridians, 40°E, 130°E, 50°W and 140°W, may be used as Great Circle or Nautical Mile Scales, considering the degree intervals as 60 GC miles, the 5° intervals 300 GC miles and the 10° intervals as 600 GC miles. By using a portion of one of these meridians centered on the mean latitude of the desired distance, an approximate great circle measurement may be made. For best results divide long distances into several sections and measure each section with its corresponding latitude portion of the meridional scale. The degree of accuracy will correspond with the care used.

NOTE: Pending postwar settlements, political boundaries shown are as of 1935.


Permanent ice
Generally unnavigable sea and land-fast ice in August
Generally unnavigable sea and land-fast ice in February
INDIAN OCEAN
ARABIAN SEA
BAY OF BENGAL
TROPIC of CANCER
TIBET
SINKIANG
OUTER MONGOLIA
MANCHURIA
SOCIALIST REPUBLICS
ARCTIC CIRCLE
ANGLO-EGYPTIAN SUDAN
FRENCH EQUATORIAL AFRICA
FRENCH WEST AFRICA
ALGERIA
GULF OF GUINEA
PERMANENT
under 2
2 to 25
25 to 60
60 to 125
125 to 250

1588


PERMANENT
ICE
N O R T H
P A C I F I C
O C E A N
INTERNATIONAL DATE LINE
Day changes across this line
(Day Later)
(Day Earlier)
TROPIC OF CANCER
HAWAIIAN ISLANDS
ALEUTIAN ISLANDS
JAPAN
MANCHURIA
OUTER MONGOLIA
ARCTIC CIRCLE
UNINHABITED
ALASKA
CANADA
UNITED STATES
MEXICO
GULF OF MEXICO
under 2
2 to 25
25 to 60
60 to 125
GREENWICH HOUR ANGLE (G.H.A.) IS GIVEN UNDER LONGITUDE
POPULATION
PER SQUARE MILE
UNINHABITED
UNDER 2
2 TO 25
25 TO 60
60 TO 125
125 TO 250
OVER 250

Source: Rand McNally.
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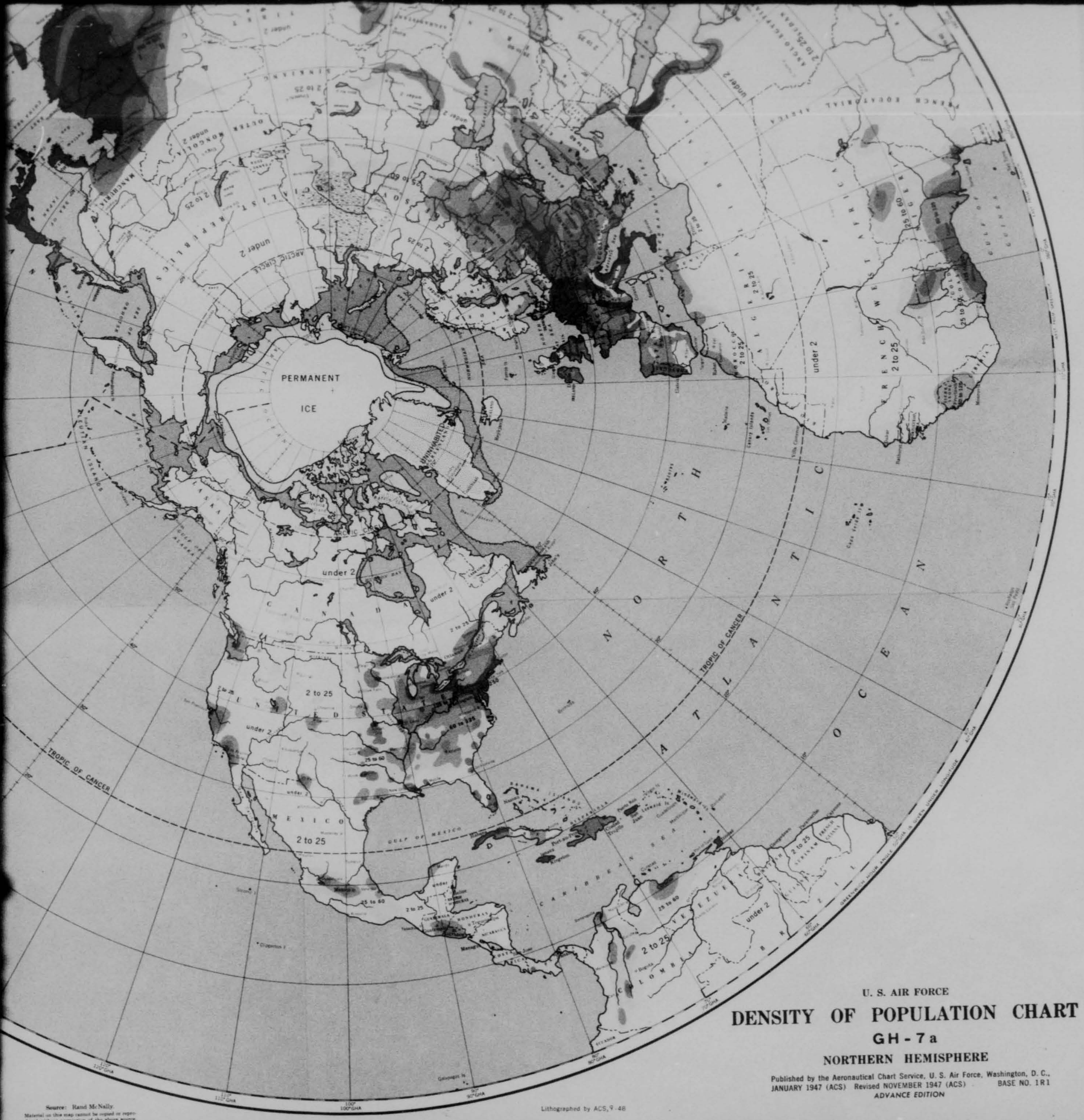
PERMANENT ICE
ARCTIC CIRCLE
under 2
2 to 25
25 to 60
C A N A D A
U N I T E D S T A T E S
M E X I C O
N O R T H A T L A N T I C O C E A N
TROPIC OF CANCER
GULF OF MEXICO
C A R I B B E A N S E A
ALASKA
OUTER MONGOLIA
MANCHURIA
FRENCH WEST AFRICA
FRENCH EQUATORIAL AFRICA
ANGLO-EGYPTIAN SUDAN
ALGERIA
MOROCCO
GULF OF GUINEA
VENEZUELA
COLOMBIA
BRAZIL
ECUADOR
Galapagos Is.
Clipperton I.
120° 120°GHA
110° 110°GHA
100° 100°GHA
90° 90°GHA
80° 80°GHA

U. S. AIR FORCE

DENSITY OF POPULATION CHART

GH-7a

NORTHERN HEMISPHERE

Published by the Aeronautical Chart Service, U. S. Air Force, Washington, D. C.,
JANUARY 1947 (ACS) Revised NOVEMBER 1947 (ACS) BASE NO. 1R1
ADVANCE EDITION

Source: Rand McNally.

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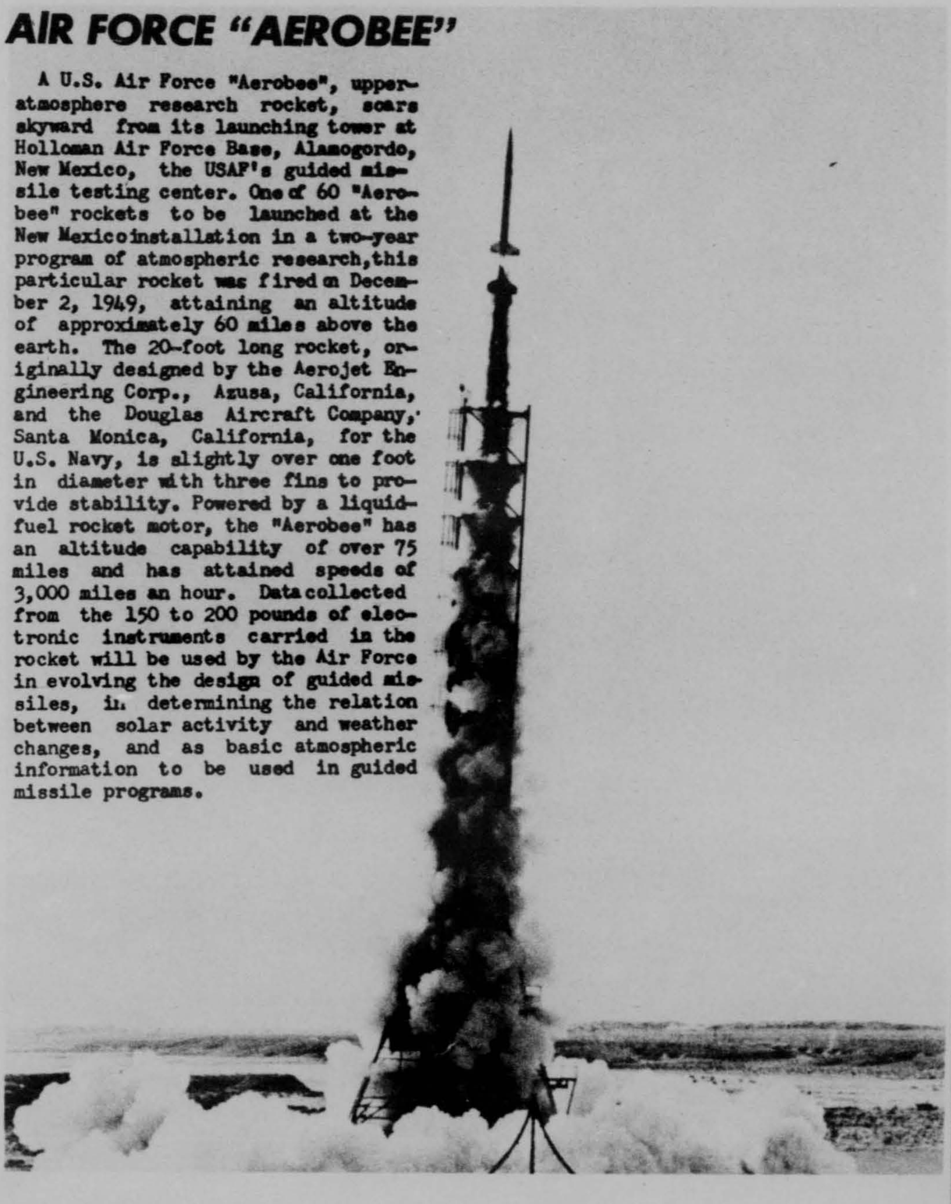
Lithographed by ACS, 9-48

1590

AIR FORCE "AEROBEE"

A U.S. Air Force "Aerobee", upper-atmosphere research rocket, soars skyward from its launching tower at Holloman Air Force Base, Alamogordo, New Mexico, the USAF's guided missile testing center. One of 60 "Aerobee" rockets to be launched at the New Mexico installation in a two-year program of atmospheric research, this particular rocket was fired on December 2, 1949, attaining an altitude of approximately 60 miles above the earth. The 20-foot long rocket, originally designed by the Aerojet Engineering Corp., Azusa, California, and the Douglas Aircraft Company, Santa Monica, California, for the U.S. Navy, is slightly over one foot in diameter with three fins to provide stability. Powered by a liquid-fuel rocket motor, the "Aerobee" has an altitude capability of over 75 miles and has attained speeds of 3,000 miles an hour. Data collected from the 150 to 200 pounds of electronic instruments carried in the rocket will be used by the Air Force in evolving the design of guided missiles, in determining the relation between solar activity and weather changes, and as basic atmospheric information to be used in guided missile programs.



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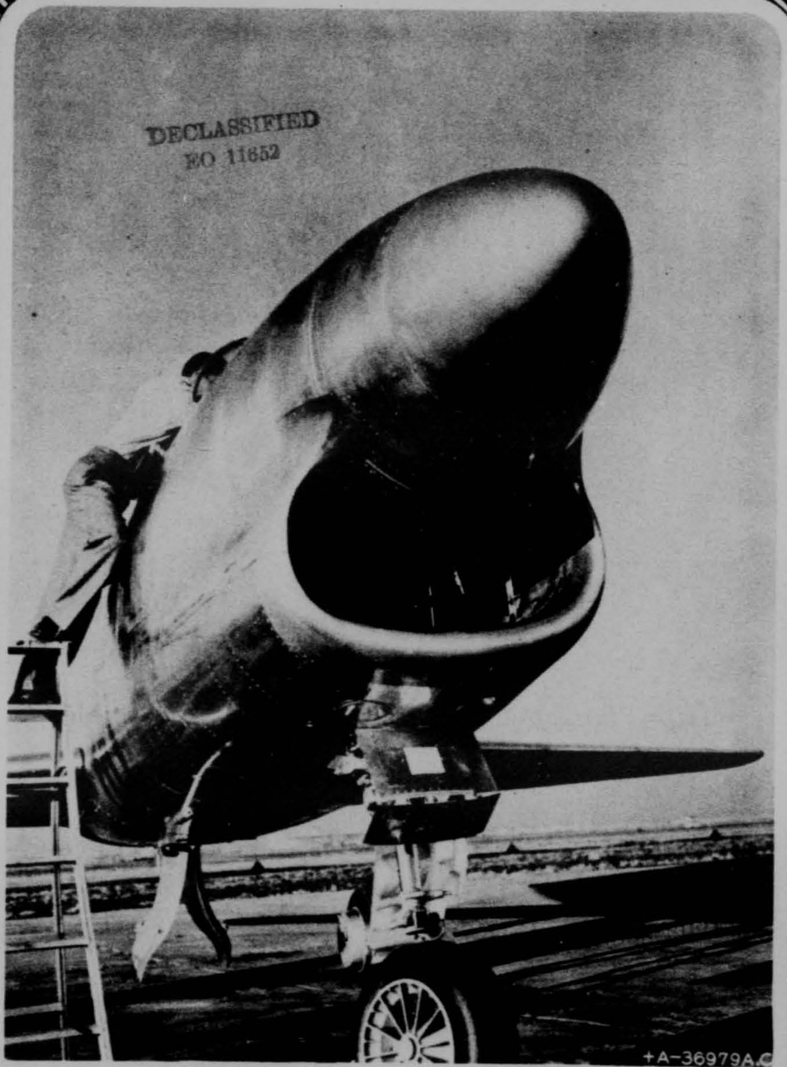

YF-86D, see page 38

CONTINENTAL AIR COMMAN[redacted]

MC-30274-1-R
V. 2, No. 5

419.608
5 Mar. 1950

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Vol. 2 No. 5 5 March 1950

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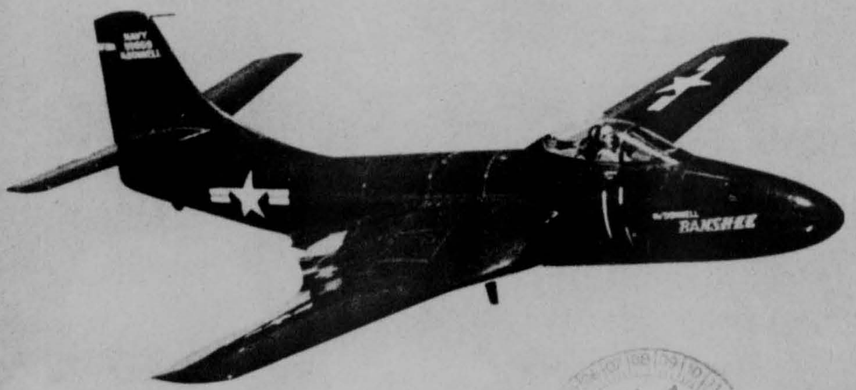

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NAVY'S F2H-1 BANSHEE, PAGE 8

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.Published Twice Monthly
..For The Air Reserve Forces
...By The Directorate Of Intelligence
CONTINENTAL AIR COMMAND

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1. Atomic Energy
2. Communism
3. Air Defenses

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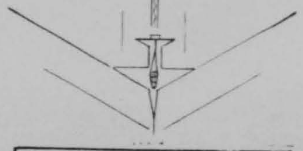

This "Review" is published for three reasons:
1. To provide timely data regarding new techniques, practices and general information whereby intelligence personnel can maintain proficiency.
2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

Two types of material are solicited for publication:
1. Stories and pictures relating to the intelligence activities being conducted within an organization.
2. Original articles of a noncontrovessial but informative nature.

Material submitted must include sources utilized and the authors name, rank and present military affiliation. Mail stories to: The Editor, "Air Intelligence Review," ConAC, Mitchel Air Force Base, New York.

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The Real Meaning of

SOVIET PROPOSALS FOR CONTROL OF ATOMIC ENERGY

THE SOVIET GOVERNMENT'S PLAN FOR CONTROL OF ATOMIC ENERGY PROVES TO BE WORSE THAN NO PLAN AT ALL WHEN ANALYZED. IT PROVIDES NO REAL SECURITY AGAINST THE AGGRESSIVE USE OF ATOMIC ENERGY; WORSE STILL, ITS PROVISIONS FOR SECURITY ARE SO INADEQUATE AS TO BE ACTUALLY DANGEROUS.

THE USSR INSISTS THAT TWO SEPARATE ATOMIC ENERGY CONVENTIONS, ONE ON PROHIBITION AND THE OTHER ON CONTROL, SHOULD BE PUT INTO EFFECT SIMULTANEOUSLY. IN DOING SO, SOVIET REPRESENTATIVES DELIBERATELY IGNORE THE FACT THAT CONTROL IS A LONG-RANGE PROJECT REQUIRING EXTENSIVE PREPARATION AND CONTINUOUS IMPLEMENTATION. PROHIBITION AND DESTRUCTION OF ATOMIC WEAPONS, ON THE OTHER HAND, IS EFFECTED ONLY ONCE AND THEN COMPARATIVELY QUICKLY. BY INSISTING THAT THE PROHIBITION IN REALITY PRECEDE CONTROL, THE USSR IS ATTEMPTING TO ELIMINATE THE HEADSTART OF OTHER NATIONS IN THE ATOMIC FIELD. ONCE THAT HEADSTART IS ELIMINATED, THE USSR WILL CONSIDER A CONTROL MECHANISM, BUT ONLY ONE WHICH IS SUPERFICIAL, HAPHAZARD, AND DEPENDS EXCLUSIVELY ON THE GOOD WILL OF EACH NATION FOR ITS EFFECTIVENESS. SUCH A SYSTEM INVOLVES A REAL DANGER SINCE IT DELUDES PEOPLE INTO THINKING THAT ATOMIC ENERGY IS SAFELY CONTROLLED, WHEREAS IN FACT NO REAL CONTROL EXISTS.

IN 1947 the Soviet Union advanced a plan for control of atomic energy as an alternative to the program advocated by the majority of the United Nations. Since that time, Soviet representatives have vigorously defended their plan despite the fact that the Atomic Energy Commission of the United Nations flatly rejected it as ineffective.

Soviet conduct after submission of its plan quickly made it obvious to every member of the United Nations that the USSR had no intention of agreeing to any effective system of international control. Its strategy in proposing and championing the plan was the same as that which characterized the USSR's disarmament proposals two decades ago, when the Communists themselves said, "It goes without saying that not a single Communist thought for a moment that the imperialists would accept the Soviet proposals". With its atomic energy plan the USSR is attempting to insure a free hand for itself in its own production program by the simple device of getting other nations to commit themselves to a control system which simply would not provide control. And no matter how often the validity of the USSR's atomic control program is questioned or its worthlessness demonstrated, the proposals are continually readvanced with a bland disregard of all previous rebuttals and refutations. Soviet spokesmen have simply insisted that the USSR wants an "effective" control system. They have never once challenged the effectiveness of the majority's plan. Nonetheless, the

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USSR refuses to accept any system of atomic energy control other than its own - and that system, upon analysis proves to be worse than no system at all.

Because the proposals advanced by the Soviet representatives are formulated primarily for public consumption, and because Soviet apologists have advertised them so copiously, the layman often finds it difficult to recognize the defects and misleading aspects of the proposals and the inevitable conclusions to which they lead. On the surface the plan outlined by the USSR has a certain ring of plausibility, further enhanced by a heavy interlarding of appeals to "peace," "independence," and moral rectitude. Basically, it rests on three points: (1) Destruction of existing stocks of atomic weapons and the public declaration of all atomic facilities; (2) establishment of a control commission within the framework of the United Nations Security Council; and (3) a system of control depending on periodic inspection of declared facilities with special investigations of suspicious circumstances. In the debates of the Atomic Energy Commission, several additional factors emerged; the USSR insists on the declaration of all existing atomic facilities and the prohibition of all atomic weapons before any control system was inaugurated; the USSR insists that individual nations continue to own, operate and manage atomic manufacturing facilities; and the USSR refuses to countenance any measures of international supervision other than periodic inspections by the Control Commission of declared facilities and declared facilities only (or special investigations on suspicion of wrongdoing). Finally, the USSR refuses to permit any effective sanctions against violations of the control system; it wishes to restrict the Control Commission to recommending measures against violations to the Security Council, and the latter's action could be prevented by the veto of one of the five permanent members - including, of course, the USSR.

TIMING OF THE CONTROL CONVENTIONS

By its insistence that prohibition and abolition of atomic weapons come before a control convention is concluded, the Soviet Union has demonstrated clearly that its primary interest is not regulation of future atomic production but elimination of the headstart gained by other nations in the atomic field. The possibility of effective control after that headstart is eliminated is obviously nil.

The Soviet-proposed convention on the prohibition of atomic weapons provides no guarantee that atomic weapons stockpiles will be destroyed nor does it make any provisions to check on the destruction. Actually, the Soviet representatives have insisted that the nuclear fuel in existing atomic weapons be converted to peaceful uses, not destroyed - so "destruction of atomic weapons" apparently involves only destruction of such extraneous materials as bomb casings and the like. The nuclear fuel, which could be reconverted into an atomic bomb in short order and with comparatively little effort, would thus remain in the hands of it original owner.

In addition, the proposals give no assurance that the nations openly possessing atomic weapons will go even this far to abolish their stock nor any guarantee that nations secretly possessing such weapons will abide by the convention.

Enforcement of the provisions rests entirely on the good faith of the signatory powers. Inspection of atomic facilities under the Soviet proposals could only come after atomic weapons were prohibited. And the inspection envisaged in the Soviet control, as will be seen below, is so superficial as to afford little or no assurance that either the prohibition or the control convention is being observed sincerely.

Since the beginning of discussions on atomic energy control, the USSR has been adamant on the point that atomic weapons be prohibited and destroyed before a control system can really be formulated or implemented.

It was, therefore, with a great show of cooperativeness that on October 2, 1948 the Soviet delegation announced that it was "modifying" its stand on prior prohibition. This modification consisted on conceding that "simultaneous" implementation of conventions on prohibition and control would be acceptable to the USSR. In reality, this so-called "concession" involved no change whatsoever in the USSR's previous position since no control system could be worked out in detail without comprehensive information regarding each nation's atomic capabilities and potentialities - none of which information would be given until the conventions were signed and put into force - and since in other ways implementation of any control plan would necessarily involve considerable time. Under present Soviet proposals, atomic stockpiles would be "destroyed" within three months of the effective date of the convention. The actual inauguration of the "control system" would involve, on the other hand, first, the submission by each nation of a list of facilities engaged in mining atomic raw materials and production of atomic energy, then, on the basis of this information, drawing up a program for periodic inspection, and finally the implementation of that inspection - at best a long-term matter. In view of past experience in working out technical details for international control in any field, it appears probable in this case that atomic weapons would be "eliminated" long before the control system was put into operation. It is also just as possible that obstructionist tactics - tactics of a type with which the world is all too familiar- could block permanently the establishment of any control system at all. The Soviet representative himself acknowledged that possibility quite candidly when he said, "....if there is found to be no basis for agreement, then naturally the convention cannot be concluded." Communist propaganda conveniently ignores this all-important fact. But since the USSR is clearly concerned with the elimination of existing atomic weapons rather than in real control, present and future, there appears to be little likelihood of a change in the Soviet insistence that prohibition come before control is instituted.

OWNERSHIP OF ATOMIC MATERIALS

The Soviet representative to the United Nations Atomic Energy Commission stated categorically that the Soviet Government would not consent to international ownership or international management and operation of dangerous atomic facilities. Both, he claimed, were unessential to atomic control. The USSR bases its insistence on this point on alleged concern for the principle of national sovereignty, despite assertions of reputable atomic scientists that the atomic energy industry is too intricate to be controlled by any measures calling for less than a partial abrogation of sovereignty.

Other powers of the world stand diametrically opposed to the USSR on the sovereignty question. All save the USSR and its satellites have agreed to surrender sovereign rights wherever necessary to ensure effective international control of atomic facilities. All save the USSR and its satellitesare agreedthat nations on whose territories such facilities are located would have to renounce certain prerogatives ordinarily associated with ownership. This does not necessarily imply the complete surrender of all rights of ownership to a Control Agency, but rather only the surrender of those rights which might impair the effectiveness of control.

The position taken by the non-Soviet world stems from the technical aspectsof the atomic energy problem. At present, the principal sources of nuclear fuels from which atomic energy is obtained are uranium and thorium. Once the nuclear fuel is obtained -- and the process for obtaining it is the same whether it is intended for a bomb or for peaceful purposes - only a small installation is required to turn it into atomic weapons. Such installations could be easily concealed in any country. Moreover, very little time is required for the assembling of bombs from nuclear fuel. And sincethe production processes utilized in making bombs are,almost to the last stages, identical withthe processes involved in peaceful usage of nuclear fuels, conversion of an ostensibly peaceful installation to war production would by only a matter of days.

Because of these technical aspects of atomic energy production, two extremely serious dangers must be eliminated if, as the UNAEC puts it, "the peaceful development of atomic energy can be promoted in an atmosphere of confidence and general trust." Under present conditions atomic materials can be diverted comparatively easily from legitimate uses and/or can be manufactured secretly in a world that is apparently at peace. The AEC considers that any effective plan for the general international control of atomic energy must provide against these two dangers.

Considering the Soviet proposals in the light of these technical aspects of atomic energy control, the irreconcilability of complete sovereignty and realistic control at once becomes obvious. Without international management and operation of all atomic facilities, it is technically impossible to eliminate the dangers of diversion and clandestine activity, since these dangers exist at every stage of the process from the mining of the raw materials to the completion of the final product. Only a continuous inspection of each and every operation could guarantee against possible mal-practices - and as the Soviet representative argued, continuous inspection of any one operation "ceases to be inspection and becomes supervision or management." The Soviet Government more than once declared international management and operation to be the equivalent to international ownership, and thus an infringement on national sovereignty, a proposition which the USSR refuses to accept.

While no one has contended that an effective control system agency will not require surrender of some of the attributes of sovereignty heretofore exercised by the individual state,it has never been suggested that complete ownership rights (i.e., complete sovereignty) on atomic matters devolve on the Control Agency. For example, quotas for production and consumption of nuclear fuel and the production policy itself would be beyond the jurisdiction of any Control Agency since these provisions would be laid down in advance by the control convention. The Agency would be unable to manage or dispose of materials and facilities arbitrarily or for its own profit since it would only be holding these in trust forthe member states for their benefit. Nor could the agency close atomic plants arbitrarily or construct plants at will, except with the agreement of the nation concerned. It would also have to conform to national legislation in such matters as public health, working conditions, and labor standards. In effect, individual nations would be required to renounce only those rights which, if unchecked, could impair the effectiveness of the control program.

PERIODIC INSPECTION AND INVESTIGATION

The USSR has refused to consider any control system which involves "international management and operation." It has proposed instead an International Control Commission which "shall periodically carry out inspection of facilities for the mining of atomic raw materials and for the production of atomic materials and atomic energy." Unemphasized is the fact that inspection under the Soviet plan, would be limited to only those facilities declared by the individual state to comprise its atomic industry. No provision is made for cases of falsified declarations.

The Commission's functions in the periodic inspections would consist of investigations of mining and production facilities declared by the governments, accounting for raw materials, "observing the fulfillment of the rules.....prescribed in the convention on control," collecting and analyzing requisite data, and submitting recommendations to the Security Council and the individual governments. To fulfill its functions, the Commission would have access to all declared atomic facilities and operations, it would carry out "weighing, measurements and various analyzes" of atomic materials, and would request the individual government to provide any information on atomic activities.

On the surface, such measures appear to provide a fair degree of checking, if not of actual supervision. When viewed against the complexities of the present-day atomic industry, however, it soon becomes obvious that the merits of such a plan are nil.

Actually, the traditional Soviet policy toward foreigners would restrict the operations of an inspection team in the USSR itself to less than a necessary minimum. The stringent and evergrowing Soviet obsession with secrecy hardly supports a hope that the Kremlin is willing to reverse its traditional policy toward outsiders even for atomic energy control.)

Again, it is the technical complexities of atomic energy production which render the Soviet proposals inadequate for real control. Not even the Soviet representative has been able to show how periodic investigations could determine accurately the amount of material being processed in plants at the time of inspection, nor the amount which has been processed between inspections. Without these checks, there is no way of knowing what quantities of atomic materials are in the hands of any country.

Since no production can take place at present without uranium and thorium, physical control over these materials and their fissionable derivatives must be maintained at all stages, from their extraction to their use as nuclear fuels. Accounts cannot be verified without continuously checking on the grade of the ore extracted from a given mine (and grades may vary from one place to another in the same mine), or on the daily output or on the amount shipped for refining. The same precautions must be exercised with regard to uranium and thorium processing and purification plants and all other plants using or producing nuclear fuels. Because of the large number of complex stages in the process, and because of the remote control operations where highly radioactive and toxic materials are involved, it is impossible to check the amount of material in process at any one moment or on the elemental changes such materials undergo in an atomic pile. Nor could periodic inspection provide any definite knowledge of the rate at which such fuels were produced or consumed between successive inspections. Only the management of the plant itself would be in a position to keep check on the nuclear fuels involved. If the international control agency itself were not managing the facilities, the international inspectorate would have to depend solely on data accorded it by the individual government. It would be impossible to verify such data with any degree of accuracy without continuous supervision of the facilities, i.e., without international management.

The periodic inspections and special investigations provided in the Soviet plan offer no safeguard against clandestine activities on the part of a nation which would deliberately set out to violate the control convention. "Special investigations" are supposed to cover such eventualities, but special investigation can be undertaken only when "suspicion of violation arises." As shown above, the periodic inspections would be of such limited nature that there would hardly be opportunity for the international control commission to become suspicious.

In addition to the limitations outlined above, the Soviet Government has specifically refused to agree to a provision granting the commission the right to control explorations for mineral resources to determine whether a country has uranium and thorium ores or has discovered new sources of nuclear fuel. It has refused inspection of activities related to and used primarily for nuclear fuel production, such as the production of pure graphite, heavy water or of centrifuge pumps, diffusion barriers, etc. Nor will the USSR permit inspection of laboratories engaged in "scientific research in the field of peaceful uses of atomic energy," except for periodic inspection of those laboratories known to be working with dangerous amounts of material. And, of course, the inspectorate can check only declared installations and cannot on its own ferret out any secret activities.

The USSR has generally discounted or ignored the entire question of secret activities. As one Soviet delegate put it, "Governments responsible under the convention for the implementation of measures on their territory take the obligation to implement the convention, and from this it follows that secret activities would be excluded." In view of the USSR's past distrust of good faith alone as a basis for international agreements (and the hard bargains driven by Stalin in return for Soviet "good faith" at Yalta and Potsdam), such an assertion in the case of atomic energy appears rather startling.

CONTROL AND SANCTIONS

The only guarantee of workability in the Soviet atomic energy proposals is the good faith of the nations involved. No provisions are made for stronger sanctions in cases where national ambitions override good faith. Only two regulative powers are assigned the Control Commission, the power to make recommendations to the individual governments on questions relating to the production and use of atomic materials, and the power to recommend to the Security Council measures for handling violators of the prohibition convention. The commission would have no power to prevent or stop violations of the conventions on the spot. It would have no right to guard stockpiles or halt production for inspection purposes if evidence of malpractice is detected. Its only recourse would be reliance on the good faith of the nation concerned, or on recommendations made to the Security Council. The Control Commission itself would be powerless to act where immediate action is essential; only the time-consuming procedure of the Security Council could determine what action, if any, should be taken. And, of course, the five great powers maintain the right to veto any decision of the Security Council, and can thereby block any action inimical to their own interests.

Under such a control system, no real security or control exists since the organization entrusted with the problem has no power to cope with a situation requiring quick action. A nation bent on violating the terms of the control conventions could continue its transgressions for a substantial period of time without risking sanctions. And even if measures were decided upon before the nation in question used its atomic stockpile aggressively, there is no guarantee that the measures could be applied effectively short of war between the UN and the guilty party. The Soviet proposals not only fail to provide the security required of any system of international control of atomic energy but are so inadequate as to be actually dangerous - giving an illusion of security with no foundation.

MOTIVATION OF THE SOVIET PROPOSALS

The primary objection to the entire Soviet concept of Atomic Energy Control is the fact that the Soviet system provides no guarantee of fulfillment, other than the willingness of the individual nations to cooperate. And few nations are willing to accept a Soviet-inspired convention based on good faith after taking into account the USSR's past record on international agreements.

It is well known that Marxist theory in Soviet practice justifies the use of any means to bring about the downfall of capitalism. The writings of Lenin and Stalin afford ample evidence that Soviet leaders intend to advance and are advancing the cause of Communism by whatever methods best serve their purposes. These methods may at a given moment be reproachment with capitalist countries (e.g., the wartime alliance of the Big Three) or cold war with capitalism. The USSR will, when necessary, become party to an international convention if such a convention serves its immediate purposes. It will just as readily violate that convention with or without pretext if violation is more to the USSR's advantage than "observance." The fate of the nonaggression treaties with Estonia, Latvia, and Lithuania are but three examples of Soviet policy in treaty fulfillment. In the words of Lenin, Communism "recognizes all methods of political struggle, as long as they correspond to the forces at the disposal of the Party and facilitate the achievement of the greatest results possible under the given conditions." "We must agree to any sacrifice, and even - if need be - to resort to all sorts of stratagems, manoeuvres, illegal methods to evasions and subterfuges."

It is in the light of this philosophy, still preached today as guidance to the Communist Party and the Soviet State, that every Soviet proposla must be judged. Generally, the motivation is far more important than the intrinsic merits of the proposals. The completely unrealistic nature of the atomic control system advocated by a state noted for its cynicism in international affairs would substantiate the belief that the USSR's entire stand on atomic control is merely a tactical maneuver. The desire for control is clearly outweighed by the desire to exploit the atomic controversy for propaganda purposes - and thus gain time to overtake the United States in atomic development. Just as the Communists said in 1928, disarmament proposals "must not be utilized as a pretext for advancing similar demands (i.e., for disarmament) in capitalist countries, but as a means: (1) For recruiting sympathizers for the Soviet Union - the champion of peace and Socialism; (2) for utilizing the results of the Soviet policy...... to carry on propaganda among the masses in support of the only way toward disarmament and the abolition of war, viz. arming the proletariat, overthrowing the bourgeoisie and establishing the proletarian dictatorship."

The Soviet proposals for disarmament and for atomic control were not intended for serious consideration. Both served the Soviet policy of the moment. In 1928 it was advantageous to demand disarmament and decry sovereignty in order to weaken capitalistic states. Two decades later, sovereignty is defended at all costs as an essential safeguard to the USSR's own policy of nationalism. Not only has the USSR reversed its position, but now it has even managed to advocate both sovereignty and disarmament in connection with atomic control.

Perhaps the entire stand taken by the Soviet Union on the question of atomic energy control - and with it of disarmament and peace - can best be summed up in the words of a Comintern document which outlined the policy to be followed by Communists in exploiting the entire question of "peace" for Communist purposes. The real intentions motivating the Soviet proposals are stated baldly, albeit in Marxian double talk, when the Comintern declares: "There is no contradiction between the Soviet Government's preparation for defense and for revolutionary war and a consistent peace policy. Revolutionary war of the proletarian dictatorship is but a continuation of revolutionary peace policy 'by other means'."

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--COVER PHOTO--

F2H-1 BANSHEE-

TWIN-JET LOW-WING CARRIER BASED FIGHTER

The Banshee bears marked resemblance to the Phantom. The main recognition difference is the absence of dihedral in the stabilizer of the Banshee. Other improvements have also been made, such as, making the outer surfaces appreciably smoother, constructing the wings and tail considerably thinner and increasing the pilot's visibility. The engines are almost twice as powerful as the Phantom's, thereby, creating much better performance. The F2H-1, like its predecessor the FH-1, is designed to cruise on one or two engines. The jet units are placed close to the center line of the airplane so that very little yaw results when one engine is shut off.

MANUFACTURER: McDonnell
DIMENSIONS: Span - 41' 6" (folded 18') Length - 38' 11"
ENGINES: J-34/3000 lb thrust
SPEED: 510 knots/sea level
RANGE: 1185 nautical miles/291 knots
ARMAMENT: (4) 20 mm. cannon

100 THINGS YOU SHOULD KNOW ABOUT COMMUNISM AND RELIGION

PART I OF II PARTS

This is to tell you what will happen to YOU and YOUR CHURCH if Communism ever takes over the United States of America.

The long and the short of it is just this: You cannot be a Communist and believe in God. You cannot believe in God and have a peaceable life under Communism.

In all their plans and actions, the Communists mark down religion as Enemy No. 1. Where they dominate, they attack it head on. Where they do not dominate, they try to deceive and to corrupt from within just as they do in government, in education, in labor unions, and throughout a nation's life in general.

The aim and object of Communism is always the same —complete control over the human mind and body, asleep and awake, in sickness and in health, from birth to death. That is why Communism marks religion Enemy No. 1, for religion in some form is always a basic influence in the life and thinking of any people.

Communism cannot dominate family life, for example, until it has first fought its way past the influence of religion upon the family.

Communism cannot force its own brand of moral code upon a person without first destroying his moral code rooted in religion.

Communism cannot make education a weapon in its hands so long as religion is secure in its own right to teach and to educate.

Communism cannot dominate unless it has the power to remake the life of the people. It cannot ignore religion and do that.

So here, then, is a report on what Communism seeks to do about religion in the USA., as judged by what it has already done elsewhere and has SAID it will do here at the first opportunity:

1. IF COMMUNISM SHOULD COME TO THE UNITED STATES, COULD I BELONG TO A CHURCH?

You would have to choose at once between church and Communism. If you should choose the church, then prepare for persecution.

2. WHAT WOULD THE COMMUNIST DO TO CHURCHES AND SYNAGOGUES?

Take them over and put an end to the freedom now guaranteed by Sentence One, Article One in the Bill of Rights of the Constitution:

Congress shall make NO law respecting an establishment of religion or prohibiting the free exercise thereof.

3. WHAT DOES THAT MEAN, EXACTLY?

Just study for a minute these figures on the present size and nature of religion and its works in the USA:

256 denominations

253,000 churches and synagogues

77,000,000 members

162,000 Sunday schools

13,000 parochial schools

690 colleges and schools of higher learning

Libraries, radio stations, publishing houses for books, magazines and newspapers.

Charities, orphanages, hospitals, missionary forces

Ladies' aids and auxiliaries. Men's societies, young people's organizations, childrens groups

These are what Communism would like to take over and destroy.

4. WOULD THE COMMUNISTS DESTROY THE BIBLE?

Every copy they could find. And they would jail anybody trying to print new copies.

5. COULD I BE MARRIED IN THE CHURCH?

Not legally.

6. COULD MY FUNERAL BE HELD IN THE CHURCH?

Not legally.

7. COULD MY CHILD BE BAPTIZED OR CHRISTENED IN THE CHURCH?

At the risk of prison for parent and pastor.

8. WOULD MY CHILD GO TO SUNDAY SCHOOL?

Not only would Sunday school be illegal, but also your child would be taught to report you to the police for trying to send him.

9. HOW WOULD MY CHILD LEARN HIS RELIGION, THEN?

Only through what you might tell him at home, to offset the positive atheism he would learn all week at the government school.

10. YOU MEAN THE GOVERNMENT WOULD TEACH ATHEISM?

Yes. Here is the rule laid down by Nikolai Lenin, leader of the Communist revolution in Russia in 1917 and founder of the Red government now headed by Joseph Stalin:

Down with religion! Long live atheism! The spread of atheist views is our chief task!

That rule has not changed.

11. COULD I GIVE MONEY TO THE CHURCH?

Yes, if the Communist system would allow you any; but then most of it would go for staggeringly high taxes, rent, and other fees charged by the government to discourage church operations. Anything left could go to feed the preacher, who would be little better off than a beggar, anyhow.

12. WHO WOULD OWN THE CHURCHES?

Under Communism, churches and synagogues could no longer own their own property, free, clear, and untouchable, as they do in the United States today. Church property would become government property. Congregations could only use such small rooms or buildings as the government might license to them on concession.

The fees and charges for this would be heavy and all use would be subject to strict Communist control, review and supervision.

13. HOW ABOUT MY OWN CHURCH-GOING?

You could try on your own time, if the Government happened at the time to let you off work on a holy day. Otherwise, only at night, when and if you get the chance.

14. WOULD I BE ALLOWED TIME OFF FOR RELIGIOUS HOLIDAYS AND CELEBRATIONS AS NOW?

Not a chance.

15. COULD I HELP OUT WITH CHURCH CHARITIES AND WELFARE WORK?

There wouldn't be any. All church schools, hospitals, orphanages, asylums, and such things would be seized by the government. Religion would be denied any say in their use or management.

16. WHAT ABOUT MISSIONARY WORK?

Illegal. Forbidden.

17. COULD WE PRINT THE SERMONS, CHURCH NOTES OR NEWS LETTERS?

Certainly not. Only atheistic views could be distributed and, of those, only such as the government would hand out in official form. Under Communism you wouldn't even be free to peddle your own brand of atheism - just the government's.

18. HOW ABOUT MY CHURCH MEN'S CLUB, LADIES' AID SOCIETY, OR YOUNG PEOPLE'S GROUP?

Out. There is no freedom of assembly under Communism.

19. WHAT COULD MY PASTOR DO?

In the pulpit, he could lead the congregation in acts of faith and deliver sermons, with the Communists checking on every word.

Out of the pulpit, he would be an official target for abuse, ridicule, and scorn, under constant suspicion, and in danger of his life.

20. WHY?

In him, the Communists would see a rival to their power over your mind, imagination, and will. The faith your pastor teaches is Communism's deadliest enemy.

21. WHAT DO YOU MEAN BY "FAITH"?

The sort of thing you find in the Ten Commandments and the Sermon on the Mount.

22. WHAT IS THE COMMUNIST FAITH?

"Marxism-Leninism," as operated by Joseph Stalin.

23. WHAT'S ALL THAT?

A plan and method to rule the world.

The man who drew up the plan was Karl Marx, who lived from 1818 to 1883.

The man who put the plan into action in real life was Vladimir I. Ulyanov, alias Nikolai Lenin, who lived from 1870 to 1924, and led the world Communists to capture Russia in 1917-18.

The man who made the plan a world force was Josif Vissarionovich Djugushvili, alias Josif Stalin, now living, and 67 years old, who followed Lenin in command of the world Communist conspiracy.

24. WHY DO YOU SAY "ALIAS LENIN" AND "ALIAS STALIN"?

Because those are not the real names of the men involved.

Remember, the present "Stalin" started out in life to destroy the government of his own country and rebuild it on Communist lines through bloody revolution, and that's how it was actually done.

He was against all law except Communist ideas as laid down by Karl Marx. He used the alias "Stalin" to hide his real identity, just as Ulyanov used "Lenin."

25. WHAT WAS MARX' IDEA OF A COMMUNIST WORLD?

That the world as we know it must be destroyed - religion, family, laws, rights, everything. Anybody opposing was to be destroyed, too.

Marx wanted a world in which people owned no property, took orders from the Government without question, and let their family life - husbands, wives, parents, and children - be without religion, morals, or ideals as we know them.

26. WHAT WAS HIS IDEA OF MORALITY AND FAMILY?

That anything is moral - even lying, stealing, and murder - if it brings on Communism.

That women should have children for the Communist state to educate, train, and use, but parents should not have any say in training according to their OWN IDEAS.

That there is no need to fear God because He does not exist.

Marx had the idea that people could never be happy, have enough to eat, make enough money, or have success in the kind of world we know.

The USA is living proof that he was as wrong as a man can be.

27. WAS MARX CRAZY?

Perhaps. But Marx was not the first evil and crazy man to start a terrible world upheaval, nor was he the last. Hitler was like that, too, but look at what he did.

28. HOW DID ANYBODY FALL FOR MARX?

Some overlooked his craziness because he was one of the most effective propagandists who ever lived.

His preaching of destruction appealed especially to people who wanted to rule others and didn't know how. It still does.

29. WAS LENIN ONE OF THOSE POWER SEEKERS?

Yes. Lenin was the son of a minor Government clerk. He had a terrible thirst for power.

Early in his life he read Marx, caught the idea of forming Communist cells of revolution as Marx planned them, and built a conspiracy to capture his country.

When Russia's Czarist Government crashed in the war of 1914-18, it was followed by a Republic organized along the lines of our own. But before the Republic could really take hold, Lenin's Communists came out from under cover, confused the public mind by propaganda, stirred a military revolt, slaughtered all opposition and set up by force of arms a Communist dictatorship. They still have it today.

30. DID ALL THE RUSSIANS TURN COMMUNIST?

Neither then nor now. Only a few trained and disciplined favorites were or are allowed to be Communists.

For a general picture of what kind of people turn Communist and what they do, see the first of this series, entitled "100 Things you Should Know About Communism in the USA". (Int. Information Bulletin #8, 15 Oct 48)

31. WHY DO ANY PEOPLE FALL FOR THEIR LINE?

They promise all the things that people have always sought - an easier life, an end to trouble.

32. DO THEY DELIVER?

Of course not.

Once they get in control, they reduce a nation to horror and slavery. Look at the record, not only in Russia but in all other countries captured by Communism.

33. HOW DO THEY KEEP GOING?

The secret of Communism's drive and the real key to the Communist faith is the dream of total power for Communists, loss of power for all others. That's the story in a nutshell.

34. WHERE IS THE HEADQUARTERS OF THE COMMUNIST FAITH?

The Kremlin, Moscow, Russia.

35. WHO IS THE HEAD OF THAT FAITH?

Joseph Stalin, because he is the head of the Government of Russia and Chief of the Communist Party of Russia. To a Communist in the United States or any other country, Stalin's word is final.

For a Communist to defy Stalin is as scandalous to other Communists as for a religious-minded person to blaspheme God.

36. IS THERE ANY PROOF OF THIS?

Examine the record in Russia, Latvia, Lithuania, Estonia, Poland, Czechoslovakia, Hungary, Rumania, Bulgaria, Yugoslavia, Austria, Germany, and in all other countries where Communism takes any hold.

Add to it the thousands of volumes of Communist official literature collected in the Library of Congress here in Washington.

Measure against your common sense and decide for yourself. In the meantime, here following are significant highlights from that record dealing with just one side of the story, Communism's war on religion all over the world, including the United States of America.

37. WHAT ABOUT RUSSIA?

Let's flash back. The number of congregations has dropped since 1917 by more than 75 percent. That any have remained at all is triumph of survival against relentless, cruel, and powerful persecution.

38. WAS RUSSIA A VERY RELIGIOUS COUNTRY BEFORE?

About half the people of the old Russian Empire belonged to the Eastern Orthodox branch of Christianity. The Orthodox Church was recognized and established as an arm of the Government.

Beyond the established church, there were congregations of Roman Catholics, Protestants, Jews, Mohammedans, and other faiths, even ancient tribal pagan groups.

None beyond the Orthodox Church was recognized as legally "established" by the Government, but they were at least tolerated. They are not even TOLERATED now. Only the Orthodox sect is allowed any activity at all.

39. WHY IS THE ORTHODOX CHURCH AN EXCEPTION?

Its priests are today held captive by the Communists and used to help rule the Russian people.

40. HOW DID THE COMMUNISTS CAPTURE THEM?

By destroying the independent power of the church and then taking advantage of the determination of many people to have a continuing religious service on any terms.

41. WHAT WAS THE FIRST STEP?

All Orthodox Church property, right down to the crucifixes and altar vessels, was seized. All monasteries closed. Churches turned into movie houses and museums. Church bells destroyed.

42. HOW WERE ORTHODOX PRIESTS TREATED?

Thousands were slaughtered. Others were ridiculed and kicked through the streets. As a class, they were held up to the country as parasites and frauds, and refused permission to travel, meet in groups, or to train or ordain others.

43. HOW ABOUT THE OTHER FAITHS?

Treated even worse, since they represented minority groups.

44. WHAT ELSE HAPPENED?

Official Government agencies were set up with the taxpayers' money to operate "antireligious museums" and to publish books, posters, pamphlets and magazines denouncing religion. Atheist carnivals were held on religious holidays. Christmas trees were banned. Sunday was decreed a workday to stop devotional services, and failure to report for work on a religious day meant instant dismissal. Religious oaths were abolished.

Atheism was taught in the schools as a required course for all children. Radio broadcasts by Government propagandists dinned atheism into people's ears night and day. Communists who showed any interest in religion were expelled and ruined. Priests and their families were made outcasts of society, refused jobs or food-ration cards, and forced to pay extra rent and taxes.

Orthodox priests are allowed to marry, so the Government even took it out on their children by refusing them so much as a high school education.

Non-Communists who stood by their religion lost their jobs and generally were shoved downhill by the full force of government.

45. WAS ALL THIS EFFECTIVE?

Figures on congregations and church organizations in Soviet Russia vary, but over-all they show a general reduction in church organizations of 75 to 90 percent over a 25-year period. The number of priests in the Russian Orthodox Church was reduced from nearly 51,000 down to less than 6,000. Orthodox Churches dropped from 46,000 before the Communists took over to 2,000 in 1948.

However, religion went underground as a result of persecution, and a vast network was created in which priests carried on religious schools and services in secrecy and survived in disguise with the help of the general public.

It has been estimated that today there are, in addition to the nearly 6,000 registered priests mentioned above, another 5,000 under cover; there are at least 2,000,000 children in underground Christian youth organizations; and there are between 67,000,000 and 80,000,000 adult believers in Russia.

46. ARE THE COMMUNISTS SATISFIED WITH THE DAMAGE ACCOMPLISHED SO FAR?

No. They will never accept as final anything less than the complete end of religion.

STATUS OF AERIAL PHOTOGRAPHY OF THE UNITED STATES

The inserted index map entitled "Aerial Photography of the United States" is the fourth edition of a series which is intended to present a periodic inventory of areas that have been photographed or are about to be photographed. The third edition was published in April 1948. Since then many new photographic projects have been completed, other areas have been scheduled for new photography in the near future, and numerous reports have been received from state and commercial agencies regarding new photographic holdings. All of this information has been utilized in revising the third edition to produce the present map which is corrected as of June 1, 1949. The frequency of revision will be governed by the number and rate of changes pertaining to aerial photographic coverage.

GENERAL PROCEDURE FOR PROCUREMENT OF AERIAL REPRODUCTIONS

Anyone desiring to obtain aerial photographs for a given area may determine from the status map whether photography is available and also the agency which holds the film. When photographs are for military usage, normal military channels will be used; inquiries concerning procurement for other reasons should be sent directly to the appropriate agency. It is advisable to include a sketch or detailed description of the area of interest and also to specify the type of reproductions desired - contact prints, enlargements, or photo index sheets. In each case, reproductions must be ordered from the agency having custody of the film - there is no central laboratory which can furnish prints from all Government photography. Related data such as scales, dates, and lens focal lengths are also available from the film-holding agencies.

For the coverage designated on the status map as "States and Commercial", "Secondary Photography", or "New Photography In Progress", the name of the agency or organization may be obtained upon request from the Map Information Office, Dept. of the Interior, Washington, D. C.

SOURCES OF REPORTS

The accompanying index map has been compiled by the Map Information Office on the basis of reports of existing and proposed new aerial photographic coverage. Reports from the commercial and state organizations were received in response to a general invitation made to all such active organizations in the past.

NEW PHOTOGRAPHY

In addition to the existing aerial photography, areas which are under contract or which are otherwise definitely scheduled for new photography, are indicated. However, due to the limitations in showing a number of different classifications on one map, no attempt has been made to indicate which agency may be obtaining the new photography; that fact should be ascertained by inquiry to the Map Information Office. In areas previously photographed, scheduled new photography may very likely be for a different agency than the one having the existing photography.

GENERAL TYPES OF PHOTOGRAPHY

It is not possible to show clearly on this index map any details pertaining to the scale of the photographs, the focal length of the camera lenses, and the date of photography. However, general information regarding the types of photography obtained and used by the principal agencies may be summarized as follows:

The Production and Marketing Administration, the Soil Conservation Service, and the Forest Service, of the Department of Agriculture, usually require an 8 1/4 inch nominal focal length lens and a scale of about 1:20,000. In a few cases, scales of 1:15,840, 1:31,680, and 1:40,000 have been required. In general, the photography was obtained between 1936 and 1949. Worthy of mention are several instances where the Forest Service is obtaining infrared aerial photography for classification studies.

Practically all of the Geological Survey photography was taken primarily for topographic mapping either with 6 inch, 5.2 inch, or 4 inch nominal focal length lenses. The scales of the photography vary considerably, being governed by the desired map contour interval. As an example, in some areas the scale is as large as 1:12,000, while in others it may be as small as 1:56,000. In a few cases, aerial photography intended for map revision was taken with an 8 1/4 inch lens. The major part of all the photography was obtained since about 1939.

The photography of the Tennessee Valley Authority may be divided into two general classifications. For mapping, practically all of the area shown was photographed with 4 inch lenses, the resulting exposures being 7 x 7 inches in size. In addition, considerable special-purpose photography at scales larger than 1:20,000 was taken with 8 1/4 inch, or larger, focal length lenses.

Existing photography of the Bureau of Reclamation was taken with various focal lenses—6 inches, 8 1/4 inches, 12 inches.

The photography of the Coast and Geodetic Survey is generally either 1:10,000 scale or 1:20,000 scale. A part of it was taken with the special nine-lens camera, the remainder being taken with single-lens cameras either of 6 inch or 12 inch nominal focal length.

The aerial photography of the Corps of Engineers and the United States Air Force varies so widely as to scales and types that no reasonably accurate generalized description may be given. Lenses of various focal lengths were utilized. A great variation in flight altitudes resulted in a wide range of scales.

The photography obtained by the commercial firms and the state agencies also varies considerably as to scale, focal length of lens, and type. Since all commercial firms and state agencies are grouped under one color legend on the map, a prospective user should first ascertain from the Map Information Office which firm has the photography he desires, after which detailed information may be sought directly from that firm.

AREAS REPHOTOGRAPHED

In many cases areas in the United States have been photographed more than once. This is occasioned by several major considerations. First, in many areas, cultural and physiographic features on the ground do not remain the same. Changes are constantly taking place - new highways are constructed, dams are built and areas are flooded, forests are cut and farms are established, the courses of streams are altered, and other similar changes occur. Obviously, for any use which requires a correct knowledge of features as they currently appear on the ground, the photographs must be of recent origin. Also, when photographs are to be used for preparing maps, it is often required that they be taken in seasons when deciduous trees are bare of foliage. Consequently, new photographs are often necessary to replace those several years old or those taken during late spring or summer. The second consideration is purely a technical one. Modern, accurate maps are most economically and efficiently produced by the use of aerial photographs and stereoscopic plotting instruments. However, the plotting instruments require certain types of photographs. Most of the instruments in use require aerial photographs taken either with a 4 inch, a 5.2 inch, or a 6 inch nominal focal length lens. Now diametrically opposed to this consideration is the fact that for general land-use studies, planimetric work such as acreage measurements and direct distance measurements, the preparation of mosaics,and other allied non-stereoscopic uses, photographs taken with a longer focal length lens are much more desirable. Practically all photographs obtained for those purposes are taken with lenses of at least 8 1/4 inch, and often 10 inch, focal lengths. Consquently, except in rare cases, one type of photograph will not be economical for the uses mentioned above and for concurrent use in map plotting instruments. This consideration has often resulted in more than one set of photographs for the same area.

SELECTION OF COVERAGE FOR AVERAGE NEEDS

In areas where two or more sets of photographs exist, the set which is judged to be most suitable for average needs has been designated as primary photography and shown by color pattern on the index. The existence of other coverage for the same area, designated as secondary photography, is shown by a pattern of black diagonal lines. Therefore, black diagonal pattern will indicate all areas that have been photographed more than once. This method of presentation necessitated arbitrary selection.

The selection of the coverage to be shown as primary photography was based on three main considerations - utility for average needs, age of photography, and scale. Without exception,preference was first accorded to single-lens vertical photographs. Multiple-lens vertical photography was only shown in color where no single-lens vertical coverage existed. In cases where there were more than one set of single-lens vertical exposures, age was the most important factor and scale was of secondary influence in governing the slection. Therefore, in many cases, the coverage indicated in color pattern is that most recently obtained even though it may be at a small scale, while photography several years older, but at a larger scale, was classed as secondary photography to be shown in black pattern. Of course, there was a reasonable limit to this conception, and in some cases new photographs of extremely small scale were subordinated in favor of coverage several years older having a considerably larger scale.

Records of all photographic coverage are maintained in the Map Information Office. The names of the agencies having the secondary photography of any area can be readily obtained from that office upon request.

GENERAL

The Map Information Office is interested in receiving information pertaining to any existing photography for those areas which appear on this map as not having been photographed. While the search for coverage information has been thorough, it is conceivable, and even likely, that for some of the areas indicated as unphotographed on the index, photography is in existence and may be held by an organization or concern which would be willing to make reproductions available. Notification of any cases of this nature will be appreciated.

USDIGS Uncl

ACCESSION LIST OF RUSSIAN BOOKS

D OF I, HQ, USAF

The following books are filed in Documents File and are available for exploitation by any interested agency.

Administrative Territorial Division of the Federated Republic on 1 May 1940. No author. Published 1940. AF-132690

Administrative Territorial Departments of the United Republics of USSR - 1941-1942. No author. Published 1942. AF-132689

Administrative Territorial Division of the Federated Republics on 1 Jan 1941. No author. Published 1941. AF-132693.

A. Garkovski Movement Sovial in the Ural Mashzavod. By S. M. Lerinman. Published 1946. AF-132696.

Expedition in A/C SSR N-169 to Area of Inaccessible Pole. Official Publication. No author. Published 1946. AF-132697.

A/C With Tricycle Landing Gear. By. I. I. Eskin. Published 1947. AF-132695.

Anisotropic Lamination. By S. G. Lekhnitskii. (Translated from: Ahizotropny Plastinki) Published 1947. AF-132698.

A/C Wing. By N. A. Fomin. Published 1946. AF-132692.

Mechanics of A/C Construction. By Ya. D. Livshits. Published 1946. AF-132691.

Technique of Rocket Flight (Translated from German). By E. Zenger. Published 1947. AF-132694.

Assembly of Aviation Engines, Adjusted Installations. By M. P. Novikov, A. V. Sevoi, and A. I. Troshev. Published 1947. AF-132681.

Reference for Aviation and Automobile Fuel. By N. A. Rogozin. Published 1947. AF-132688.

Flight Problems Using Rocket Apparatus. By F. A. Tsander. Published 1947. AF-132687.

Aerodynamic Calculation of A/C. By T. V. Osloslavskii and V. M. Titov. Published 1947. AF-132686.

Automatic Flight. By E. V. Olman, Ya. I. Solovev, and V. P. Tokarev. Published 1946. AF-132682.

Aerology, Spherical Piloting Method, Single Point Control. By I. Ya. Tanatar. Published 1948. AF-132683.

Instruments for Planes. By A. S. Logunov. Published 1947. AF-132684.

Basis of Construction of Sights for Bombing. By I. E. Efros. Published 1947. AF-132685.

Air Photography. By N. P. Rozhdestvin. Published 1947. AF-132699.

RESERVE ACTIVITY

The 50th Fighter Wing (Jet), United States Air Force Reserve, one of the first corollary units to be activated, is an excellent example of effective Air Force personnel procurement technique. Prior to activation of the Reserve Wing in July 1949, Colonel Bruce Johnson, Commanding Officer of the 50th, personally screened the records of officer and airmen applicants in order to insure an efficient operating unit.

Letters were then dispatched to the accepted personnel inviting them to Otis Air Force Base to meet their regular counterparts in the 33rd Fighter-Intercepter Wing, commanded by Colonel Arthur Agan. Wholehearted cooperation on the part of the staff of the 33rd permitted rapid mission familiarization, a long stride toward operational readiness.

The introductory intelligence training was devoted primarily to organizational equipment orientation and conducted tours by such qualified men as Major Donald W. Wantz and Lt. James Pressley. This was followed by specialized training embracing all phases of operational intelligence. A series of simulated problems including operations orders, reports, briefing and interrogation, situation maps and a final critique were undertaken. An excellent example of the simulated problems was the imaginary invasion of the Northeastern United States by a hostile force.

Indicative of the efficiency of the 50th Fighter Wing and the interest its training program has aroused, is its attendance record. Of a total strength of 96 officers and 400 airmen, the attendance has averaged 100% and 80% respectively.

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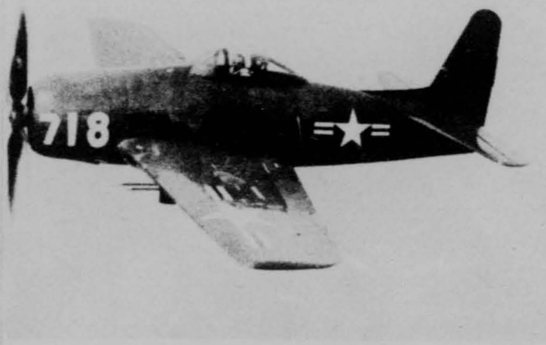
NAVY AIRCRAFT



F8F-2 BEARCAT-

SINGLE-ENGINE MID-WING CARRIER BASED FIGHTER

The evolution of the Grumman fighter has produced this high speed, very maneuverable little fighter, which was with fleet units just prior to VJ-day, but too late for actual combat. Powered with the same horsepower engine as its predecessor, the Hellcat, the Bearcat is lighter, smaller and much cleaner in design. Along with the Corsair it is the Navy's first line conventional engine carrier based fighter. Recognition characteristics are the familiar Grumman stubby fuselage, high bubble canopy and tapered low mid-mount wing with blunt tips. The F8F-2 shown here is actually the same as the F8F-1 with the exception of two 20 mm. cannon.

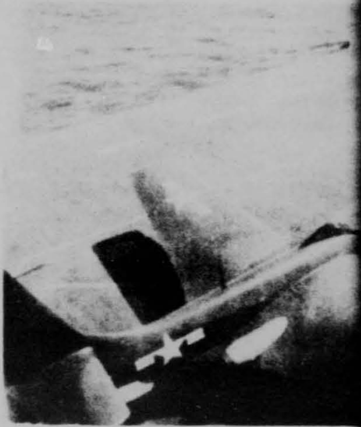
MANUFACTURER: Grumman
DIMENSIONS: Span - 35'6" Length - 27'6"
ENGINE: R-2800/2380 h.p.
SPEED: 370 knots/19,900 ft.
RANGE: 1,140 nautical miles/140 knots
ARMAMENT: (4) .50 cal. guns or (4) 20 mm. cannon

F9F-2 PANTH

SINGLE-JET MID-WING CA BASED FIGHTER

The Panther is the first jet plane produced by G has very few of the familiar Grumman recognition c istics. The pressurized cockpit is located far f the thick fuselage. The intakes for the single c flow type jet engine, located in the fuselage a pilot, are in the leading edge of the wing roots. haust is out of the ventral side of the fuselage f the rudder extremity. A "droop snoot" wing is inc to improve landing and take-off characteristics. ble nose section permits rapid changes of arma tronic or camera equipment to suit the type of mis duction version includes a pilot ejection mechani

MANUFACTURER: Grumman
DIMENSIONS: Span - 35' 3" Length - 37' 8"
ENGINE: J-42 or J-33/4000-lb thrust
SPEED: 508 knots/sea level
RANGE: 945 nautical miles/310 knots
ARMAMENT: (4) 20 mm. cannon

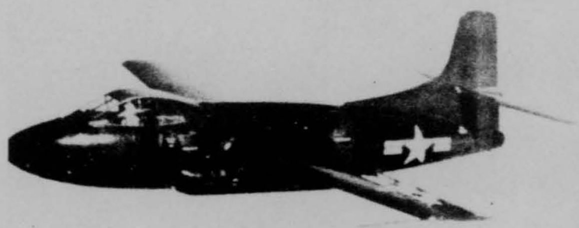


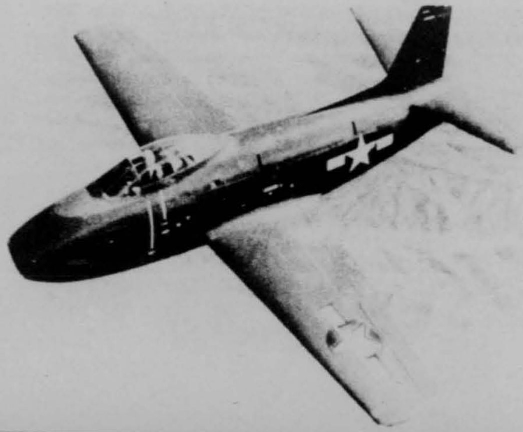
FH-1 PHANTOM-

TWIN-JET LOW-WING CARRIER BASED FIGHTER

The Phantom is a twin-jet, low-wing, Navy fighter plane. The jet engines are mounted in the wing roots forming very massive wing root sections. The wings are set well back on a thin fuselage causing the aircraft to appear extremely long nosed. The dihedral stabilizer is set high to avoid the jet blast and the cockpit canopy is forward of the wing affording excellent visibility. In the plan view, the leading edge of the wing is straight, with intakes forward of the wing breaking the straight line, and the trailing edge is tapered. All airfoil extremities are squared. The FH-1 was the Navy's first all-jet plane to operate from a carrier.

MANUFACTURER: McDonnell
DIMENSIONS: Span - 42' 0" (15'3" folded) Length - 37' 2"
ENGINE: J-30/1600-lb thrust
SPEED: 400 knots/25,000 ft.
RANGE: 600 knots
ARMAMENT: (4) .50 cal. guns





FJ-1 FURY-

SINGLE-JET LOW-WING CARRIER BASED FIGHTER

The Fury is a single-engine, single-seat low-wing monoplane with short stubby, thin, high speed laminar flow wings and resembles a high "flying bomb". The air intake is located in the nose while the engine and fuel tanks are enclosed within the fuselage. The Fury has a high square fin and rudder, the horizontal stabilizer has dihedral and is mounted high for increased stability. For all-around visibility, the cockpit has been located forward of the leading edge of the wing. The FJ-1 with its enormous fuselage dwarfs little jets, such as the FH-1.

MANUFACTURER: North American
DIMENSIONS: Span - 41' 0" Length - 33' 8"
ENGINE: J-35/3820-lb thrust
SPEED: 471 knots/sea level
RANGE: 1190 nautical miles/278 knots
ARMAMENT: (6) .50 cal. guns

F7F-3 TIGERC

TWIN-ENGINE MID-WING CA BASED DAY FIGHTER

The F7F Tigercat is a mid-wing monoplane with singl rudder, high mid-mount wing with straight lea sharply tapered trailing edge and squared off tip underslung nacelles project beyond the trailing e wing. The fuselage is long and narrow with a t cockpit. The long horizontal stabilizer has slight leading edge and raked tips. This is Grumman's fir engine fighter design since the experimental F5F appeared in 1940. The F7F was developed for use rier decks but is now used primarily as a land b fighter by the Navy and Marines.

MANUFACTURER: Grumman
DIMENSIONS: Span - 51'6" Length - 45' 4 1/2"
ENGINE: R-2800/2380 hp
SPEED: 370 knots/19,200 ft.
RANGE: 1,360 nautical miles/155 knots
ARMAMENT: (4) .50 cal. guns; (4) 20 mm. canno

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NAVY AIRCRAFT

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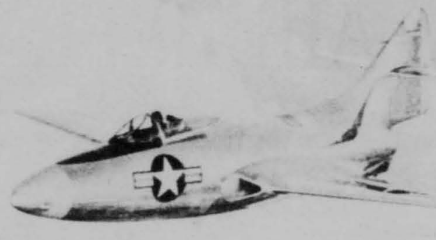

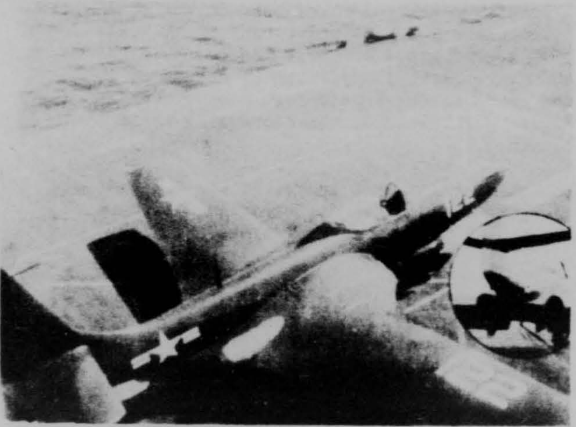

F3D-1 SKYKNIGHT-

TWIN-JET MID-WING CARRIER
BASED LONG RANGE FIGHTER

The Skyknight, a versatile, two-seat, twin jet aircraft, first flew in August 1948. It has an all-metal mid-wing of semi-monococque construction and a nose wheel landing gear. Pilot and crewman are seated side-by-side in a pressurized cockpit which is provided with air-cooling and heating systems, a flat armored windscreen, armored canopy roof and bulged sides. For emergency escape at high speeds a bail-out chute opening underside of the fuselage permits safe exit. Hydraulically operated speed brakes or flaps extend outward from the fuselage just forward of the tail. These brakes permit quick deceleration for carrier landings, maneuverability in combat and limit speed in dives.

MANUFACTURER: Douglas
DIMENSIONS: Span - 50' 0" Length - 45' 5"
ENGINE: Two Westinghouse J-34-WE-38 axial flow jets 3500 lb. thrust each at take-off, mounted semi-externally on either side of the lower fuselage.
SPEED: Over 475 knots
ARMAMENT: 20 mm. cannon
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J-1 FURY-

-JET LOW-WING CARRIER
BASED FIGHTER

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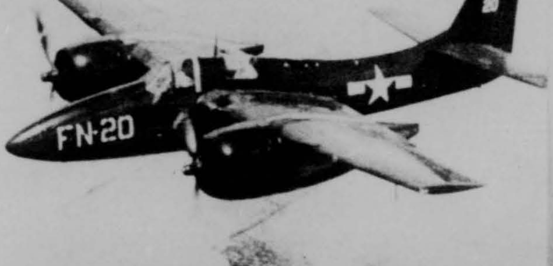
ARMAMENT: (4) .50 cal. guns; (4) 20 mm. cannon



AIR DEFENSE GRID

BY SUBDIVIDING ALL THE EARTH'S SURFACE TO LATITUDE 80° NORTH AND SOUTH INTO GRIDS, ACCURATE POSITIONAL DATA CAN BE EASILY OBTAINED AND TRANSMITTED.

Basic Grid for Air Defense Operations. Pending revision of FM 30-20, May 27, 1940, the following is published for the information and guidance of all concerned:

1. The purpose of the AD Grid is to satisfy the requirements of air defense in world wide application and to permit easy transmission of accurate positional information.

2. The AD Grid divides and subdivides all of the earth's surface to latitude 80° north and south in such a way as to keep the grid divisions and subdivisions approximately square. This is accomplished by changing the size of the grids in degrees and minutes of longitude several times between the equator and the poles. The only large variations in shape occur between latitude 72° and 80° N and S where the top of the grid lines converge considerably toward the poles, but it was felt that due to limited operation in this area it would be less confusing to allow the grids to converge more, rather than to add another change in grid size. Figure 6 illustrates the converging meridians and successive changes in grid lengths.

3. This grid system is based entirely on lines of longitude and latitude and can be placed on any map having longitude and latitude, regardless of type of projection, as can be seen in Figures 1 to 5 where several types are illustrated.

4. The first four successive subdivisions of the grid squares are identified by letters starting from the upper left corner of each grid square and running from left to right consecutively, omitting the letter I, as shown in Figures 1 to 4, inclusive, and are divided on the basis of degrees and minutes of latitude and longitude. Points in the fifth subdivision are identified by four coordinate numbers, the first two along the x axis (longitude) and the last two on the y axis (latitude). The first digit of the x and y axis are shown on the grid and the second digit of each is estimated.

5. The first division of the earth's surface is shown in Figure 1 in large shaded block letters:

A - from latitude 60° N to 80° N, longitude 0° around the world to 0°
B - from latitude 40° N to 60° N, longitude 0° around the world to 0°
C - from latitude 40° N to 40° S, longitude 0° to 120° E
D - from latitude 40° N to 40° S, longitude to 120° E to 120° W.
E - from latitude 40° N to 40° S, longitude 120° W to 0°
F - from latitude 40° S to 60° S, longitude 0° around the world to 0°
G - from latitude 60° S to 80° S, longitude 0° around the world to 0°

6. The second division shown in Figure 1 and 2 with solid block letters is a division of each of the above shaded letter division as follows:

> Shaded letter A grid area is subdivided into one row of eight grid squares, lettered from A to H inclusive. Shaded letter B grid area is subdivided into one row of twelve grid squares lettered from A to M inclusive. Shaded letter C grid area is subdivided into twenty-four grid squares, four rows with six grid squares each, lettered from A to Y inclusive. Shaded letter D and E grid areas are subdivided the same as shaded letter C. Shaded letters F and G grid areas are subdivided the same as shaded letters B and A, respectively.

7. The third division, Figure 3, is made by subdividing each one of the solid block letter grid squares, made in divisions two, into twenty-five grid squares. There are five rows with five grid squares each, lettered with hollow block letters from A to Z.

8. The fourth division known as basic grid, Figure 4, is accomplished by subdividing each one of the hollow block lettered grid squares in division three into twenty-five basic grid squares, five rows with five grid squares in each and lettered from A to Z inclusive. The length of sides of the basic grid squares in degrees and statute miles are shown in Appendix.

9. The fifth division, Figure 5, is made by subdividing each one of the basic grid squares in division four into one hundred grid squares, ten rows with ten grid squares in each, and numbering the x and y axis. The division can be made by simply stepping off ten equal parts on all four sides of the grid and drawing in the lines parallel to longitude and latitude lines.

10. To make a position report the four letters of each of the four divisions, and the four numbers of the fifth division are used. The full designation of point X, figure 5, is EBPW5518. For local operation some of the larger division letters may be omitted.

11. To lay out a grid for local operation anywhere between latitude 40° N and S refer to Fig. 1 division two (solid block letters) to determine in which grid square the area to be gridded lies. This grid area, 20° on a side, is then laid out with pencil on a map. Next divide this square into twenty-five grid squares 4° on a side and letter the subdivisions as illustrated by hollow letters in Fig. 3. Only one or two of the division 3 (hollow letter) grid squares are normally used for local operation but the above procedure is necessary to establish the location of the letters. The division three grid square to be used is then divided into 25 basic grid squares, 48' on a side. Each of these is then further subdivided into 100 grid squares as shown in Fig. 5.

The procedure for laying out a grid in the area between latitude 40° and 60° N or S is identical except that the second division grid area lengths are 30° longitude by 20° latitude. This makes the third division grid areas 6° longitude by 4° latitude, and the fourth division grid areas 72' longitude by 48' latitude.

Likewise the procedure is identical for laying out a grid in the area between latitude 60° and 80° N or S except that the second division grid area lengths are 45° longitude by 20° latitude. This makes the third division grid area 9° longitude by 4° latitude, and the fourth division 108' longitude by 48' latitude.

1. The following table shows in angular measure the length of the sides of division 3, and basic grids division 4 in different areas of the world:

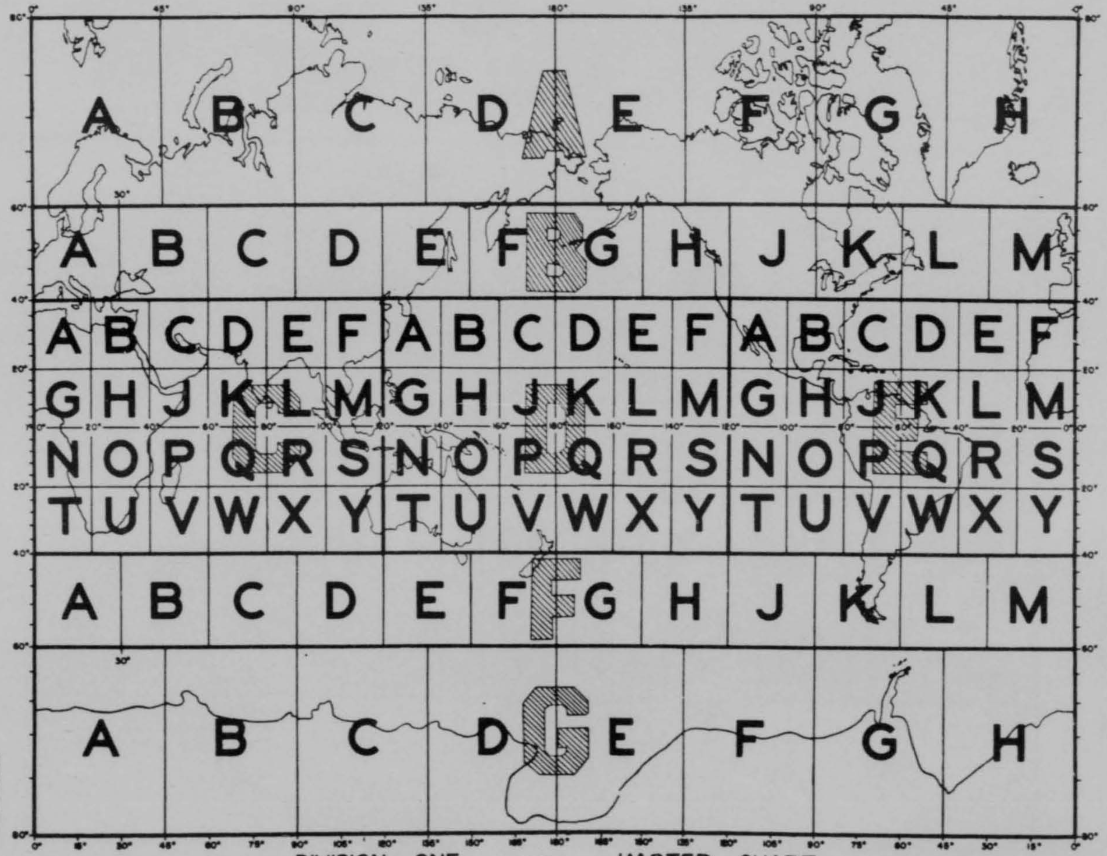
Division One (Shaded letters)	Latitude	Division 3 Fig. 3		Division 4 Basic Grid	
		Long.	Lat.	Long.	Lat.
A & G	60° - 80° N&S	9°	4°	108'	48'
B & F	40° -60° N&S	6°	4°	72'	48'
C,D & E	40°N -40° S	4°	4°	48'	48'

2. The following table shows length of Basic Grid (Fig. 4) base lines in statute miles:

Latitude Degrees N & S	Miles for 48' Lat.	Miles for 48' Long.	Miles for 72' Long.	Miles for 108' Long.
0	54.963	55.338 (Equator)		
4	54.966	55.204		
8	54.974	54.803		
12	54.987	54.136		
16	55.006	53.208		
20	55.029	52.021		
24	55.056	50.582		
28	55.086	48.898		
32	55.121	46.973		
36	55.157	44.822		
40	55.194	42.450	63.676	
44	55.234		59.808	
48	55.273		55.646	
52	55.311		51.211	
56	55.349		45.525	
60	55.384		41.609	62.413
64	55.417			54.731
68	55.446			46.778
72	55.472			38.594
76	55.493			30.218
80	55.509			21.692

For example, the size of a Basic Grid Square at latitude 28° N or S is 55.086 by 48.898 miles. A basic Grid Square at latitude 48°N or S is 55.273 by 55.646 miles. A Basic Grid Square at latitude 64° N or S is 55.417 by 54. 731 miles.

AIR DEFENSE GRID


A B C D E F G H
A B C D E F G H J K L M
A B C D E F A B C D E F A B C D E F
G H J K L M G H J K L M G H J K L M
N O P Q R S N O P Q R S N O P Q R S
T U V W X Y T U V W X Y T U V W X Y
A B C D E F G H J K L M
A B C D E F G H
A
B
C
D
E
F
G
0°
45°
90°
135°
180°
135°
90°
45°
0°
80°
60°
40°
20°
0°
20°
40°
60°
80°

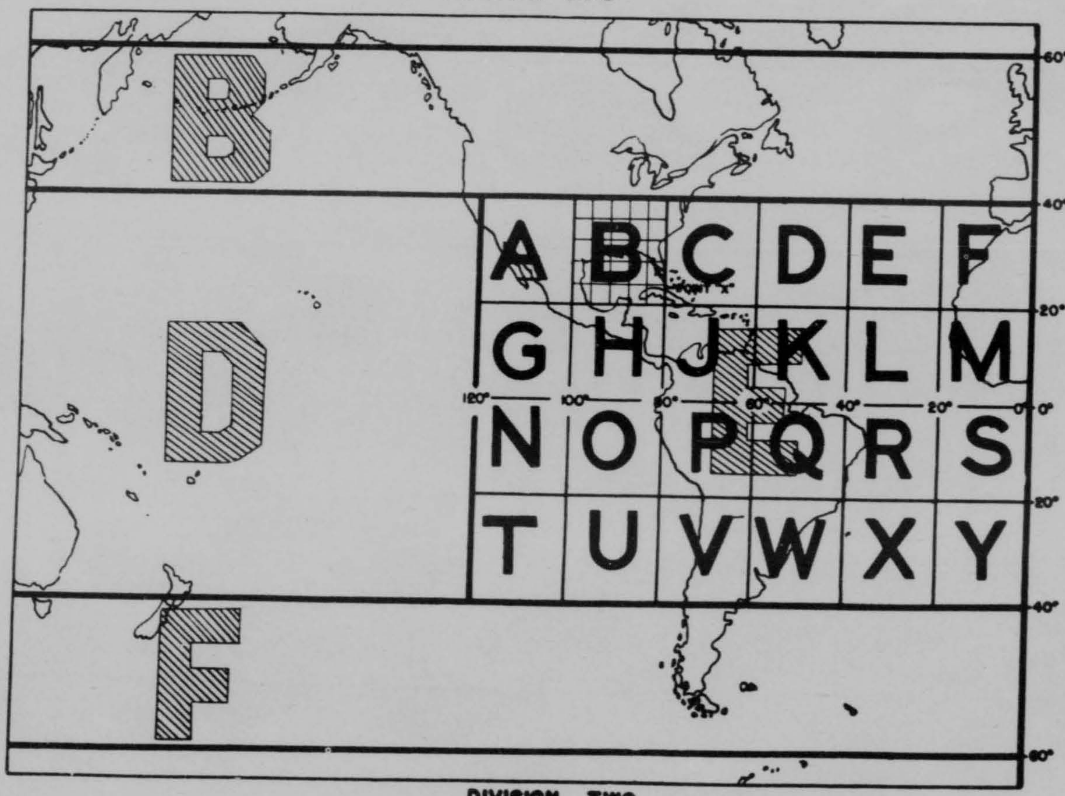
DIVISION ONE
AND
DIVISION TWO — MASTER CHART

FIG. 1

MASTER CHART FOR DIVISION OF WORLD FROM 80° NORTH TO 80° SOUTH INTO DIVISION ONE AND DIVISION TWO UNIT OF LATTER CAN BE DIVIDED INTO TWENTY-FIVE PARTS OF DIVISION THREE, AND ONE OF THESE INTO TWENTY-FIVE PARTS OF DIVISION FOUR, OR BASIC GRID BY DEGREES OR MINUTES OF LONGITUDE AND LATITUDE. LAST UNIT CAN BE DIVIDED INTO 100 OF DIVISION FIVE

RESTRICTED

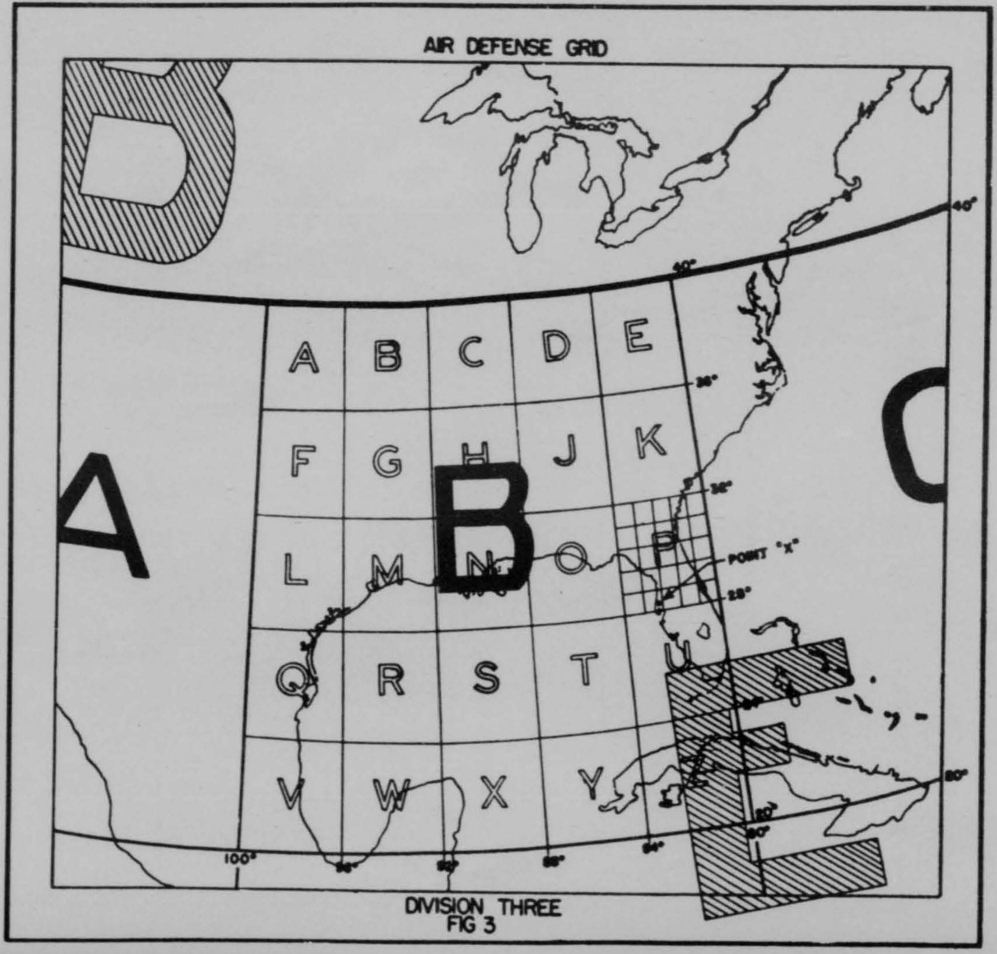
AIR DEFENSE GRID


B
D
F
A
B
C
D
E
F
G
H
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
E
60°
40°
20°
0°
20°
40°
60°
120°
100°
80°
60°
40°
20°
0°

DIVISION TWO
FIG. 2

RESTRICTED

AIR DEFENSE GRID


A
B
C
E
A
B
C
D
E
F
G
H
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
40°
40°
36°
32°
POINT "X"
28°
24°
20°
20°
80°
100°
96°
92°
88°
84°
80°

DIVISION THREE
FIG 3

RESTRICTED

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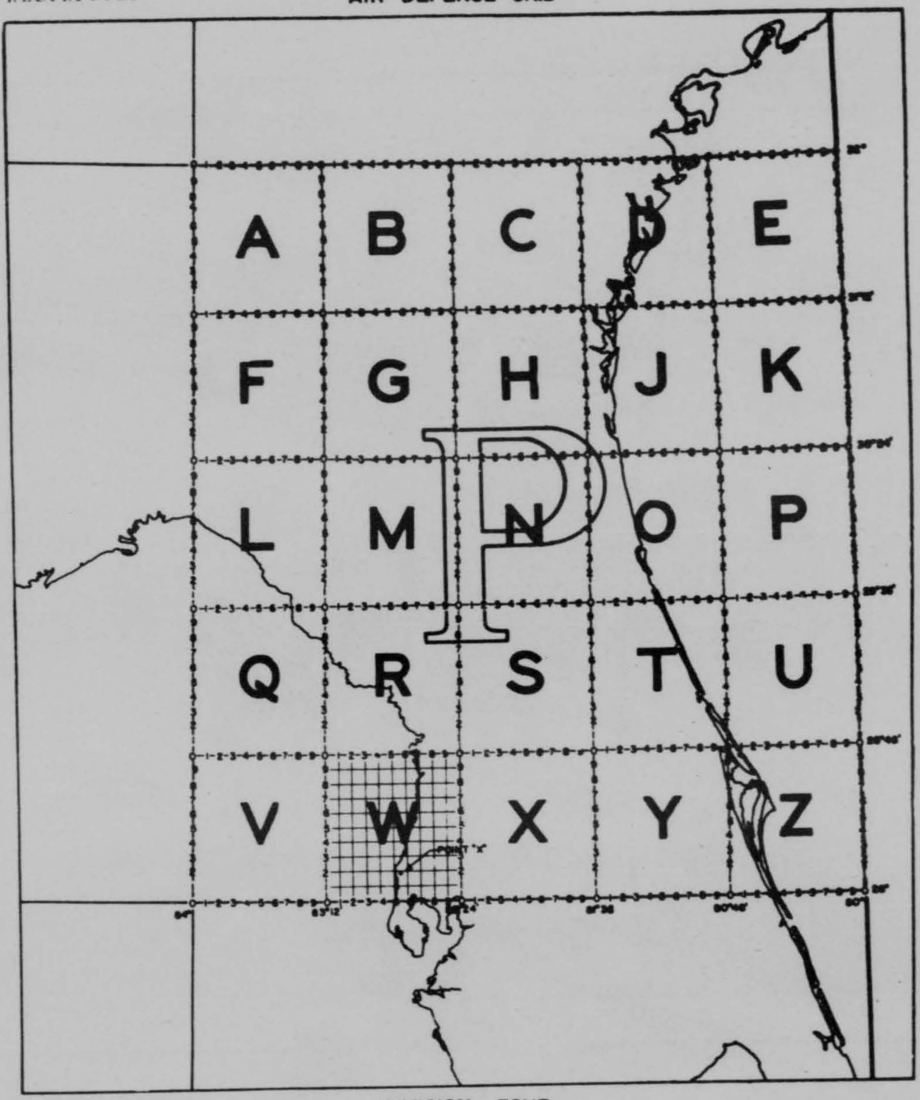
AIR DEFENSE GRID


A
B
C
D
E
F
G
H
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z
POINT "X"
83°12'

DIVISION FOUR

FIG. 4

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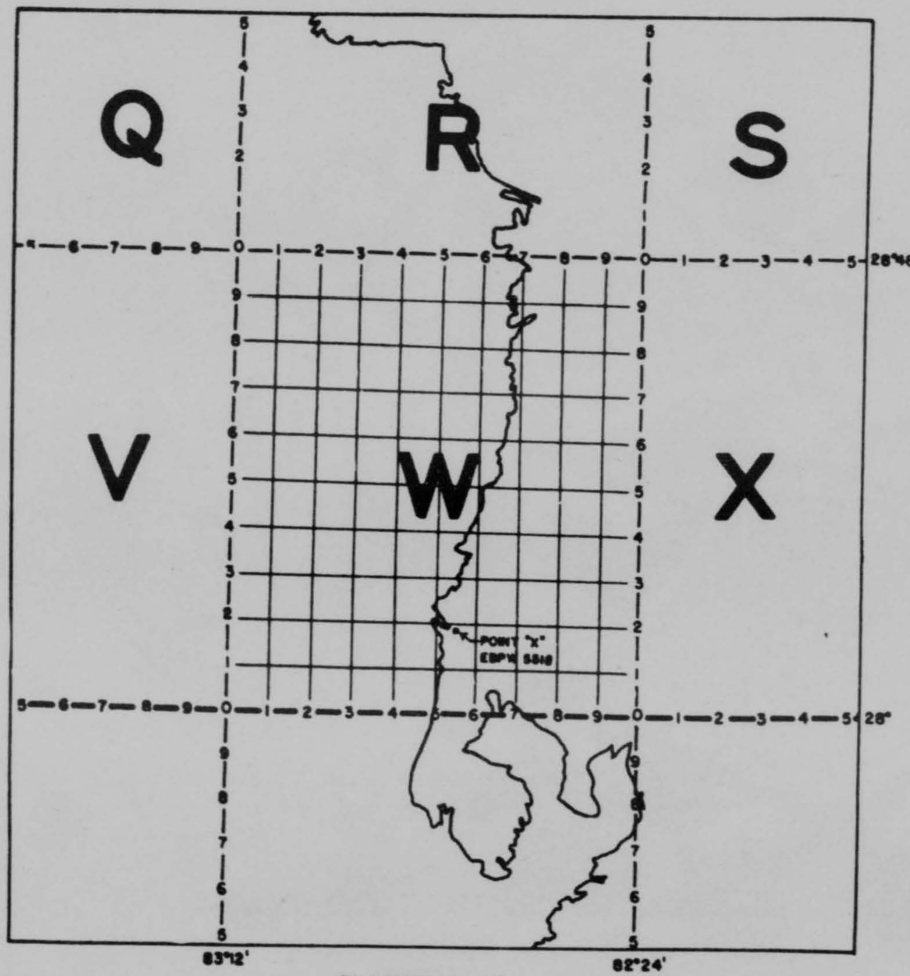
AIR DEFENSE GRID

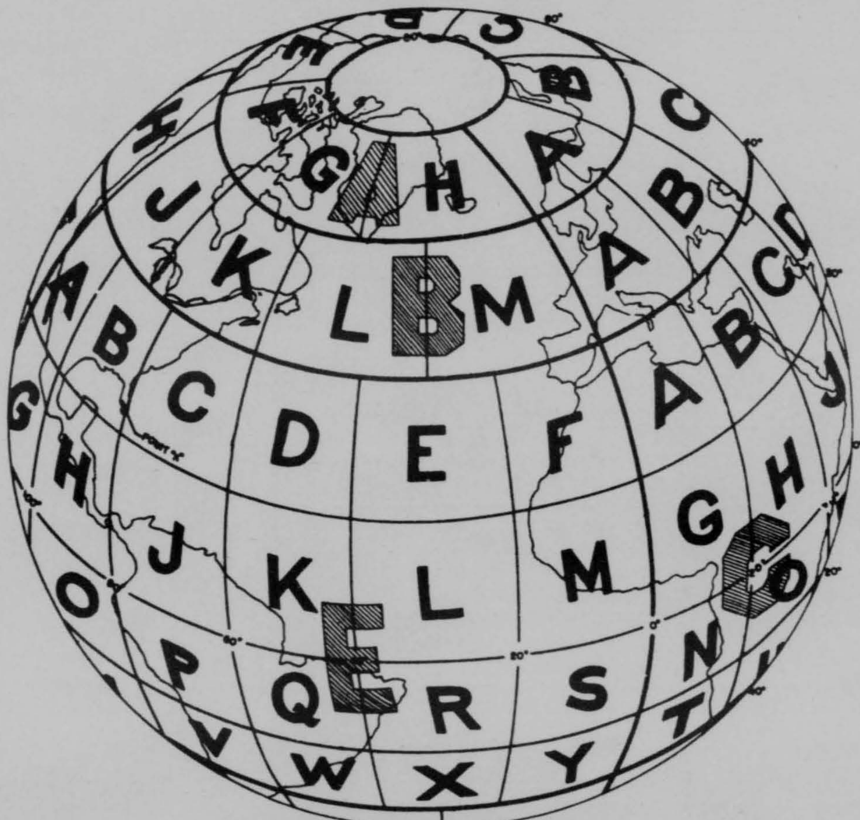

Q
R
S
V
W
X
5 4 3 2 0 9 8 7 6 5 4 3 2 0 9 8 7 6 5
6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5
28°48'
POINT "X"
EBPW 5818
5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5
28°
83°12'
82°24'

DIVISION FIVE

FIG. 5

RESTRICTED

AIR DEFENSE GRID


A
B
C
G
H
J
K
L
M
A
B
C
D
E
F
G
H
J
K
L
M
N
O
P
Q
R
S
T
V
W
X
Y
POINT "X"

SPHERICAL PRESENTATION
OF THE FIRST & SECOND DIVISIONS

FIG. 6

POLAR GUIDE

This is the Seventh in a Series of Chapters on Arctic Indoctrination

Chapter XVIII - Land Survival

FORCED LANDING

Stay on your pre-arranged flight course at all times, so that if you are forced down the rescue party will be able to find you. Keep in touch with the nearest air base; if you find yourself in trouble, you can radio your position before landing. In mid-winter, ice on quiet polar waters attains a thickness of three to six feet. Frozen lakes are therefore the most suitable landing places, although broad rivers, treeless valley floors, beaches, and even ice floes may have to serve. In the early fall, lake landings are inadvisable; and in the spring, beware of rough, discolored, rotten-looking ice. If you are obliged to land on a glacier, ice cap, or on the snow-covered tundra, come down parallel with, rather than at right angles to, the "sastrugi" (wind-formed ridges of snow). If crevasses are visible on your landing area, take them at right angles.

Unless you know the terrain perfectly and have been there a very short time previously, don't make a wheels down emergency landing regardless of how smooth the surface looks. With wheels down, hummocks or piled snow will probably cause you to nose over.

Don't bail out unless the plane is afire and in danger of disintegrating. Even in a fighter, your chances for continued life are far greater in almost any kind of forced landing than in a bail-out at very low temperatures with only the small amount of survival equipment you can carry on your back.

In the first place, bailing out is a dangerous procedure in most polar areas. You are likely to be dragged by the wind, your clothes torn, and your body frozen before you can get loose from the parachute. And it can happen even to experts. In fact, it did. In a recent rescue, a man familiar with cold weather techniques, with plenty of parachuting experience, dropped under favorable conditions,was dragged several miles by the wind and was found frozen to death, still in his parachute harness but with his clothes ripped wide open.

Furthermore, your chances of survival and of being found are far, far greater if you stay with your plane. A recent B-29 accident is a case in point. The plane had crashed into a hillside that looked like a cloud,and a good part of the plane had been destroyed. None were seriously injured, however, and the pilot (who should have known better, for he was a veteran of two previous crashes) and the navigator took most of the remaining survival equipment and tried to walk out. The rest of the crew stayed with the airplane and though they had practically no equipment or food managed to survive for five days when they were found and rescued. The pilot and navigator were found shortly afterward, frozen to death, a few miles from the plane.

By crash landing you will have the advantage of a radio, extra emergency kits, and the plane itself, which will furnish material for both shelter and improvised equipment. When you crash-land, get out of the plane as quickly as possible; take your chutes and emergency equipment along if you can do so in a hurry. Simple tools, such as screw drivers, pliers, and hammers can also save you much unnecessary discomfort. Stay away from the plane until engines have cooled, free gas has evaporated, and the danger of fire is past. If you are in a pursuit or a light bomber, keep your chute on as you get out. In large aircraft throw out a few chutes, but don't allow this action to slow up the exit.

BAILING OUT

Don't bail out unless it's absolutely necessary. If you have to bail out, do these things:

1. Wear the heaviest clothing possible - you'll need all of it. The outdoor air may be so cold that you will freeze parts of your face or hands during descent. Wear gloves and protect your face with your hands if you can. Your rate of descent may produce a freezing effect sufficient to cause frostbite.

2. As you come down, keep your eye on the plane and try to fix the position of the crash so you can get to it after you land. Even if the plane burns after the crash, the wreckage will still furnish some valuable aids for camping and traveling. Also make a search within a radius of a hundred yards of the crash for things that were thrown out of the plane as it crashed.

3. Don't abandon your parachute after it has brought you down. Every part of it will make useful emergency equipment. In the packet of each parachute pack is a small booklet on "Emergency Uses of the Parachute", AF Manual 64-0-4.

PLANNING

Survival procedures naturally vary with the size of the crew. In an emergency landing a large crew is at an advantage, for there can be division of labor according to the skills of the individual members of the crew and, as a result of this teamwork, greater safety and comfort can be achieved. For maximum efficiency, therefore, crews must be carefully trained so that, while all members of the crew are familiar with the overall survival procedures, each member is particularly prepared for one or more special jobs. Of course, there is always a possibility of casualties, and there may have to be substitution of duties. The airplane commander must therefore be familiar with the special skills of each crew member and be ready in case of a crash to assign primary responsibilities for major functions to particular individuals or groups of individuals. In this way all the work involved in survival can be accomplished without neglect of any job because of casualties.

Small crews and fighter pilots must also have a fairly accurate conception of the jobs that must be done in order to survive after a crash landing or bail-out. Regardless of the amount of planning and briefing before the flight, each survival situation has its own peculiarities, and procedures must be planned carefully in order to take best advantage of all favorable factors. Consequently, after giving first aid and doing what you can to keep temporarily warm and dry, plan carefully the survival measures to be taken. Taking into consideration the equipment and supplies available, plan steps necessary for transmitting distress signals, securing shelter, and supplementing your rations.

FIRST AID

Check for injuries at once and treat them immediately. Keep all injured personnel warm and lying down. Wounded persons require special care because they are more likely to freeze than uninjured men. They must be made warm at once with coats, parkas, chemical thermo pads- whatever is available - even while essential first aid is in progress. When a sleeping bag is used, brush the snow from the injured person's clothing before putting him into it. Watch especially for shock; if not treated at once, it may result in quick death. Shock symptoms are: Pale face and lips, clammy skin, nausea, weak pulse, rapid breathing, and mental confusion. Treat a victim of shock by laying him on his back with his head low and his feet raised. If you have no sleeping bag, lay him on seat cushions or floor mats retrieved from the plane. Keep the patient warm, wrapping him in extra clothing or a parachute. If he is conscious, and no internal injuries are indicated, give him warm, sweet drinks, but avoid alcohol. When stopping bleeding, release pressure frequently or the casualty will freeze. If a tourniquet must be applied, warm those parts of the body where the circulation is cut off. As soon as bleeding is checked, remove the victim to a warm spot.

Remove boots from injured persons who can't walk and wrap their feet in any covers available. Check the condition of the feet at least twice daily. If feet remain cold for long periods, trench foot or freezing may set in. One such injured man lost both feet because no one bothered to remove his boots during a rescue period of nine days. Remember that the cold pain sensation may be gone entirely when trench foot or freezing sets in.

Treat other injuries as follows:

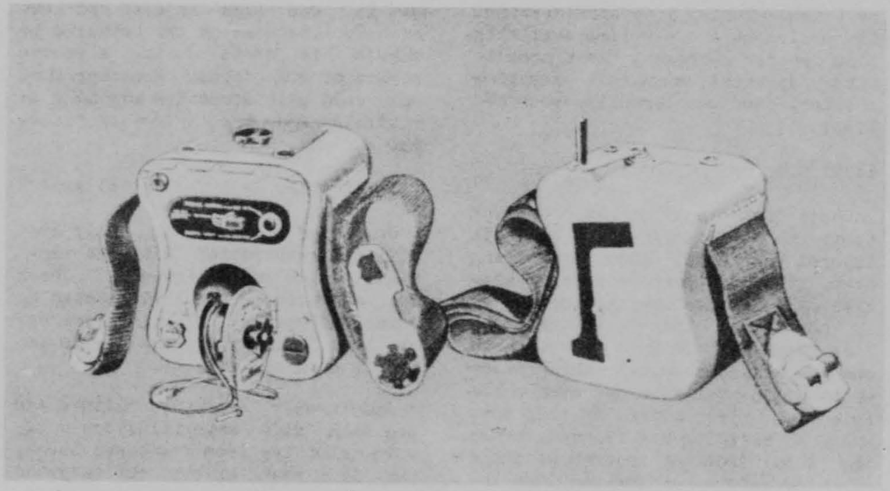
Cessation of breathing. Apply artificial respiration with the victim's tongue pulled forward. Check for a fractured skull (indicated by enlarged pupils, bleeding from ear or into skin around eye); keep the victim warm and dry.

Fractures. Improvise splints and pad with soft materials; don't remove clothing from fractured limbs, but if a wound exists, cut away the clothing around the wound and dress the wound before applying splints.

UTLIZING THE AIRPLANE

In all your plans, remember that the plane will provide you with much needed shelter and equipment and will make it easier for the searchers to find you. Don't abandon your plane.

When you are sure that there is no danger of fire, return to the airplane and drain all the oil from the engine. You can do this best by using the "Y" drain of each engine. Don't worry about containers; at low temperatures the oil will congeal rapidly when draining directly on the ice and snow and in this congealed form can be used at any time for several purposes. However, if you wait long before attempting to drain, the oil will congeal in the engine and you will have to expend a great deal of effort to get even a small amount of oil from the engine. Don't drain the gasoline. Since it will not congeal, the tanks offer the best storage spot for it. You



can get the gasoline from the tanks as you need it.

Moor your plane securely so that it will remain in place even if there is a gale.

SIGNAL DEVICES AND SIGNALS

If the radio transmitter in your plane is operative, get your radio signals going as soon as possible after giving first aid and taking care of other immediate necessities.

RADIO SIGNALS

Radio is your quickest and most effective means of securing help. Try to establish radio contact as soon as you can safely return to the plane, and keep on trying. On bombers or cargo planes, use the auxiliary power unit if possible.

Try to start the auxiliary power unit by means of its associated battery. If warming is necessary, remove the oil drip pan from under the APU, insert into the pan wicks of harness soaked in gasoline, and ignite them. Keep all available fire extinguishers near for immediate use if necessary. If the APU battery is low, re-charge it on the first running, then cut off the APU.

Since it will obviously be impossible to run the APU continuously, you'll have to determine how often you should start it and how long you should run it. Base this decision on the fuel and oil reserves, the condition of the battery, and the temperature. The interval between periods of running must never be so great that the APU cools below its minimum starting temperature. In general, at an average temperature of -30° F, the unit must be run approximately every one-half hour in order to keep it warm enough to start at will. If you cover the APU with some insulating material, such as a blanket, you can increase the interval between running periods.

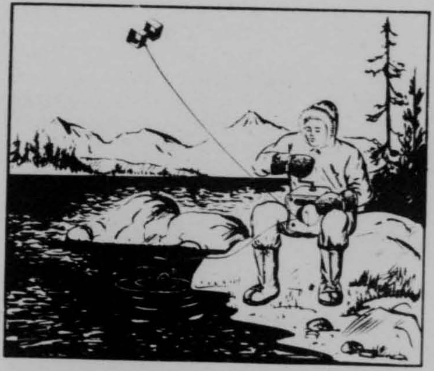
If the APU is damaged or if there

is none on the plane, use the plane's battery. (In some instances, pilots forced down on ice have used the plane's engine for power purposes by chopping a trough so that the propeller might rotate freely.)

If the regular radio equipment is operative, transmit on the control frequency. Give your identification, assumed position, weather, nature of injuries, and any other information that might aid a rescue party. Transmit during the 3-minute International Silent Period which begins at 15 and 45 minutes after each hour.

If the radio equipment is inoperative or if the battery is down, try to attract attention with an emergency transmitter - the Gibson Girl (AN/CRT-3) or the lightweight Hand Energized Radio Beacon Transmitter (AN/CRN-16) which is being developed and will probably be ready for distribution before long.

AN/CRT-3. Set up the Gibson Girl transmitter in a broad valley near a river if possible. Avoid very narrow valleys surrounded by high mountains. If the terrain does not afford a reasonably broad valley, try to gain access to a summit. The best coverage is secured by using all 300 feet of antenna wire supported by the balloon or box kite. When there is less than a seven-mile wind and you can get water for the balloon's hydrogen generator, use the balloon to raise the antenna. You will need four to five gallons of water for the hydrogen generator, and, if water is not at hand (as in an unfrozen stream or lake), you'll have to melt ice or snow to get it. On the polar pack, it may be easier to go to the nearest lead or dig through the floe. To inflate the balloon, follow the directions given on the can in which the balloon is packed.



Using AN CRT-3.

When the wind is strong, use the kite to raise the antenna. Attach the antenna to the proper tab on the kite. This will keep the kite from jerking violently and perhaps snapping the antenna wire. If you can't use the kite or the balloon, make the antenna as long as possible. Attach the far end of the antenna to a high tree or, if none is available, to the highest point of the crashed plane. To provide a satisfactory means of throwing the antenna to the top of a tall tree, tie the ground wire cap to the end of the antenna wire. Make the antenna fairly taut. Be careful to insulate the end of the antenna from the point of attachment to the airplane structure or tree. Attaching a length of rope, cord, or parachute shroud line is sufficient to maintain clearance of the antenna wire from the grounded objects and accomplish the required insulation.

To get a good ground connection, immerse the ground wire in an open stream or through ice into a body of water. If it is not possible to obtain a good ground, use a counterpoise. Lay out the spare roll of antenna wire in a straight line on the ground and connect it to the ground wire on the transmitter.

If you can't find a high point on which to attach the antenna, lay out the full length of antenna wire on top of the deepest snow or ice bank you can find. For a counterpoise, stretch out the spare roll of antenna wire in the opposite direction from the antenna and connect it to the ground connection at the transmitter.

When you have completed setting up the antenna and ground (or counterpoise), transmit in accordance with the instructions printed on the transmitter. Turn the selector switch to 500KC/8280 KC AUTOMATIC. This sends an SOS when the crank is rotated. Between sunrise and sunset (or at corresponding times in winter) operate from 15 to 30 minutes after each hour. This will include one of the international distress listening periods. If you can't stand fifteen minutes of cranking, transmit for five minutes, from 15 to 20 minutes after each hour. Be sure to crank a few minutes each daylight hour to make sure the signal reaches distant RDF stations. It will probably take the entire daylight period for the RDF stations to obtain a fix. You can expect search planes on the second day of operation. When you hear or sight them turn the switch to 500 KC MANUAL. Hold down the key and crank continuously. If visibility is poor when the planes fly overhead, turn the selector switch to SIGNAL LIGHT POSITION and crank. At the same time blink the light with the key.

AN/CRN-16. Development of a hand-energized radio beacon transmitter is now reaching the final stage, and a limited number of these transmitters will soon be available for distribution. The transmitter, which weighs a total of only 2 1/4 pounds, includes a hand-cranked generator and can be carried in a pocket of the flying clothes. The transmitter operates at a very high frequency and can be received over line-of-sight distances. It will be particularly useful for fighter pilots.

VISUAL SIGNALS

In wooded country, light a fire at once; it is not only a good signal, but a source of warmth as well. At night it shows up best when inside a paratepee. Don't keep it up all night, though, unless someone can stay up and make sure it stays under control.

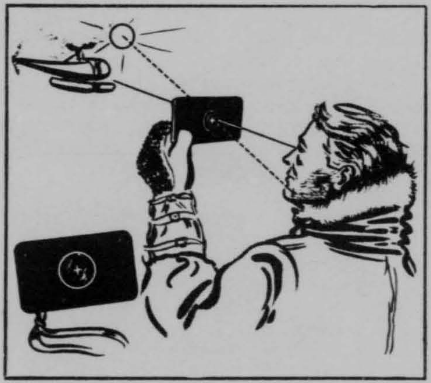
To attract the attention of a search airplane after you hear or see one, prepare the materials for a number of flash fires. Use fine slivers of wood from the airplane floor, raveled parachutes and harness, small chunks of rubber from seats and padding, and any other materials that will burn easily. Lay them on some suitable surface (such as a cowl section), which will keep the materials out of the water resulting from the heat of the fire. Include a can of gasoline and water-resistant matches in the cache so that, when necessary, you will be able to start the fire without delay. Cover these materials with a piece of parachute canopy or similar cover to protect them from drifting snow.

In winter these fires may not be visible from a distance from the air, especially against the snow background. A column of black smoke, however, is a good signal anytime of the year. Therefore, prepare such materials as chunks of congealed oil, animal fat, innertubes, rubber hose, floor mats, de-icer boots, damp leaf mold, green leaves, or rotted wood, to throw on the fire after it is burning strong.

In timber country, both summer and winter, every green spruce tree of good height from about ten feet up is a potential day or night signal of excellent visibility. Gather the dry dead twigs from other trees and shake them free of snow and frost. Then, after you have shaken the tree free of snow, build a big "bird's nest" of them in the lowest branches of the tree you have selected for the signal. When you light the "bird's nest", the tree will go up like a Roman candle. Gasoline thrown on the "nest" or oil-soaked rags placed in it make for really quick starting. You cannot make a better signal day or night. The smoke and flame are visible for miles. If you are lucky enough to be in timbered terrain, don't confine yourself to one tree. Prepare a number of trees, as high as you can on ridges and hilltops, and ignite them whenever you hear or see a rescue plane in the vicinity.

A signal mirror is an extremely effective visual signal. Rescue planes have been brought in by it from distances as great as twenty miles. Keep a signal mirror handy on your person so you can use it the minute you spot a plane. Practice signaling with it. If you have no mirror, improvise one from a ration tin by punching a hole in the center of the lid.

If there is snow, tramp out a big SOS, making the letters about 200 feet high and outlining them with evergreen boughs. A circle stamped out on the snow, laid out with twigs or shown clearly in any other way, is also a clear signal of distress. In open snow country, long straight tracks can be seen from the air for several miles. Take hikes off in various directions, dragging an object that will make good tracks. Keep your plane free of snow so that it will contrast with the snow around it.



Signal Mirror.

Put yellow or orange ponchos or orange-colored life-preserver cushions on the wings. Lay out shiny metal portions, such as engine cowlings, so they will reflect light; arrange several such panels in different positions to create a series of reflected rays with wide coverage. Another good visual signalling device will be your parachute. All new parachutes will be colored international orange, a color which has been decided upon as among the most conspicuous in any kind of terrain. Your Barren Land Tent, if you have one, will also serve as a good visual signal, since it has a fluorescent neon-red color.

In open country spread your signal panel on the ground, folded properly to give your message. Anchor it with a few stones or small logs. In timbered country, fly it from a long pole lashed to the top of the tallest tree. If you have no panel, make signal flags from chute cloth.

You can also raise the Gibson Girl balloon or kite antenna above the trees as a signal. On snow or on open water leads within the sea ice, sea marker from your life raft is an effective visual signal; keep it from freezing so that you can use it when you see a plane.

At night or during periods of poor visibility, use colored flares when you hear an airplane. Keep your flares and smoke bombs handy for instant use; don't waste them. Signal with a flashlight or the blinker signaling light of the emergency radio. If the airplane's landing lights are intact and you can get an engine to run, remove the lights and extend them for signaling. But don't waste the battery; save it for the radio.

RADAR DEVICES

Corner reflectors MX-137A and MX-138A (Emily) can help greatly in attracting radar-equipped planes to your position. They reflect a large portion of the radar energy that strikes them and make radar detection much more likely. In using a corner reflector, remember that it is a line-of-sight device - that is, objects in the way, such as heavy woods or mountains, prevent signals from getting out. Place your corner reflector as much in the clear and as high as conditions permit. On a smooth, unbroken expanse of ice several miles in area, corner reflectors have a range of two to twelve miles. They require no power and are continuously usable. Just make sure that the reflecting surfaces are always taut and at exact right angles. If the reflector is damaged, try to restore it to its original shape and its original position on the mast.

POSITION DETERMINATION

To speed rescue, it is essential that as accurate a position indication as possible be transmitted. You must therefore take precautions to protect navigation instruments, particularly octants and watches, from damage at time of the landing and must remove them, together with map kits, solution tables, etc., from the airplane as soon as possible after landing.

Make observations immediately and from time to time to determine with as high degree of accuracy as possible the position report to transmit over the radio. If, because of loss or damage, no octant is available, improvise some method of measuring altitudes. Use the astrocompass, a Weems Plotter with a plumb line attached at the center of the protractor, or measure the length of a shadow cast by a vertical rod of known height. Crude instruments will give divergent results, but if you average the various positions obtained or send them all, you can help search parties cut down the search area and thereby increase the chances of a successful search.

SANITATION

To prevent pollution of the living area and of snow and ice which you might use later for drinking water, select a special site for a latrine as soon as possible after landing and establish a sheltered latrine. Adhere strictly to latrine discipline, for you can never be certain that you will not have to occupy your camp for a considerable time even after its position is known on the outside.

In order to avoid interrupting sleep and having to crawl out of the sack, drink most of your liquids immediately after arising. Don't drink before going to sleep. Besides making for greater comfort, this practice will reduce tendencies toward violation of latrine discipline.

In case the necessity arises while you are on a hunting trip or away from camp for any other reason, don't be afraid of performing latrine duties regardless of the temperature. You have sufficient body heat to prevent the freezing of the necessary exposed parts during the short period involved. Of course, you should take advantage of any shelter from the wind to reduce possible discomfort.

Early in your setting up a camp, select a dump area in an inconspicuous place nearby and dump all refuse there. A littered camp area is not conducive to sanitation or morale.

CLOTHING

No matter what you do, you will have to keep warm and dry. If snow got into your boots when you left the plane, shake it out and close the opening it slipped through. If your socks are wet, change them. If you have no spares, several layers of parachute cloth wrapped around your feet are better than wet socks. One pilot who was forced down on the Alaskan Route didn't dry his feet after snow got into his shoes during a walk - and he lost several toes from freezing. Had he simply taken off his shoes and socks, shaken the snow off them, and then dried his feet and wrapped them with parachute cloth, he might still be flying today. If your boots are big enough, a few handfuls of dry grass stuffed around your feet will make a warm "sock" that is hard to beat - Laplanders have used grass "socks" for centuries. Padding from seat cushions will serve equally well. Don't stuff the material in tightly, though. Leave some room so that there will be adequate circulation.

Keep your hands warm. A lost mitten can mean a lost hand or even a lost life, so tie your mittens together with a long string that runs up behind your neck. A short string connecting the lines across your chest will help keep the strings out of your way. Try to do everything with your mittens on. If you are forced to remove them, stop and warm your hands frequently - more often than seems necessary, because once they get stiff you are in trouble. If your hands get too cold, put them in a pocket or inside your clothing to warm up. But don't wait until your fingers are so numb you can't unbutton your clothing. If you drive yourself too hard at heavy work, you will become exhausted and also perspire a lot. Both perspiration and exhaustion increase the chances of freezing. Therefore, take it easy; don't wear too much clothing while you are exerting yourself. To cut down perspiration, open your clothing at the neck and wrists and loosen it at the waist. If you wear a parka and get hot, let it hang loosely at the waist. If you are still warm, take off an underlayer or two. Don't open your trousers or your boots - it's a sure way to get snow in them. The minute you stop work, put on more clothing to keep from getting chilled. Try wrapping a piece of parachute around you, Indian-fasion; it helps cut off the wind.

In summer, protect yourself from insects with a headnet, gloves, and other means.

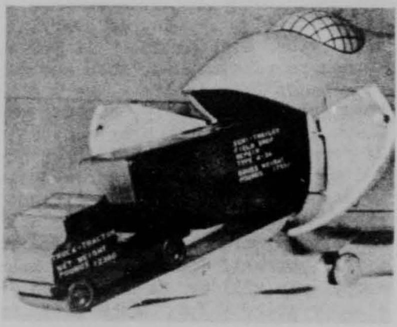
Polar Guide Chapter XVIII Rest

* * *

War is the aftermath of the failure of diplomacy, but it is the continuation of policy and its object is to enforce that policy as economically as possible.

* * *

IMPROVED CARGO VERSION OF B-36 BOMBER PROPOSED; WOULD FEATURE EASIER LOADING, MORE CARGO SPACE



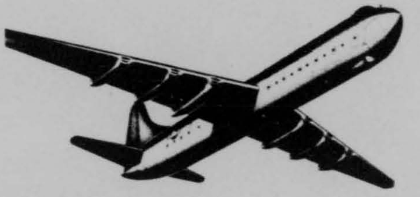
Procurement Division officials at Air Materiel Command Headquarters are studying a design proposal for a production model of the experimental XC-99 transport. The proposal was recently submitted by Consolidated Vultee Aircraft Corp., builder of the giant cargo version of the B-36. Company officials say the proposed transport, to be known as the C-99, could haul bigger loads (both in size and weight) over longer ranges than any other aircraft either in existence or in prospect.

It would differ from the XC-99, which was delivered to the Air Force last year, in five major ways: (1) higher-horsepower engines;(2) easier loading through nose and tail doors; (3) a 57% increase in usable cargo space; (4) a pressurized crew compartment and upper deck; and (5) a B-36-type flight deck, including a bubble canopy.

The C-99 would become the latest transport version of the B-36 and about 70% of the parts of both planes would be interchangeable. Like the "Flying Cigar", the C-99 would be equipped with six pusher-type engines and four-wheel main landing gears. It would have the same wing as the B-36 bombers, with a span of 230 ft., but its double-decked fuselage would be longer and much larger. The experimental XC-99 last April carried 100,000 lb of simulated cargo on a test flight - said to be the heaviest load ever taken aloft in one airplane.

Installation of the more powerful engines would enable the proposed transport to take off at a much higher gross weight than is possible with the experimental model. Because of this increase in gross weight and the improved fuel-consumption characteristics of the proposed engines, the C-99 could carry a 100,000-lb payload nearly 2,000 nautical miles further than the XC-99 can carry the same load. With the 100,000-lb payload, the new Convair transport could take off from bases in the eastern part of the country and fly nonstop to Britain or western Europe. It could carry a maximum payload of 116,000 lb for a shorter distance.

Mobile equipment would be able to drive directly on or off the plane through a clamshell-like nose door or an elongated tail door by means of self-contained low-angle ramps. Electric hoists, operating on cargo compartment, would facilitate loading, shifting, and unloading of heavy equipment and cargo. When used as powered winches,these hoists could pull non-powered vehicles up the ramps and into the plane.



AN ARTIST'S DRAWING of the proposed C-99. Several major improvements, including higher-horsepower engines, pressurized compartments, and a B-36-type flight deck, are the main difference between this plane and the experimental transport which last year made a test flight carrying 100,000 lb of cargo. About 70% of the parts on the C-99 and the B-36 would be interchangeable.

The entire cargo compartment would fully open up at both ends to provide entrances nearly 12 x 13 ft. These doors would removethe restrictions imposed by hatch-size limitations and would permit more varied loading arrangements.

The proposed air freighter would have 21,715 cu ft of usable cargo space (volume projected above cargo floors) - an increase of 57% over the XC-99. This was accomplished by enlarging the fuselage and changing the size and shape of the compartments. The revised lower cargo compartments could accommodate a substantial number of armored vehicles and other military equipment which cannot now be delivered by air.

To provide greater comfort for crew members and passengers in the C-99's upper deck, cabin pressurization would be installed. While carrying a large cargo load in the lower compartments, the plane could still carry 183 troops in the upper deck under all-weather flight conditions. Convair officials report this pressurization feature is particularly significant in transporting litter patients.

To achieve closer standardization for flight crews, the B-36 flight-deck arrangement of pilot, copilot, and flight engineer would be installed in the C-99 beneath a bubble canopy.

The proposed transport could haul 401 fully equipped troops. As a quickly converted hospital plane, 343 litter patients and 33 medical attendants could be accomodated.

One or more of each of the following could be carried in the C-99: fueling units, towing tractors, airplane spares (including complete nacelles, jet pods, and landing gears), heavy guns and carriages, light and medium tanks, trucks, jeeps, field shop-repair units, helicopters, liaison planes, guided missiles, and similar items. Moreover, after the maximum number of a given item had been loaded, the plane could still take a quantity of cargo or troops before attaining its normal 100,000-lb payload capacity.

Only 44 of these transports, Convair reports, would be needed to simultaneously move all the troops in an entire airborne division - now about 17,500 men.

Company executives, in proposing the plane, declared that the C-99 would be able to carry these large loads over long ranges, and the direct flying cost per ton-mile would be extremely small. In the same way, the plane's "rate of work" - as expressed in ton-miles per hr at various ranges -would far exceed that of any other aircraft, it was said.

It was pointed out that development costs of the new ship have been borne by the B-36 and the XC-99, and relatively small expenditures would be required for additional research and development. It would also require a minimum of engineering man-hours, and delivery of the planes could start in a comparatively short time.

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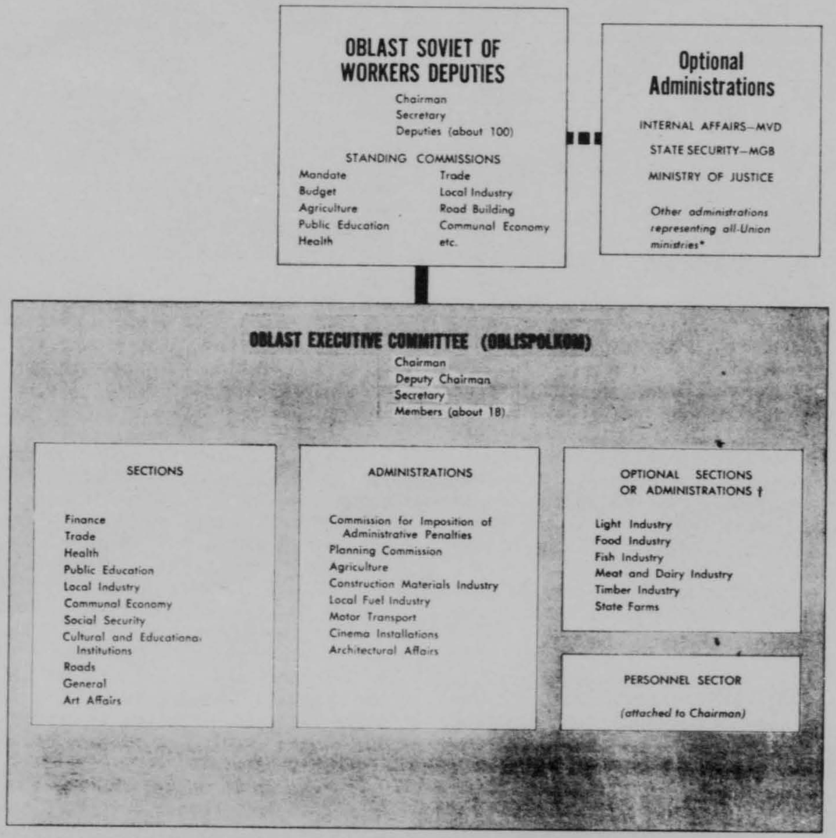
CHART 11

Typical Oblast Constitutional Government Apparatus

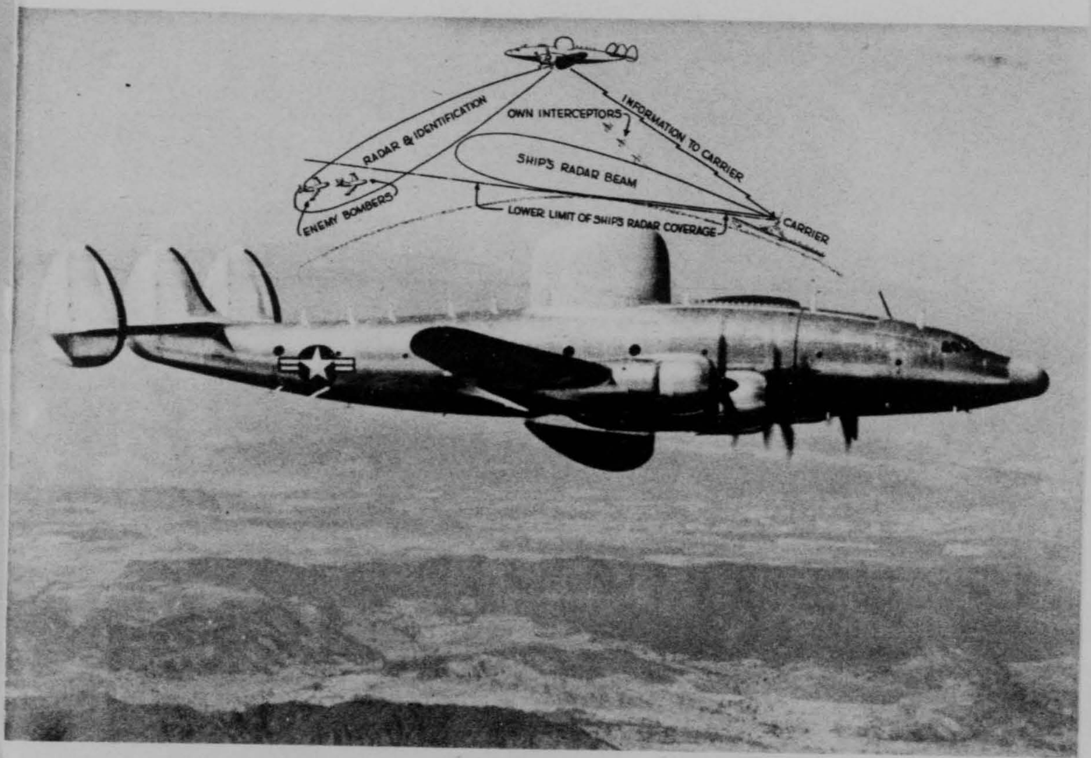

OBLAST SOVIET OF WORKERS DEPUTIES
Chairman
Secretary
Deputies (about 100)
STANDING COMMISSIONS
Mandate
Budget
Agriculture
Public Education
Health
Trade
Local Industry
Road Building
Communal Economy
etc.
Optional Administrations
INTERNAL AFFAIRS—MVD
STATE SECURITY—MGB
MINISTRY OF JUSTICE
Other administrations representing all-Union ministries*
OBLAST EXECUTIVE COMMITTEE (OBLISPOLKOM)
Chairman
Deputy Chairman
Secretary
Members (about 18)
SECTIONS
Finance
Trade
Health
Public Education
Local Industry
Communal Economy
Social Security
Cultural and Educational Institutions
Roads
General
Art Affairs
ADMINISTRATIONS
Commission for Imposition of Administrative Penalties
Planning Commission
Agriculture
Construction Materials Industry
Local Fuel Industry
Motor Transport
Cinema Installations
Architectural Affairs
OPTIONAL SECTIONS OR ADMINISTRATIONS †
Light Industry
Food Industry
Fish Industry
Meat and Dairy Industry
Timber Industry
State Farms
PERSONNEL SECTOR
(attached to Chairman)

* Formed by All-Union Ministries (28) as needed and attached loosely to Soviet.

† Formed by Oblast Soviet as needed but subject to approval of appropriate Ministry of the Union Republic.

The terms "Administration" and "Section" indicate difference in size, not in kind.

This is the eleventh of fourteen charts on USSR organization of Government and Communist Party.


RADAR & IDENTIFICATION
OWN INTERCEPTORS
INFORMATION TO CARRIER
SHIP'S RADAR BEAM
ENEMY BOMBERS
LOWER LIMIT OF SHIPS RADAR COVERAGE
CARRIER

PO-1W - NEW NAVY FLYING LAB

This specially modified Lockheed Constellation (one of two) is being used by the Navy to conduct extensive tests of airborne early-warning radar equipment and procedure. Ship-borne radar beams are limited to the optical horizon, because they do not bend with the curvature of the earth. With the high-altitude Constellation's radar beams reaching far beyond, valuable time is gained for launching interceptor fighters from ships or shore stations and for deployment of fleet units to meet aerial attacks. Designated by the Navy as the PO-1W, the Constellation can remain aloft for long periods on patrol missions from shore stations. Bunks are provided for relief of crew members. The flight characteristics of the modified Constellation are not materially affected by the bulky radomes visible on the top and bottom of the fuselage.

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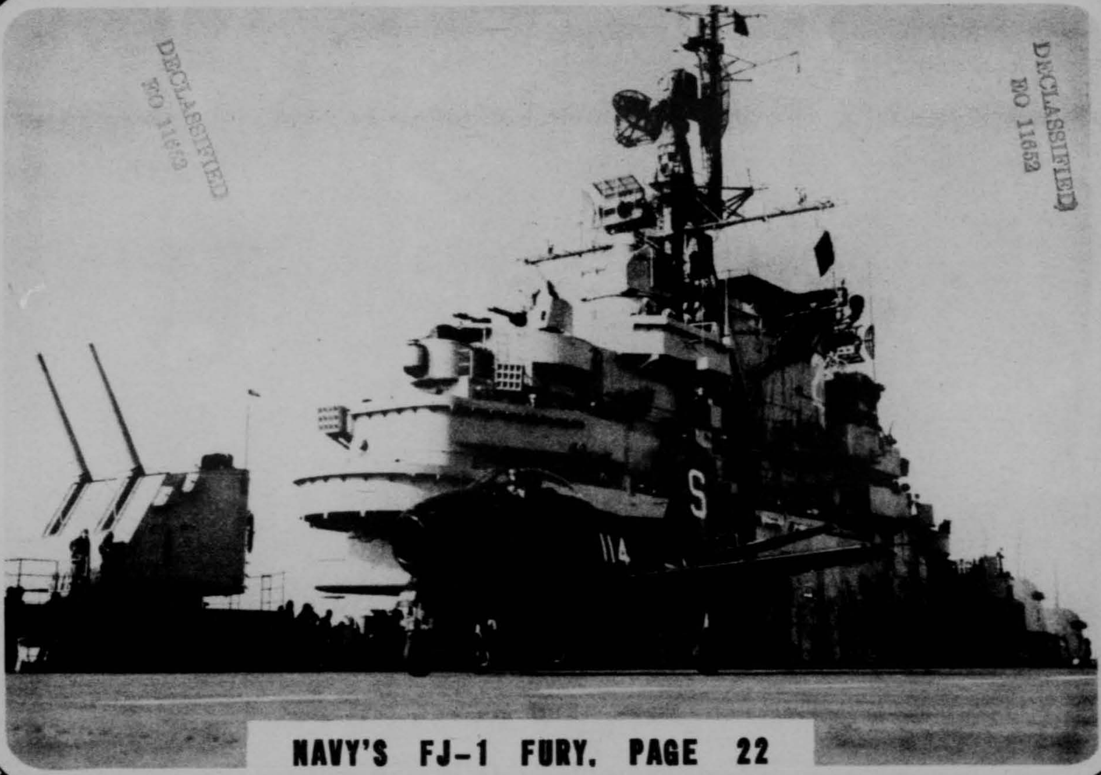

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1. Communism (Bd)
2. Weather (Bd)
3. Russian Armed Forces - Training (Bd)
4. Russian - Politics and Government

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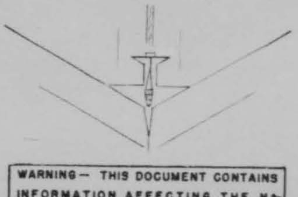

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2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

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COMMUNIST TACTICS AT AN INTERNATIONAL CONGRESS OF INTELLECTUALS

The political and psychological strains of the postwar period have given impetus to the convocation of international congresses of private individuals for the avowed purpose of exploring ways and means by which the people of the world can co-exist more amicably. A large sector of world public opinion, disappointed that the last war has not yet brought definite peace, views such congresses with a certain amount of hope and expectation that they will achieve concrete results related to their stated objectives.

This is particularly true in the case of gatherings of outstanding leaders in the realms of the arts and sciences. Ordinarily such persons can be expected to be aware of the actual problems involved in improving international relations and of the attempts already made to further international peace and security. Furthermore, such persons generally are considered to have a reasonably objective outlook, which should enable them to study problems and seek workable solutions without engaging in mere slander and abuse against any country or group.

Unfortunately, the first international gathering of intellectuals, which took place at Wroclaw(Breslau), Poland, in August 1948, did not accomplish anything constructive, much to the dismay of those well-intentioned individuals who attended it. Their hopes were blasted by the Communists, who arrived well prepared to harangue the Congress with the Soviet line regarding the culpability of the western democracies and the thwarted "peace efforts" of the Soviet Union. Because of the Communists' tactics, the meeting became a platform for Soviet propaganda rather than a conference for evolving objective proposals to improve relations between peoples.

The meeting, which was called the World Congress of Intellectuals in Defense of Peace, was in session between August 25 and 28, 1948. It was sponsored by a non-governmental committee of Polish intellectuals, generally oriented to the left, with the support of a similar group of French intellectuals.

The first public announcement of the projected congress appeared in May. Invitations were sent to over 500 intellectuals of all countries. Subsequently, it was announced that certain renowned intellectuals would attend, a fact which attracted many of the non-Communist participants who looked forward to the establishment of personal contacts and exchange of views with men prominent in public, artistic, and scientific life. A number of these outstanding

[redacted]

figures, however, did not attend.

The objectives of the Congress were announced by Jeroslav Iwaskiewcz, chairman of the Polish sponsoring group, to be (1) exploring means of safeguarding principles of peace, (2) examining the problem of national cultures, (3) discussing the possibilities of international popularization of achievements in the realms of science and art, and (4) unifying the efforts of representatives of the cultural world with progressive social movements.

It quickly became obvious that the gathering was not a balanced representation of international intellectuals, though, since invitations had been extended almost exclusively to individuals who were accustomed to support or give tacit approval to the Soviet position on various questions. Moreover, while non-Communists outnumbered party members in the delegations attending the Congress, each group had a core of purposeful Communist leaders, together with a large number of fellow-travelers. (The Polish organizing committee arranged for the comfort of all delegates. Transportation costs of Western delegates, as well as hotel, food and sightseeing expenses were defrayed by the committee.)

The technique employed in the election of officers insured Communist control of the meetings. After the welcoming speeches, the proposed executive council of the Congress and the rules governing the Congress were hurriedly approved by acclamation upon the motion of Maurice Bedel, chairman of the French organizing committee. The name of Jerzy Borejsza, one of Poland's ten leading Communists, was placed before the Congress and accepted for the post of Secretary-General, who by the rules of the Congress dictated the choice and order of speakers.

The first speaker, A. Fadeyev, Chairman of the Soviet Writers'Union, launched an abusive attack against the United States, its culture, and its people. In a speech characterized by flagrant misstatements and slander, he charged the British Labor government, as well as American leaders, with following Goebbels' policies. Fadeyev asserted that all the prominent leaders of real democratic cultures who are drawing inspiration from the country of socialism should unite and lead an unrelenting, active, effective fight against those that Stalin brands as enemies of mankind.

Having castigated the Western nations, he then eulogized the USSR, its sympathizers, and its allies.

Fadeyev's wrangling stunned a considerable portion of the audience, particularly members of the American and British delegations, several of whom submitted requests for the floor and stated their intention to quit the congress. But Fadeyev's invocation of the Party line, his castigation of the United States, his eulogies of the "achievements and beneficence" of the Soviet Union remained the dominant theme of the remaining sessions of the Congress.

Possibly feeling that they had overdone the attack on the Westerners in the opening speech, the Russians sought to mollify the feelings of those offended by Fadeyev when, the following morning, Ilya Ehrenburg delivered a much less emotional and derogatory address. This speech was tempered by such statements as "Far be it from me to give vent to any kind of undue patriotism; I know that there is much good in America, remarkable scientists, writers, architects," or "the triumph of boorish Thomases will never conceal from us the diligence, giftedness, and kindness of the American people". Nevertheless, he closely adhered to the Party line in regard to "American imperialism" and Soviet "love for peace".

This mollification was carried a step further when on the third day the Russians invited the Americans to a private lunch. However, the real intent of the Soviet representatives was made inescapably clear in the meeting the same afternoon. Tension reportedly continued to mount with the successive speeches, and Dr. Julian Huxley finally gained the floor to make a plea for the abandonment of recriminations. He expressed his distress at "the lack of mutual comprehension, even lack of mutual appreciation that has been shown here." He appealed to his colleagues of the Russian delegation that they recognize repressions and restrictions. Finally, Huxley expressed the hope that something constructive might be accomplished in the last hours of the Congress.

However, the Soviet participants obviously had no intention of seeking constructive, impartial results. David Zaslavski of the Soviet Union, obtaining the floor from Secretary-General Borejsza, responded to Huxley by denying that any restrictions exist within the USSR, and advised Huxley that he and his colleagues had come to talk, not about cultural matters, but about peace and war--and that they would do so.

Only a few dignified, constructive addresses were made during the congress. Most of the participants, following the lead of the Soviet representatives, railed against the United States and its "puppets" in other states. A notable exception was Allan J. Taylor of the UK, a former BBC commentator who had to resign his job because he was considered "too pro-Soviet". Condemning the intolerance and hatred evinced by Fadeyev, Taylor averred that ".....without intellectual freedom, without love, without tolerance, the intellectual cannot serve humanity."

Speaking in a similar vein, Dr. Bryan J. Hovde of the American group objectively admitted certain shortcomings of the United States, but pointed out the progress made in overcoming them. He then recounted many of the defects prevailing in the Soviet Union, which the Soviet representatives, whom he charged with warmongering, refused to acknowledge. In conclusion, he called for cooperation in effecting an eight-point constructive program for peace.

Apparently, the organizers of the Congress had prepared a resolution for presentation to the Congress and hoped that it would be passed by acclamation. However, this information leaked out, and several irate Western participants induced the organizers to draft a resolution in committee.

An international drafting committee selected by the executive committee and dominated by Secretary-General Borejsza, thereupon worked out a resolution to be placed before the Congress. A draft, originally prepared by Huxley and approved by Hovde, which emphasized the importance of the UN and UNESCO, was rejected by the committee in favor of Borejsza's resolution. Among other things, the draft specifically cited the United States as the "source of imperialistic warmongering" in the world. After much prolonged wrangling, the United States representative on the committee, with the support of the British, finally effected some changes in the wording of the condemnation, although the tone remained close to that of the Party line.

The final document, filled with platitudes designed to attract earnest liberals, in effect placed the responsibility for the absence of peace solely upon the West. Following Borejsza's announcement that the vote would not be considered final until the resolution was signed, it was accepted by a vote of 371 Ayes to 19 Nays and abstentions. To date the full list of signers of the document has not been made public.

The resolution accepted by the Congress called for the organization of "national congresses of cultural workers in defense of peace." The drafters, no doubt, envisaged a loose type of left-wing organization intended for political action and propaganda. Toward this end there was appointed a central permanent liaison committee, numbering 21 representatives from 13 countries. Of this group, nine are Communist Party members, four at least being on Central Committees;nine are ardent fellow-travelers, three possibly Party members;and two are probably fellow-travelers. Only one of the 21 is definitely neither a Communist nor a fellow-traveler.

It is notable that none of the dissenters to the Congress' resolution were named to the permanent committee despite the thoughtful and hopeful statement issued by the American dissenters:

> "We believe that the peace of the world can only be secured if leaders of opinion everywhere understand that liberty loving countries whose social, economic and political systems are widely divergent from each other nevertheless can and must live on the same earth in peace with each other, engaging in friendly relations of commercial and cultural intercourse..We hope, however, that under appropriate future auspices it may be possible to continue the discussion along the lines noted above."

The Communist attitude toward liberal views which do not coincide with the Party line was clearly manifested in an interview given the Polish press by Ilya Ehrenburg, in which he called the eminent dissenters "imbeciles and idiots."

This meeting of intellectuals was designed to attract a large number of non-Communists, and succeeded in associating with the Congress the names of many prominent individuals in the cultural and scientific world. The Congress itself was utilized by the Communists,spearheaded by Soviet delegates, as a platform from which they could denounce the West and laud the Soviet Union.

By means of Ehrenburg's mollifying speech,the general social affability and even an apparently conciliatory attitude in the drafting committee, Soviet representatives endeavored to retain the good will of the hopeful liberals. It has been suggested that in future congresses of this type, the Soviet representatives, having profited by these moderate tactics at Wroclaw, may well be more subtle on the theoretical level and less antagonistic in their relations with non-Communist delegates,without, however, deviating from the basic Party line.

The possibility is remote that any constructive measures can emanate from such congresses, whether national or international. The well-disciplined, dogmatic Communists can always be expected to utilize such meetings as sounding boards for their views. They are convinced that "Leninist-Stalinist theory....is the key to understanding the real causes of contemporary wars," and that".... as long as the capitalist system of world economy exists, the Soviet people must be ready for all contingencies." (A. Leontiev in *Pravda* October 28, 1946.)

Dr. Julian Huxley, Director-General of UNESCO, who had attended in a private capacity after being assured by Jerzy Borejsza that the Congress would be cultural in scope, dejectedly stated after the meeting:

> "This gathering of scientists, writers, and artists from many countries could have provided an opportunity for reconciling in the intellectual and cultural sphere what may broadly be called the eastern and western points of view. I can only express my regret that this opportunity was not taken.... The Congress from the outset took a political turn; there was no real discussion and the great majority of speeches were either strictly Marxist analyses of current trends, or else controversial attacks on American or western policy and culture."

Generally speaking, unofficial congresses, particularly those of intellectuals, women and youth, have demonstrated that a small core of hard-shelled Soviet Communists with definite objectives in mind dominate the group of well-intentioned and earnest delegates who are usually unorganized and without precise and concrete proposals. The Communist representatives, often in the guise of objective liberals, are fortified with a well defined program. The genuine liberals, even though constituting a majority, are usually equipped only with credulity and hope.

Non-Communist intellectuals who attend future meetings of this nature will be foredoomed to disillusionment and frustration unless they come prepared to compete with the Communists and understand the methods used by them.

They will be overwhelmed at the outset unless they insist that the organizing committee extend invitations to a genuinely representative group of outstanding figures in the fields covered by the meeting, without regard to their personal political views.

They will find it necessary to study in advance the parliamentary tactics used by Communists in past congresses, and to consult among themselves regarding the best means of coping with them. Communists achieve domination over such congresses by pushing through their agenda, their rules, and their chosen officials (especially the secretary-general of the meeting) without permitting delegates time either to object or to propose amendments or alternatives. Through foresight and persistence, Communists pack the very important drafting committee with individuals sympathetic to their cause. Working as an organized and well disciplined minority, Communists ride roughshod over the rules of the meeting unless firmly held in check by others who insistently invoke the rules. At Wroclaw, Fadeyev spoke for 50 minutes beyond the 10-minute limit, and Ehrenburg, when requested to yield the floor after 20 minutes, appealed to the audience and continued for another 20 minutes. By steam-roller tactics, Communists attempt to obtain concurrence on resolutions which either blatantly or subtly condemn semi-factual or fictitious abuses in the systems of the Western democracies, while completely ignoring the notorious abuses tolerated or even encouraged by the Soviet Government and its satellites.

Non-Communist participants will find themselves overwhelmed by these Communist tactics of attack and diversion unless they carefully prepare in advance a positive and concrete program and press it forward with organized and energetic methods.

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Subversive ORGANIZATIONS AND PUBLICATIONS

The following listed organizations and publications, cited by the House Un-American Activities Committee, are but a few of the proclaimed Communist enterprises which exist in the United States today.

Many people have been duped into joining or supporting these activities without realizing their true character. U.S. citizens would do well to thoroughly investigate before joining or supporting organizations having the words "progressive", "people's", "democratic", "democracy", or "youth" as a part of its name, as these words are frequently used by Communists in the names of many front organizations. Anyone belonging to, supporting, or having knowledge of the members or activities of these organizations will render their country a great service by reporting such information to the proper authorities.

COMMUNIST FRONT

The committee has defined a Communist front as an organization or publication created or captured by the Communists to do the party's work in special fields. Since Communists will not admit their control of a front, it takes them among people who would never willingly act as party agents. It is Communism's greatest weapon in the country today.

COMMUNIST ENTERPRISE

By "outright" Communist enterprises, the committee refers to organizations such as the Communist Party USA, the domination of which by the Stalinists is not disguised. A glance at the compilation will show that organizations of this character are relatively few when compared to the hundreds of fronts that have been set up by the Communist party.

TEN "DON'TS" BY J. EDGAR HOOVER

We can successfully defeat the Communist attempt to capture the United States by fighting it with truth and justice, implemented with a few "don'ts":

Don't label anyone as a Communist unless you have the facts.

Don't confuse liberals and progressives with Communists.

Don't take the law into your own hands. If Communists violate the law, report such facts to your law-enforcement agency.

Don't be a party to the violation of the civil rights of anyone. When this is done, you are playing directly into the hands of the Communists.

Don't let up on the fight against real Fascists, the KKK, and other dangerous groups.

Don't let Communists in your organization or labor union out-work, out-vote, or out-number you.

Don't be hoodwinked by Communist propaganda that says one thing but means destruction of the American Way of Life. Expose it with the truth.

Don't give aid and comfort to the Communist cause by joining front organizations, contributing to their campaign chests, or championing their cause in any way, shape, or form.

Don't let Communists infiltrate into our schools, churches, and molders of public opinion, the press, radio, and screen.

Don't fail to make democracy work with equal opportunity and the fullest enjoyment of every American's right to life, liberty, and the pursuit of happiness.

ABOLISH PEONAGE COMMITTEE
Recently reconstituted by the Communist front, the Civil Rights Congress.

ABRAHAM LINCOLN SCHOOL
Cited as a "Communist institution."

ACADEMIC AND CIVIL RIGHTS COMMITTEE
A "completely Communist created and controlled organization."

ACADEMIC AND CIVIL RIGHTS COUNCIL OF CALIFORNIA
A "Communist transmission belt."

ACTORS' LABORATORY
A "Communist venture."

ACTORS' LABORATORY THEATRE
A "red front * * * * also referred to as the Hollywood Actors' Laboratory School."

ALL-AMERICAN ANTI-IMPERIALIST LEAGUE
Cited as a "Communist-front organization."

ALL-CALIFORNIA CONFERENCE FOR DEFENSE OF CIVIL RIGHTS AND AID TO LABOR'S PRISONERS
Cited as a Communist front and a subsidiary of the International Labor Defense.

ALL HARLEM YOUTH CONFERENCE
"Nothing more plainly reveals the fraud and dishonesty of the Communists than the sinister stirring of antagonisms of one racial group against another. * * *Among the more conspicuous Communist-front groups in the Racial * * *subclassification * * * is All Harlem Youth Conference."

ALLIED LABOR NEWS SERVICE
"The Communist influence is established through such news services. * * *"

ALLIED VOTERS AGAINST COUDERT
Cited as a Communist front.

ALMANAC SINGERS
"Communist entertainers."

AMERICAN ARTISTS CONGRESS
"Typical of * * * Communist created and controlled organizations."

AMERICAN ASSOCIATION OF SCIENTIFIC WORKERS
"Included among the Communist fronts represented" at the Win the Peace Conference in Washington, D. C., April 5-7, 1946.

AMERICAN COMMITTEE FOR A FREE INDONESIA (See American Committee for Indonesian Independence)

AMERICAN COMMITTEE FOR A KOREAN PEOPLE'S PARTY
"This is just one of many Communist fronts for the purpose of protesting American policy in Korea and creating pressure for the recall of American occupation forces from that country."

AMERICAN COMMITTEE FOR ANTI-NAZI LITERATURE
Cited as a Communist front.

AMERICAN COMMITTEE FOR DEMOCRACY AND INTELLECTUAL FREEDOM
Cited as a Communist front which defended communistic teachers.

AMERICAN COMMITTEE FOR FRIENDSHIP WITH THE SOVIET UNION
"Typical of the completely Communist created and controlled organizations in the * * * civic committee field."

AMERICAN COMMITTEE FOR INDONESIAN INDEPENDENCE
"This front was organized to create support for the Indonesian revolution. The national headquarters is at 23 West Twenty-sixth Street in New York City. * * * Stemming from this red front are several subsidiary committees, such as the American Committee for a Free Indonesia, Los Angeles, and the American Committee for a Free Indonesia, San Francisco."

AMERICAN COMMITTEE FOR RUSSIAN FAMINE RELIEF
Cited as a Communist front.

AMERICAN COMMITTEE FOR STRUGGLE AGAINST WAR
"Among the more conspicuous Communist fronts that have defied brazenly the interests of the United States and other freedom loving nations whenever they have beenin conflict with the interests of Soviet Russia and world Communism."

AMERICAN COMMITTEE OF JEWISH WRITERS, ARTISTS, AND SCIENTISTS
"Among the Communist-front organizations for racial agitation" which also serve as "money collecting media" and "as special political organizing centers for the racial minority they pretend to champion."

AMERICAN COMMITTEE OF LIBERALS FOR THE FREEDOM OF MOONEY AND BILLINGS
Cited as a Communist front.

AMERICAN COMMITTEE TO AID KOREAN FEDERATION OF TRADE UNIONS
Cited as a Communist front "for the purpose of protesting American policy in Korea and creating pressure for the recall of American occupation forces from that country."

AMERICAN COMMITTEE TO AID SOVIET RUSSIA
"One of the many Communist-front organizations for propagandizing in behalf of the Soviet Union.* * *It appears to be active in Los Angeles County."

AMERICAN COMMITTEE TO SAVE REFUGEES
"A Communist front operating in the Communist-refugee field." It merged in March 1942 into the Joint Anti-Fascist Refugee Committee, which has only shown interest in Communist refugees.

AMERICAN CONGRESS FOR PEACE AND DEMOCRACY
Cited as "among the more conspicuous Communist fronts that have defied brazenly the interests of the United States and other freedom-loving nations whenever they have been in conflict with the interests of Soviet Russia and world Communism."

AMERICAN CONGRESS TO FREE EARL BROWDER
Cited as an organization"noted" for"pro-Soviet and pro-Communists tendencies."

AMERICAN COUNCIL, INSTITUTE OF PACIFIC RELATIONS
Cited as a Communist front which received funds from the American People's Fund, another front organized and directed by Frederick V. Field as a repository for funds to be distributed to Communist enterprises.

AMERICAN FEDERATED RUSSIAN FAMINE RELIEF COMMITTEE
Cited as a Communist front.

AMERICAN FEDERATION FOR POLITICAL UNITY
Cited as a Communist front.

AMERICAN FEDERATION OF LABOR TRADE UNION COMMITTEE FOR UNEMPLOYMENT INSURANCE AND RELIEF
Among organizations, created or controlled by the Communist Party or part of a united front with the party,which supported the First United States Congress Against War in 1933. The congress was openly led by Communists.

AMERICAN FRIENDS OF CZECHOSLOVAKIA
"This front organization became active in June 1944. Its headquarters is located at 8 West Fortieth Street in New York City, and the organization is under the leadership of William J. Schieffelin."

AMERICAN FRIENDS OF SPANISH DEMOCRACY
"Front groups continually raise huge sums of money in this country" in behalf of "Communist Parties and their front groups in nations not yet dominated by the Communist dictatorship.* * *Among the more conspicuous fronts in this subclassification are* * *American Friends of Spanish Democracy."

AMERICAN FRIENDS OF THE CHINESE PEOPLE
Cited as a Communist front.

AMERICAN FRIENDS OF THE MEXICAN PEOPLE
A "completely Communist created and controlled organization."

AMERICAN FRIENDS OF THE SPANISH PEOPLE
A "completely Communist created and controlled organization."

AMERICAN FUND FOR PUBLIC SERVICE (Garland Fund)
"Contributed more than $1,500,000, all to the furtherance and support of left-wing and Marxist projects. * * * *Had as its trustees the leaders of the Communist Party in America."

AMERICAN INVESTORS UNION, INC.
Cited as a Communist front.

AMERICAN LABOR ALLIANCE

The Communist Party, when operating underground in 1921, established the American Labor Alliance as "its open, legal expression."

AMERICAN LABOR COMMITTEE AGAINST WAR

An organization "noted" for "pro-Soviet and pro-Communist tendencies."

AMERICAN LABOR PARTY

Among "organizations that are victims of Communist domination."

AMERICAN LEAGUE OF EX-SERVICEMEN

Cited as a Communist front.

AMERICAN PEOPLE'S FUND

Organized and directed by Frederick Vanderbilt Field "As a repository for funds to be distributed to Communist enterprises." This "Communist financial organization has paid out large sums of money to* * * Communist and Communist-front organizations" such as National Council of American-Soviet Friendship, Allied Labor News, American Russian Institute, American Committee for Protection of Foreign Born, Joint Anti-Fascist Refugee Committee.

AMERICAN PEOPLE'S MOBILIZATION

"Immediately after Hitler's invasion of Russia, the American Peace Mobilization changed its name to the American People's Mobilization, and reversed all its former positions in exact accordance with the changes which Hitler's invasion of the Soviet Union occasioned in the line of the Communist Party."

AMERICAN PUSHKIN COMMITTEE

Cited as a Communist front.

AMERICAN RELIEF FOR GREEK DEMOCRACY

"The headquarters of this Communist front is located at 111 West Forty-Second Street in New York City. * * *Eighteen of the sponsors of the American Relief for Greek Democracy are either directors or sponsors of the National Council of American-Soviet Friendship."

AMERICAN RELIEF SHIP FOR SPAIN

Cited as "one of the several Communist Party front enterprises which raised funds for Loyalist Spain (or rather raised funds for the Communist end of that civil war)."

AMERICAN ROUND TABLE ON INDIA

"A Communist front headed by Robert Norton, a well-known member of the Communist Party."

AMERICAN RUSSIAN INSTITUTE FOR CULTURAL RELATIONS WITH THE SOVIET UNION

" A direct agent of the Soviet Union, engaged in traitorous activities under the orders of Stalin's consular service in the United States* *Founded in 1926 * * * *the semi-official status of the American Russian Institute is established * * *"Cited as "a Communist organization supported by 'intellectuals.'"

AMERICAN-RUSSIAN MUSIC CORPORATION

Cited as a Communist front.

AMERICAN SOCIETY FOR CULTURAL RELATIONS WITH RUSSIA
Cited as a Communist front.

AMERICAN SOCIETY FOR TECHNICAL AID TO SPANISH DEMOCRACY
Cited as a Communist front.

AMERICAN-SOVIET MUSIC SOCIETY
An affiliate of the National Council of American-Soviet Friendship.

AMERICAN-SOVIET SCIENCE SOCIETY
An affiliate of the National Council of American-Soviet Friendship.

AMERICAN STUDENT UNION
Cited as a Communist front which was "the result of a United front gathering of young Socialists and Communists" in 1937. The Young Communist League took credit for creation of the above, and the Union offered free trips to Russia. Claims to have led as many as 500,000 students out in annual April 22nd strikes in the United States.

AMERICAN TECHNICAL AID SOCIETY
Cited as an affiliate of the Friends of the Soviet Union.

AMERICAN WRITERS CONGRESS
"Communists regard the infiltration, manipulation, and control of artistic and cultural media as one of the indispensable phases of their program of revolution. * * *Such intellectual sabotage provides a fundamental weapon in talent and material for the Red propaganda attack on American institutions; and it provides celebrities and funds to be used for the promotion of Communist causes and programs. * * * * Typical of Communist-front organizations in this classification* * *".

AMERICAN YOUTH FOR A FREE WORLD
"Heavily infiltrated and effectively dominated by the Communist Party* * * * a successor to the Communist-influenced American Youth Congress. American Youth for a Free World was linked directly to the international Communist dominated youth organization, World Youth Council, with headquarters in London, England."

APPEAL FOR LAWRENCE SIMPSON
Cited as a Communist front.

ARTEF
Cited as a Communist theatrical front.

ARTISTS AND WRITERS GUILD
"Among the ERA and WPA workers, Communists organized" the above.

ARTISTS' FRONT TO WIN THE WAR
A "Communist organization" which "grew out of a mass meeting at Carnegie Hall in New York City on October 16, 1942."

ASSOCIATED MAGAZINE CONTRIBUTORS
"The Communist influence is established through such news services."

ASSOCIATED NATIONAL BOOKSHOPS
Advertised by Communists as outlets in various cities for Communist books, pamphlets, and magazines.

ASSOCIATION OF LITHUANIAN WORKERS
Cited as a "foreign-language Marxist organization" serving as a "satellite" to the Communist Party of Massachusetts.

BEN LEIDER MEMORIAL FUND
"The Communist Party periodically stages rallies, banquets, fund drives, and other celebrations in honor of important anniversaries of leading Communists, front organizations, party publications, and Soviet anniversaries.* * * *Among typical examples of such Communist activities are: Ben Leider Memorial Fund.*"

BOOK FIND CLUB
Cited as a Communist front.

BOOK UNION
"Distributors of Communist literature."

BOSTON SCHOOL OF SOCIAL SCIENCE
"Lectures, study classes, schools, and 'progressive' organizations were promoted with Soviet Russia the subject of glorification and Marxian economics the subject of teaching. Among these activities were the following: The Boston School of Social Science grew, financially supported by the Garland Fund, which had as its trustees the leaders of the Communist Party in America.* * *"

BRONX VICTORY LABOR COMMITTEE
Cited as a Communist front.

CALIFORNIA COMMITTEE FOR POLITICAL UNITY
Cited as a Communist front.

CALIFORNIA CONFERENCE FOR DEMOCRATIC ACTION
Cited as a Communist front.

CALIFORNIA LEGISLATIVE CONFERENCE
"This Communist front is variably called by the number of its meetings." It is a Communist front "in the fields of politics and legislation." It is one of the "basic" fronts in a "coalition" of organizations under the banner of the third party movement to elect Henry Wallace as president.

CALIFORNIA YOUTH LEGISLATURE
Cited as a Communist-front organization which took part in a mass meeting in Los Angeles on June 8, 1940, under the sponsorship of the American Peace Crusade, a Communist creation for the purpose of putting the terms of the Stalin-Hitler pact into effect in the United States.

CAMP ARCADIA
Cited as an American Youth for Democracy camp.

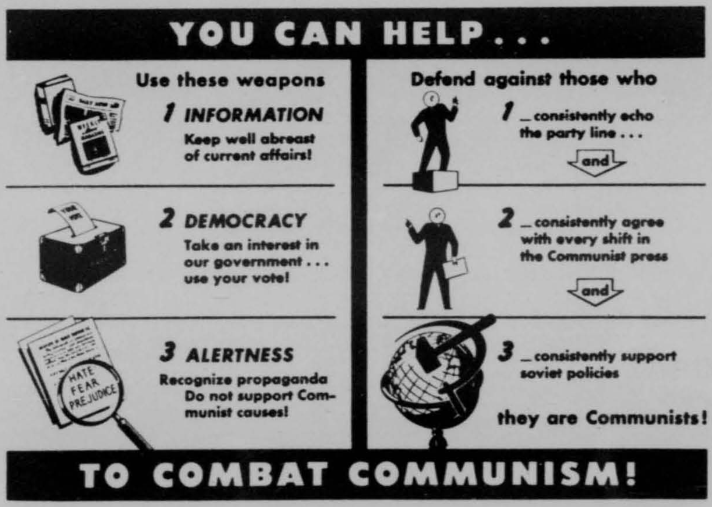
CENTRAL COUNCIL OF AMERICAN WOMEN OF CROATIAN DESCENT

Cited as subversive and Communist. It is also known as Central Council of American Croatian Women or National Council of Croatian Women.

CHELSEA JEWISH CHILDREN'S SCHOOL (MASS)
"A place where Marxism is combined with instruction in the racial tongue."

CHINA AID COUNCIL
Cited as a Communist front and a subsidiary organization of the American League for Peace and Democracy.

CITIZENS' COMMITTEE FOR BETTER EDUCATION
Cited as a Communist front in Los Angeles whose "chief activity" has been the support of extreme leftists for election to the Los Angeles Board of Education. Uses "the Communist Party's mailing list for Los Angeles County."


YOU CAN HELP...
Use these weapons
1 INFORMATION
Keep well abreast of current affairs!
2 DEMOCRACY
Take an interest in our government... use your vote!
3 ALERTNESS
Recognize propaganda Do not support Communist causes!
HATE
FEAR
PREJUDICE
Defend against those who
1 _ consistently echo the party line...
and
2 _ consistently agree with every shift in the Communist press
and
3 _ consistently support soviet policies
they are Communists!
TO COMBAT COMMUNISM!

WEATHER AND AIR OPERATIONS

The importance of short and long range weather predictions cannot be over-estimated in planning and carrying out strategic and tactical air operations. This is particularly true where rapidly changing weather is characteristic of an area of operations throughout the year.

If there were no seasonal changes and the earth's surface were smooth and uniform, the atmospheric pressure zones and the air circulation of the world would be as shown in Chart AU 50a, "USAF Generalized Diagram of Atmospheric Pressure Zones and World Air Movements". (see folded map insert.)

In addition to the alignment of mountain ranges and the distribution of high plateaus and hill lands, climate is one of the most important natural factors influencing the use of land by man. The climatic conditions depicted on charts GH 10a and 11a are mean indications of prevailing winds and high and low pressure areas. These areas are enclosed by isobars which are lines drawn upon the earth's surface through places where the height of the barometer reduced to sea level is the same. These averages, when applied to weather prognostication, play an important part in strategic and tactical operations, both short and long range.

In comparing the 10a and 11a charts it is noted that in the area over the Atlantic Ocean and Europe, isobar configurations in latitudes from 45° northward lack any similarity. Likewise, the variations in the high and low pressure areas are evident in Eastern Asia and over the North Pacific Ocean. In these areas significant and frequent weather changes occur throughout the year in latitudes from 35° northward. In most parts of the world, weather has a distinct seasonal variation.

There are numerous examples in which carefully evaluated weather played a vital role in developing military operational plans.

The Japanese, on 7 December 1941, utilized aircraft carriers concealed within an extensive storm zone which was moving rapidly eastward. This enabled the attack on Pearl Harbor to be launched from relatively short range immediately after the weather cleared. This maneuver had been thoroughly planned and practiced.

In the Greek campaign of 1940, the Italians attempted to copy the strategy and tactics of the German Panzer Divisions. Their failure to recognize the significance of heavy seasonal rains in conjunction with the launching of their campaign resulted in their inability to subdue the Greeks.

In 1942 the German battleships "Gneisnau" and "Scharnhorst" escaped northward through the English Channel and the Straits of Dover under a protective cloud cover. This occurred within the reach of Allied land based aircraft, but weather conditions, i.e., cloud cover, icing conditions and poor visibility, proved an effective screen.

The detailed weather study undertaken in planning this operation is perhaps typical yet enlightening. Its successful execution was so dependent upon a precise knowledge of the particular weather conditions that its timing could hardly be regarded as fortuitous.

Meteorologists on the German General Staff advised their leaders that February would be a suitable month for this escape from Brest. The success of the maneuver depended upon an accurate forecast, and its timing with a weather condition that lasted for no more than six or eight hours. This required a knowledge of the normal weather characteristics in the English Channel (indicating the frequency with which the desired weather conditions occurred,together with an understanding of the sequence of conditions leading up to such a development). Both elements were obtained from a careful study of a catalogued file of daily weather charts. Results proved that February was the most favorable month for the frequent occurrence of moving air mass boundaries, called fronts (a passage of a trough of relatively low atmospheric pressure accompanying the boundary of separation between cold polar air from the Atlantic Ocean and somewhat warmer types of air lying to the East and South). These fronts were accompanied by low ceilings and poor visibility,precipitation, and a high probability of conditions favoring the icing of aircraft in the clouds. It was discovered that the various weather types, characteristic of that region, exhibited an approximate six-day cycle regardless of season. Further, moving troughs or fronts crossed the English Channel, almost invariably, early during the fourth day.

The conclusion drawn was that between February 10th and 12th there was a high probability of a repetition of the desired weather conditions. This was predicted upon the results of a study of the dates of recurrence of like conditions during the month of February for the years 1935-1939.

February, 1935:	6th and 12th
February, 1936:	11th and 13th 17th and 18th, 23rd
February, 1938:	10th and 28th
February, 1939:	10th and 11th, 16th, 22nd 28th

These dates were separated by approximately six days or a multiple thereof in each case and the period between the 10th and 12th appeared in all five years.

The ships left Brest on the night of February 11,1942 and moved through the English Channel on February 12, 1942, successfully evading opposing forces under cloud cover.

Knowledge of the methods for rapid identification of past weather situations, coupled with the ability to plan an action requiring an accurate prediction of specified weather conditions six to seven days in advance, is of great value in coordinating the striking power of land, sea and air forces, either separately or under a unified command. Similarly, with a thorough foreknowledge of the weather, planners can accurately anticipate the periods when attack is possible and thus can be prepared.

In some instances weather types peculiar to the region will dictate the time for attack, tactics to be employed, and the type of equipment to be used. Both offensive and defensive plans should be developed to allow flexibility in the use of forces in order to permit taking full advantage of a specific weather condition.

Future commanders and staff officers will have improved weather advice. The better their understanding of weather, the sounder their tactical decisions will become.

There are four types of weather facilities which are of primary concern to tactical units:

a. The base weather station provides forecasting and observing service directly to using agencies on air force bases and performs staff weather and briefing duty.

b. The weather control (or weather office) serves a number of base weather stations over a large area, provides a long range forecast (over forty-eight hours), forecasts for long distance flights, prepares routine weather maps, weather analysis, and weather forecasts.

c. Mobile weather units provide the services of a base weather station, but they are able to move with highly mobile air force or army organizations. They provide weather service at beachheads, airheads and other locations where fixed facilities are not feasible.

d. The weather reconnaissance squadron supplements normal surface observing facilities. It also provides (in peacetime) tropical storm reconnaissance and conducts research projects. It performs weather observing service for the support of military operations in and over enemy territory. Weather reconnaissance will probably become increasingly important in a future war because of the expected increase in long-range strategic bombardment operations.

Weather information is obtained by commanders from the staff weather officer who is also responsible for presenting weather information to crews at mission briefings. The intelligence officer, in his interrogation of returning crews, inquires as to general route weather conditions to assist himin preparing the intelligence reports.

In joint air-ground operations, weather affects the ground and air units differently. Low ceilings and poor visibilities which may severely limit air operations may be of no concern to ground units whereas mud, floods and cold, which hamper surface operations, will have little effect on the air units. There must be a mutual understanding of the weather problem by the air units and the ground units to insure the fullest cooperation.

Weather can be a major problem in, and always exerts an influence on, planning and conducting military operations. The wise commander will know the weather characteristics of his area of operations and use them to his advantage.

Dir. of Int., ConAC Rest

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To have the courage to make a command decision, sometimes against the advice of others, will require integrity of character, self-confidence, and the willingness to take a chance. Few military decisions are made without a calculated risk. Only you, weighing the mission, the situation, and your people, can make such decisions. And you must make them, difficult as they may be. Should you vacillate when the moment requires a decision, your well-knit unit will degenerate into an aimless crowd.

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THE BOOK SHELF

RECOMMENDED READING FOR YOUR OFF DUTY HOURS

TITLE: The Atmosphere and its Characteristics

SOURCE: Aeroplane 18 November 49 pp 672-73; illus.

ADDRESS: Aeroplane, Bowling Green-Lane, London, E. C. 1, England.

The Earth's atmosphere is currently defined as consisting of four concentric gaseous layers, the troposphere, stratosphere, ionosphere, and exosphere. These layers provide a gradual transition from the atmospheric characteristics as we know them at sea level to where the exosphere merges with interplanetary space. Vertical pressure distribution increases constantly with increasing height. The troposphere extends from sea level to about 35,000 ft. at middle latitudes, but the height varies from 54,000 ft at the equator to 28,000 ft at the poles. Temperature in the troposphere steadily decreases with increasing height. In the stratosphere the temperature is at first constant, then increases to a maximum in the ozone layer. The pattern of the atmospheric winds is not completely understood. Evidence shows extremely high winds at present in the stratosphere and ionosphere. The comparatively small distances to which man has explored the atmosphere are compiled in a chart. Only representative average values are given because atmospheric characteristics vary with time of day, latitude, and season. The greatest height so far attained is that of not quite 14 miles, reached by Anderson and Stevens in 1935.

CADO 1 Feb 50 Uncl

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TITLE: Aircraft Proximity Indicator

AUTHOR: C. Adler, Jr.

SOURCE: Avia. Ops. Sep '49, (12-3 Mthly); pp 42-43; illus.

ADDRESS: Aviation Operations
Conover-Mast Corp.
205 East 42nd Street
New York 17, N.Y.

The growing volume of air traffic has increased the danger of mid-air collisions. An aircraft proximity indicator device is therefore proposed to warn the pilot of his nearness to other aircraft. A sketch is presented showing how the two horn antennas installed in the nose of an airplane would receive impulses from aircraft approaching from the left and right and would afford an overlapping coverage forward. Flashing lights in the cockpit would give the relative position of the approaching plane. Sketches also show how the pilots would turn their aircraft in accordance with the signals of their proximity indicators. The range of the indicator is to be variable from the immediate vicinity to 20 miles.

CADO 1 Nov 49 Uncl

Standard of
IDEOLOGICAL TRAINING OF SOVIET TROOPS

SOVIET AGITATION AND PROPAGANDA STRESSED

In an article in "Red Star", Colonel-General F. Kuznetsov, indicates that emphasis on the political training of service personnel is stressed in order to achieve the highest level of Marxist-Leninist indoctrination. The following is extracted from that article:

"On the initiative and instructions of Stalin, the Central Committee of the CPSU has handed down a number of important decisions on questions of ideological work in recent years. These decisions deal with the necessity to educate the Russian people in the spirit of Soviet patriotism and devotion to the interests of the Socialist state; in the spirit of inflexible will and the capacity to oppose any perfidious method of the foreign intelligence services; in the spirit of readiness in any conditions and at any price to defend the interests and honor of the Soviet State.

"This demand applies wholly and fully to the political bodies and party organizations of the Soviet Army, Navy, and Air Force.

"The successful solution of this immensely important problem is only possible on condition that military cadres are armed with Marxist-Leninist theory, that the political education of the personnel of units, formations and ships is skillfully organized."

PROPAGANDA AND AGITATION

"Bolshevik propaganda and agitation is a most important component part of ideological work. On its organization and scope depends the success of all political-educational work in the armed forces. For this reason, commanders, political bodies, and party organizations must give their rooted attention to all forms of propaganda and agitation.

"The study of Marxist-Leninist training has recently been carried out in a better organized way in the majority of units and formations with the result that their ideological level has been raised.

"The majority of officers,generals and admirals last year finished the study of 'The Short Course of History of the CPSU' and began the study of revolutionary theory in other works of the classical writers of Marxism-Leninism. During the current year, a certain improvement has also been achieved in propaganda by lectures - the scope has been widened and the subjects have become more urgent.

"The increase in the standard of Marxist-Leninist education among officers has brought about an improvement in their service activities as well as in the training and instructions of the troops under their command."

UNINTERRUPTED CAMPAIGNISM A NECESSITY

"Every study of Marxist-Leninist training should be planned so that: it educates people in the spirit of Soviet patriotism and in hatred of the enemies of our Motherland; it reveals to its hearers the whole greatness of the socialist system and its advantages over the capitalist system. An increase in the officer's Communist awareness and the improvement of his work in training and instructing the men under his command must be the result of this theoretical instruction. The Marxist-Leninist training of officer cadres is a most important link in the whole of our propaganda. On the successful solution of this problem depends nine-tenths of the fulfilment of all the tasks in the field of the ideological-political education of the personnel of units and ships.

"In the system of Party-political work, an important place belongs to mass political agitation among the personnel of our Armed Forces. Political information, reports, conversational meetings, assemblies, pictorial propaganda and all other forms of mass agitational work are called upon to give considerable assistance to the command in the solution of the problems which face ships and army units.

"One of the most important defects in agitational work is campaignism. Some of our comrades forget that the value of Bolshevik agitation lies not only in its high principles and mass nature but in permanence, and its uninterruptedness.

"Agitation has occupied and still occupies a most important place in the day-to-day activities of military-political organs and Party organizations. Discussions on stirring themes of the day and collective readings of the most important newspaper material plus local broadcasting and various forms of visual agitation have entered firmly into the life of men of the service, expanding their outlook and developing their patriotic consciousness. The Bolshevik agitator has become the closest friend and advisor of soldiers, sailors and airmen.

"The strength of our political agitation lies in its truthfulness and high principles; in its Bolshevik belligerence. It not only discloses the meaning of the events which are taking place and explains the latest measures taken by the Soviet state in the problems put forward by the Party, but it also mobilizes the masses to carry them through.

"The agitator must have the ability to coordinate organically the concrete tasks of military and political training on board ship or in a unit with the nation-wide tasks and with the nation-wide struggle for the further consolidation of the economic and military might of our Motherland.

"Soviet reality provides agitators with a great amount of material for developing the Soviet National pride, and with the opportunity for creative initiative in military matters.

"Our Bolshevik agitation is called upon to show by clear and convincing facts the immeasurable superiority of the Soviet society over the corrupt ideology and morality of the imperialist bourgeoisie. In ships and units discussions are regularly held on events abroad, but unfortunately the explanation of international events does not always reveal the true rapacious nature of present-day imperialism. Meanwhile, the teaching of hatred of imperialism and its servants is a primary task of our agitational propagandist work. Accurate and ardent Bolshevik speech unmasking the aggressive policy of the warmongers serves as a mighty weapon in educating in the spirit of burning hatred and contempt for the imperialist bourgeoisie."

I/D ConAC UNCL

ITEMS OF INTEREST

MATS WORLD-WIDE AIR RESCUE SERVICE

Washington (AFPS) - The Military Air Transport Service recently announced reorganization of its world-wide Air Rescue Service and the establishment of a unit in Germany.

The Air Rescue Service performs search and rescue service for both military and civilian airmen and aircraft lost in remote areas. It has about 3,700 Air Force officers and men assigned to this duty and more than 350 planes and helicopters available for service.

Under the reorganization, there will be seven rescue squadrons, each with four rescue flights, and one under the Alaskan Air Command.

The new squadron in Germany, the first to be established in Europe, will be based at Weisbaden with three existing flights being attached to it.

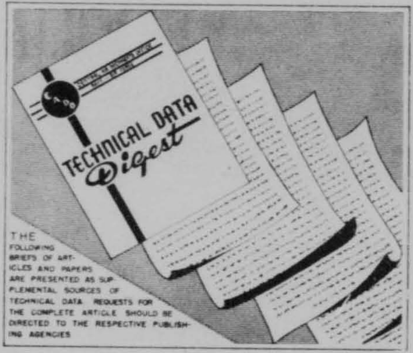
USAF ESTABLISHES SPECIAL WEAPONS COMMAND

The U.S. Air Force recently changed the designation of the Field Office for Atomic Energy, located at Kirtland Air Force Base, Albuquerque, New Mexico, to the Air Force Special Weapons Command.

The new organization assumed command status and is responsible for the service and development testing, within the field of Air Force interest and responsibility, of equipment and techniques relating to atomic energy.

No transfers of personnel, either military or civilian, to or from Kirtland AFB, resulted from the changed designation of the unit. Existing facilities will be used by the new organization.

Commanding General of the Special Weapons Center is Brigadier General Howard G. Bunker, formerly CG of the Field Office for Atomic Energy.



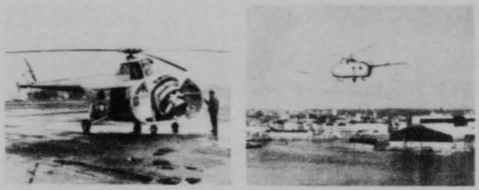
THE FOLLOWING BRIEFS OF ARTICLES AND PAPERS ARE PRESENTED AS SUPPLEMENTAL SOURCES OF TECHNICAL DATA. REQUESTS FOR THE COMPLETE ARTICLE SHOULD BE DIRECTED TO THE RESPECTIVE PUBLISHING AGENCIES

TITLE: Storm Snoopers Part II
AUTHOR: W. Marsh
SOURCE: Boeing Magazine July'49 (19-7 Mthly); pp-12-14; illus.
ADDRESS: Boeing Magazine
7755 East Marginal
Seattle, Washington

The Air Weather Service, now a firmly-established part of the Air Force, has, in effect, set up reliable weather-observation facilities where no weather stations of any kind existed before. The most important function of the present weather reconnaissance-flying squadrons is to provide a complete picture of daily weather movement in their operating zones. The 375th Reconnaissance squadron, based at Eielson AFB near Fairbanks, Alaska, and the 514 Reconnaissance Squadron, based at Harmon AFB, Guam, have saved many lives by tracking an approaching hurricane or typhoon and sounding the warning. By following a typhoon, the weather-reconnaissance crews can observe its intensity and direction of movement and issue warnings to ships and planes and to residents of land areas in its path.

CADO 1 Sept. 49 Uncl

COVER PHOTO



H-19 HELICOPTER

Newest entry into the Helicopter Field is the U.S. Air Force's 12-place Sikorsky H-19. It was designed especially for search, rescue and liaison purposes. The 'copter carries a two-man crew and ten passengers. As a hospital ship, eight litter patients and one attendant can be transported. It is equipped with a power-operated hoist for hauling passengers into the cabin while the rotary-wing craft hovers over the surf or inaccessible land areas.

An unusual feature of the H-19 is the location of its 600 hp Pratt and Whitney Wasp engine in the nose of the aircraft where it is easily accessible for ground maintenance.

The H-19 has a combat renge of 280 miles. Top speed is 100 mph. It has a service ceiling of 12,500 ft., and can carry a useful load of 2962 lbs.

An added advantage is that the rotor can be removed and the ship fitted into a transport plane for ferrying to a field near the scene of operations.

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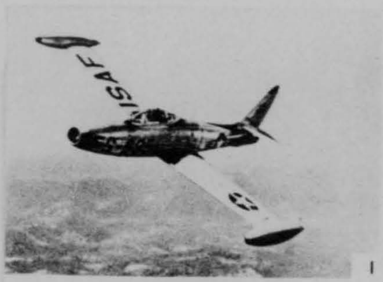

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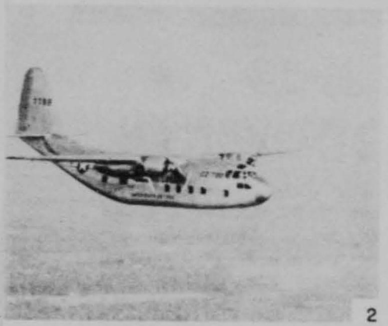

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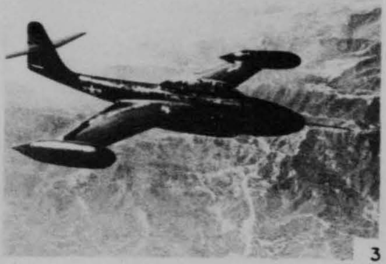

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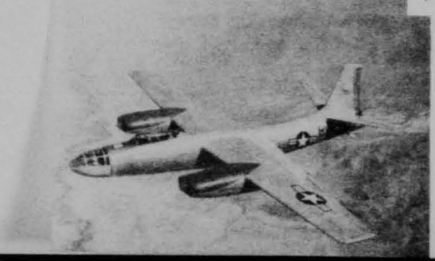

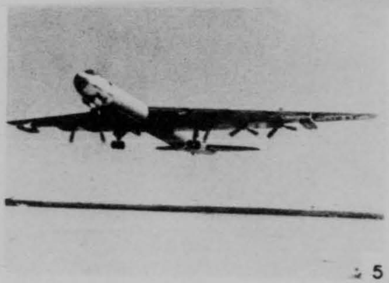

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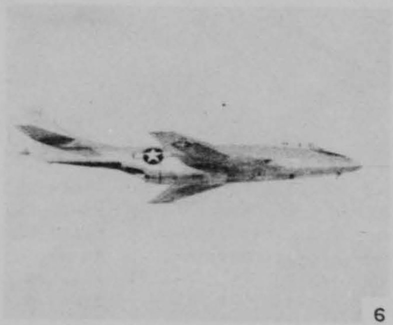

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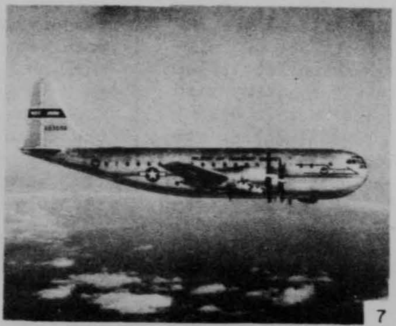

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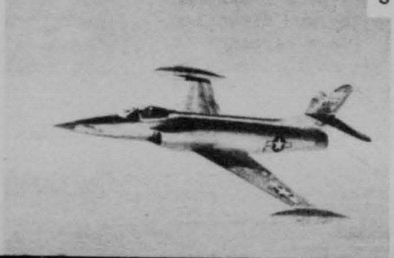

FAMILIARIZATION QUIZ

The sixteen aircraft pictured in this centerspread appeared in the special USAF AIRCRAFT FAMILIARIZATION issue of 5 January 1950. Gauge your familiarity with current operational and experimental types by taking this test. Place the appropriate picture numbers in the blanks alongside the names of the aircraft. Then check your answers with the correct listing on page 39. Score yourself as follows:

14-16 correct:	Superior
11-13 correct:	Excellent
9-11 correct:	Satisfactory
Below 9 correct:	Unsatisfactory

___ F-84
___ F-86
___ F-88
___ F-89
___ F-90
___ F-91
___ F-94
___ C-123

___ B-36
___ B-45
___ B-47
___ B-50
___ B-51
___ C-97
___ C-119
___ C-124

Does your score indicate a need to restudy the 5 January issue?

9

10

11

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FAMILIARIZATION QUIZ

5

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2 C-123

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10 B-51
14 C-97
[illegible] C-119
11 C-124

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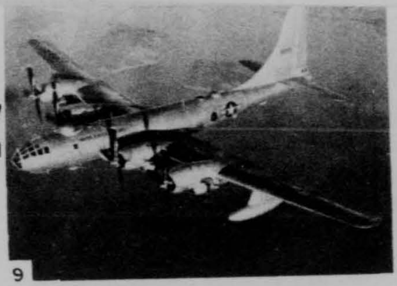
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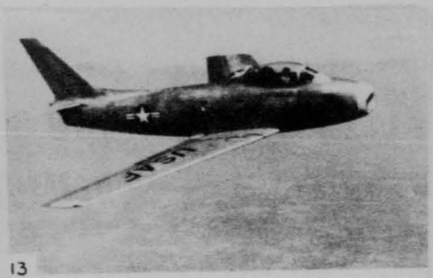
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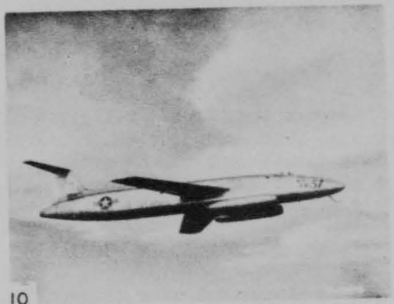
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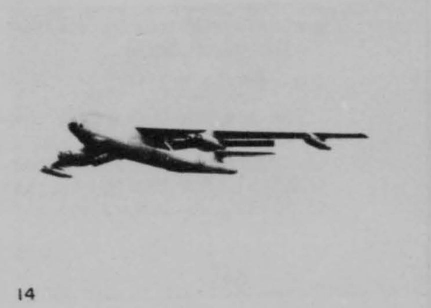
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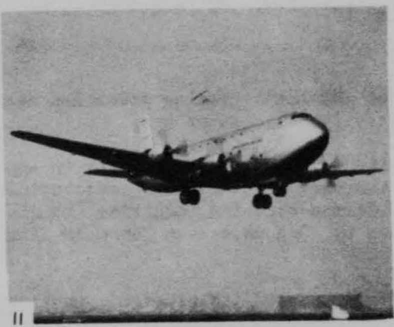
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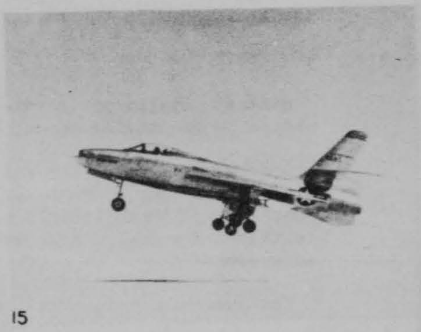
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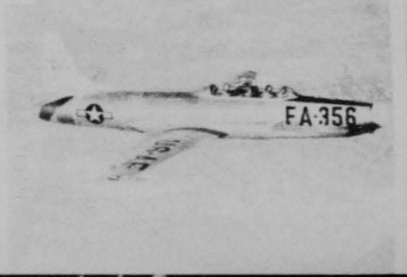

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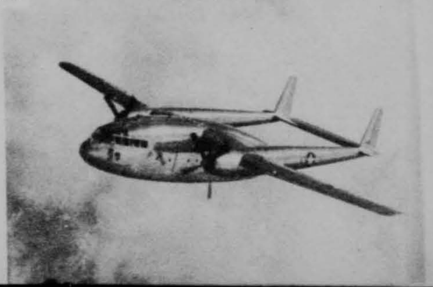


100 THINGS YOU SHOULD KNOW ABOUT COMMUNISM AND RELIGION

PART II OF II PARTS

47. HAVE THE RUSSIAN COMMUNISTS EVER TOLERATED RELIGION?

While Communists do not have religion themselves, they have at times permitted personal faith as long as the churches involved adhered to Communism's stringent restrictions on missionaries, welfare and charity work, and religious education of children.

48. WHY IS THIS?

The Russian Communists need cooperation from religious-minded people in their own country, and they also want religious people outside the borders of Russia to help the Communists seize control of other countries. "Toleration" of religion is just a tactical maneuver in Communism's war on civilization. The long-range strategy of total destruction has not changed.

49. WHEN WAS THIS "TOLERATION" TACTIC FIRST USED IN RUSSIA?

Although very minor concessions to the church were allowed in 1923 and 1935, after two of the most severe waves of religious persecution, the first significant pretense of religious tolerance came in 1938. A general order went out to "avoid jarring the religious sensibilities of the believers."

50. WHY?

Because Stalin was afraid of Hitler's growing power and wanted the Russian people to be unified and cooperative in case of war.

When war did come, the Russian Communists used priests to appeal to the Russian people for support of the war. The Moscow radio actually called upon "God-loving inhabitants" of German-occupied countries to rise in defense of religious freedom. References to God were even found in Stalin's papers and addresses.

The Government also temporarily closed its atheistic publishing concerns as a war maneuver. Churches in Moscow took on a blaze of outward life.

51. DID THIS MEAN STALIN HAD LOST HIS NERVE AS AN ATHEIST?

Not at all. He simply turned the church into a weapon for his own use on the home front then, and such it remains today.

52. DO THE COMMUNISTS PRETEND TO TOLERATE RELIGION TODAY?

No. Since the end of World War II, the Russian Government has renewed open war against religion in all forms, although in some countries Communists pretend to tolerate it to serve their propaganda purposes.

53. HOW DO WE KNOW THIS?

A recent statement in an official Soviet newspaper listed the stamping out of religious faith "by systematic, scientific, antireligious propaganda" as "the most important task in the struggle for the triumph of Communism in the U.S.S.R."

Communist Party members in Russia, both young and old, were publicly ordered recently to work against religious beliefs.

Radio Moscow is expounding atheism and bombarding the people with the well-known Marxian theme, "Religion is the opium of the people".

54. HOW DO THE COMMUNISTS CONTROL THE ORTHODOX CHURCH?

Through the Soviet Government's State Council on Orthodox Affairs headed by Georgi Karpov, an atheist Communist who for years had been a member of the Soviet Secret Police. Every decision of the church officers must be approved by Karpov, even down to the point of getting his permission to go on a trip.

55. HOW DO AMERICANS OF THE RUSSIAN ORTHODOX FAITH FEEL ABOUT THE STATE OF THEIR FAITH IN RUSSIA?

Russian Orthodox bishops and priests here refuse to accept the Russian church any longer as a guide or source of religious authority.

56. IS THE ROMAN CATHOLIC CHURCH RESTORED IN RUSSIA?

In no way. One priest is allowed to stay in Moscow for the benefit of foreigners there, but the church is entirely shut off from the people of the country as a whole.

57. HOW ABOUT THE JEWS?

The same. Hebrew, the sacred language of the Judaic faith, is forbidden by law. Feast days, religious development and enjoyment for Jews have been suppressed as harshly as for any others.

58. HOW ABOUT PROTESTANT GROUPS?

They have been crushed.

59. WHAT HAS COMMUNISM DONE TO RELIGION OUTSIDE RUSSIA?

It has seized church and synagogue property and killed church leaders wherever and whenever Communism has gained control.

Where it has not yet gained the upper hand over the country as a whole, it has tried to corrupt religion from within by setting sect against sect and creed against creed.

60. ARE COMMUNISTS TRYING TO CORRUPT RELIGION IN THE U.S.A.?

Yes.

61. WHAT IS THEIR METHOD?

The Communist Party of the United States assigns members to join churches and church organizations, in order to take control where possible, and in any case to influence thought and action toward Communist ends.

It forms "front organizations", designed to attract "fellow travelers" with religious interests.

It tries to get prominent religious leaders to support Communist policies, disguised as welfare work for minorities or oppressed groups. In the words of Earl Browder, former head of the Communist Party of the USA:

".....By going among the religious masses, we are for the first time able to bring our anti-religious ideas to them."

62. WHAT IS A "FRONT ORGANIZATION"?

An organization created or captured by the Communists to do the Party's work in special fields. The front organization is Communism's greatest weapon in this country and takes it among people who would never willingly act as Party agents.

63. WHAT IS A "FELLOW TRAVELER"?

One who sympathizes with the Party's aims and serves the Party's purposes without actually holding a Party card.

64. HOW CAN I SPOT THEM?

Many organizations have been listed as Communist fronts by the Attorney General and this Committee. You can get a list of these by writing to the House Committee on Un-American Activities, Room 226, Old House Office Building, Washington, D. C. (See Subversive Organizations and Publications - Page 6)

To show up a fellow traveler, ask him to name ten things wrong with the United States and then ask him to name two things wrong with Russia. He will be on Russia's side every time.

65. ARE AMERICAN COMMUNISTS ATHEISTIC?

Yes.

66. CAN A COMMUNIST EVER HAVE RELIGIOUS BELIEFS?

When he first joins the Party, A Communist may still have some religious faith but it soon goes or he fails as a Communist.

67. WHAT HAPPENS TO A RELIGIOUS PERSON WHO TURNS COMMUNIST?

The Party ridicules his religious ideals and dins atheist propaganda into his ears, day and night, in an attempt to convert him to atheism.

68. WHAT IF A NEW COMMUNIST REFUSES TO RENOUNCE RELIGION?

He is soon ousted.

69. WHAT HAPPENS TO A PERSON WHO IS EXPELLED FROM THE PARTY?

He is hounded for the rest of his life.

70. HAVE THE COMMUNISTS USED BLASPHEMOUS PROPAGANDA AGAINST THE CHURCH?

If there is any doubt in your mind as to the vicious and blasphemous propaganda Communists are using against religion, then go to your public library and read a typical example of it entitled "Goodbye, Christ," by Langston Hughes.

It is so atrocious that we will not reproduce it here, but even so, it is mild compared to the atheist propaganda in Moscow.

71. HOW DO COMMUNISTS WORK AMONG CHURCH PEOPLE, SINCE THEY THEMSELVES ARE SUCH HATERS OF RELIGION?

Communists are two-faced.

In their secret Party meetings, they make plans to destroy religion.

In public, they say religion and Communism should be friends and that both are working toward the same goals.

72. ARE THERE COMMUNIST CLERGYMEN?

Unfortunately, there are.

73. DO THEY ADMIT THEY ARE COMMUNISTS?

With but a few exceptions, the Party requires Communists to keep their membership secret.

74. WILL YOU GIVE AN EXAMPLE OF THE "OPEN" TYPE OF MEMBERSHIP?

The Rev. Claude C. Williams, a Presbyterian minister, whose congregation expelled him for Party activity. The Rev. Eliot White, retired Episcopalian minister, who served as a delegate to a Communist convention and lectured at Communist meetings.

75. ARE THEY IMPORTANT?

Not as important as the others who have joined the Communists fronts which the Attorney General and this committee have declared to be "subversive".

76. DO YOU MEAN THAT JUST BECAUSE A CLERGYMAN JOINS OR SPONSORS ONE OR TWO COMMUNIST FRONTS FOR ONE REASON OR ANOTHER, HE IS PLAYING STALIN'S GAME IN AMERICA?

No. We are talking about those clergymen who have over a period of years consistently followed the Party line and joined not one or two fronts, but ten, twenty, or thirty. These are the core of agents the Party depends on in the religious field.

77. BUT COULDN'T SOME OF THESE CLERGYMEN BE INNOCENTLY MISGUIDED IN THEIR ATTEMPTS TO DO GOOD?

Well, they have followed every crook and twist of the Communist Party line. Would you excuse that in your minister's case?

78. IS YOUR COMMITTEE INVESTIGATING RELIGION?

Certainly not. Religion is not under any sort of investigation by the House Committee on Un-American Activities,nor is any sect, creed, church, or individual, so far as his religion is concerned.

79. THEN WHAT'S THIS ARTICLE FOR?

To help you protect your religion and faith from Communist attack by showing you exactly what the Communists intend.

80. BUT IS COMMUNISM A "REAL" DANGER INSIDE OUR CHURCHES?

J. Edgar Hoover states:
"I confess to a real apprehension, so long as Communists are able to secure ministers of the gospel to promote their evil work and espouse a cause that is alien to the religion of Christ and Judaism."

81. IS COMMUNIST PROPAGANDA EVER SNEAKED INTO CHURCH PUBLICATIONS?

Yes. For instance, the Christian Register, official Unitarian publication, has carried Earl Browder's eyewash that a good Christian can be a Communist. It is significant that the minister responsible for doing this has since been removed from his editorship by the church.

82. DO COMMUNIST PROPAGANDISTS EVER ACTUALLY GET BEFORE CHURCH GROUPS AS SPEAKERS?

Yes. For example,the head of the Communist Party, on one occasion at least, spoke at Union Theological Seminary in New York City.

Only a few months ago, the Legislative Secretary of the Communist Party addressed a conference of 100 ministers in Washington, D. C.

83. WHAT ABOUT CHURCH YOUTH GROUPS?

Young Communists are ordered to join them.

84. WHY?

For two reasons: To win over youth to Communism and atheism, and to turn their groups into tools of the Communist Party.

85. IS THIS DONE OPENLY?

No. Communist youth, like Communist adults, work under cover. They won't admit being Communists if you ask them unless and until their Party officers direct them to do so.

86. IS THE YMCA A COMMUNIST TARGET?

Yes. So is the YWCA.

Also, church groups such as the Epworth League.

87. DO YOU MEAN EVERY EPWORTH LEAGUE OR YWCA IS A COMMUNIST HIDE-OUT?

Of course not. But we do mean that Communists do dig into such groups any way and any time they can.

We do mean they have dug into such groups, and are at it today.

We do mean that if you want to keep your own organization fit for your own family's membership, you had better stay on the alert.

88. HOW ELSE DO COMMUNISTS SPREAD ATHEISM?

Indirectly in Communist schools such as the Jefferson School of Social Science in New York, and the California Labor School.

Also in the atheistic schools for children operated throughout the country by the International Workers Order.

89. WHAT IS THE PEOPLE'S INSTITUTE OF APPLIED RELIGION?

One of the most vicious Communist organizations ever set up in this country. Declared subversive by the Attorney General.

90. WHERE IS IT LOCATED AND WHO ARE ITS OFFICERS?

4105 1/2 Third Avenue, South, Birmingham, Alabama.
Rev. Claude C. Williams, director; Edna Joyce King, executive secretary; Owen H. Whitfield and Winifred L. Chappell, associate directors; Carl Haessler, Calla E. Tennant, and Clara M. Vincent, trustees; Cederic Belfrage, research director.

91. WHAT DOES THIS INSTITUTION DO?

It teaches Communist ideas, pretending that they are Christian ideas.

92. WHAT IS THE METHODIST FEDERATION FOR SOCIAL ACTION?

A tool of the Communist Party, denounced by numerous loyal American Methodists. It claims to speak for 17 Methodist Bishops and 4,000 clerics and laymen. Not an official church organization.

93. WHERE IS IT LOCATED AND WHAT IS IT TRYING TO DO?

150 Fifth Avenue, New York, New York. Although strictly unofficial as a "church" organization, it is trying to use the prestige of the Methodist Church to promote the line of the Communist Party.

94. WHAT IS THE "PROTESTANT"?

A magazine which fanatically spreads Communist propaganda under the guise of being a religious journal.

Its avowed purpose is to "build a bridge" between Christendom and Communism. Boasts support of 6,000 ministers but not actually connected with any official religious organization.

95. WHERE IS IT PUBLISHED AND WHO ARE THE OFFICERS?

It is published by Protestant Digest, Inc., at 521 5th Avenue, New York, New York. Editor: Kenneth Leslie; Associate Editors: James Luther Adams, John Hammond, Gerald Richardson.

96. SHOULD SUCH ORGANIZATIONS HAVE ANY CHURCH'S SUPPORT?

Ask your own pastor.

97. HOW CAN WE COMBAT THEM?

Reread this article. Show it to others. Become as interested in protecting your religion as the Communists are in destroying it.

98. ARE THE COMMUNISTS JUST TRYING TO DESTROY YOUR CHURCH?

No. They're also out to get your job, to get your union, to get your farm, to get your school, to get your property, to get your Government. They're out to get YOU and make you a slave of Communism from cradle to grave.

If they can wreck your religion, that makes you just so much easier to capture and enslave.

99. WHEN AND HOW DO THEY WORK ON ALL THESE OTHER ANGLES?

Look up and study other Intelligence Information Bulletins which expose the Communist Party in other fields.

100 Things You Should Know About Communism in the U.S.A. (Int Info Bul #8)
100 Things You Should Know About Communism and Labor (Int Info Bul #30)
100 Things You Should Know About Communism and Education (Int Info Bul #26)
100 Things You Should Know About Communism and Government (Int Info Bul #46 and 47)

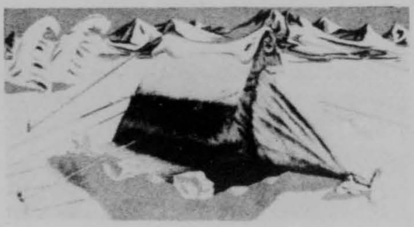
100. CAN THE COMMUNISTS WIN IN ALL THIS?

It's up to you.

POLAR GUIDE

THIS IS THE EIGHTH IN A SERIES OF ARTICLES ON ARCTIC INDOCTRINATION

Chapter 18 - Land Survival (Continued)



Arctic Survival Tent

SHELTER

In Summer, if the weather is mild, you may need protection only from the insects. In winter, however, you can't stay in the open and expect to live, unless you are on the move. You must have shelter even if it is only a hole burrowed in the snow. The type of shelter will depend mainly upon what materials are available, what you need shelter from (wind, rain, snow, cold, or insects), and how long you expect to remain in one location. Regardless of the type, however, the shelter must provide adequate ventilation - first, to prevent asphyxiation, second, to allow moisture to escape.

If suitable natural shelters, such as caves or rock shelves, are available, you need not build. If you must build, however, be sure to pick a good location. In summer, choose a campsite that is dry, relatively free from insects, and near fuel and food. Avoid areas that might become flooded. In summer, the lee of boulders and shelving rocks provides dry campsites. To escape insects, look for a cold lake, a breezy ridge top, or a place that gets an onshore breeze. During insect season, sites in forests and near rapid brooks are undesirable. During winter, choice of a campsite will depend on protection from wind and nearness to fuel and water. In high mountains and rugged terrain, avoid areas that you suspect are subject to avalanches, floods, rockfalls, and battering by winds. The bases of steep slopes are to be avoided because of falling rocks. As a rule, a camp well up on a valley slope is more comfortable than one on a valley floor.

Consider all these factors. Remember also that you're not building a display home or an apartment house. The smallest and simplest type of shelter that meets your needs and can be made with materials you have on hand is the best shelter for you.

Arctic Survival Tent

One of the best types of survival shelters, easily put up and giving good protection, is the Arctic Survival Barren Land Tent. This tent, which is now in production, will soon be available in the field as part of the survival equipment carried in the plane. It accommodates three men comfortably and four men satisfactorily. It is high enough to permit one occupant at a time to stand in a stooping position while dressing or undressing. Yet it is not so high that it permits the heat to rise above the space occupied by the personnel. The tent weighs only 25 pounds but is strong enough to withstand winds of 100 mph and gusts of 125 mph.

Fabricated of neon-red, fluorescent nylon material, it is useful also as a visual signal. The fabric of which it is made is water repellent and excludes wind-driven snow and water, but, at the same time, it permits the escape of CO and CO_2 to minimize the chances of asphyxiation. There is no waterproof coating or impregnation in the fabric, however, and the tent remains pliable and lightweight. Another feature of the tent is its built-in floor, which increases protection and makes it easier for inexperienced personnel to pitch the tent.

The tent is of "A"-pole construction. Four sectional duralumin poles slide from the bottom through cloth tubes to the leather reinforced apex of the "A". They are tied in at the bottom.

Two men can erect the tent easily.

Proceed as follows:

1. Insert and tie in the poles.

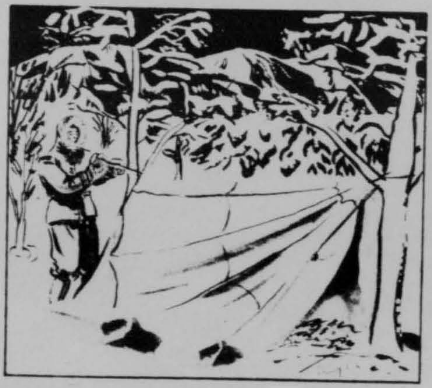
2. Stake down the apron securely.

3. Measure out the proper distance for the ridge rope and wall stays, and drive in the stakes. Tie the stays to the stakes to prevent the tent from blowing away during erection in high winds, making sure first that the "A", formed by the poles at the end, points into the wind. (On the ice pack or when the ground is too hard to drive in stakes you can use blocks of ice or snow to hold down the ropes.)

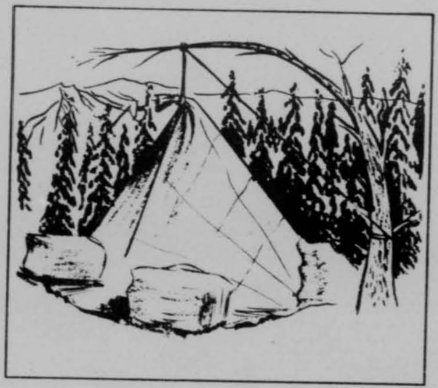
4. The man of the downwind ridge rope then takes up the slack as the man on the upwind ridge rope pays out.

5. When the ends are perpendicular, the man who is upwind makes his end of the rope fast and then the man who is downwind takes up the slack and makes his end fast.

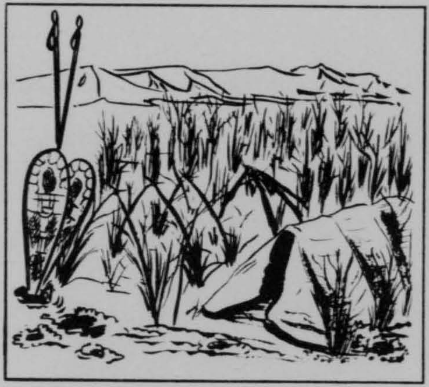
6. Make the side stays taut, and the tent is pitched.



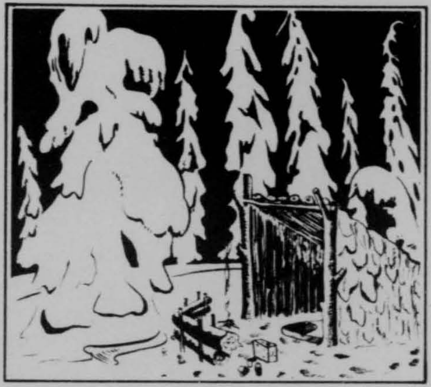
Parachute Shelter.



Paratepee.



Willow Shelter.



Lean-to.

There is an egg-shaped tunnel entrance attached to each end of the tent. This type of entrance makes it easier to enter and leave the tent and provides a means of closing the entrance completely to exclude wind-driven snow during blizzards, or to adjust the opening in such a way as to afford proper ventilation. These tunnels are advantageous also, in that, by tying them from the inside and placing equipment in them, you provide more room in the tent for personnel and, at the same time, modify the flat surface of the end to one that offers less resistance to the wind.

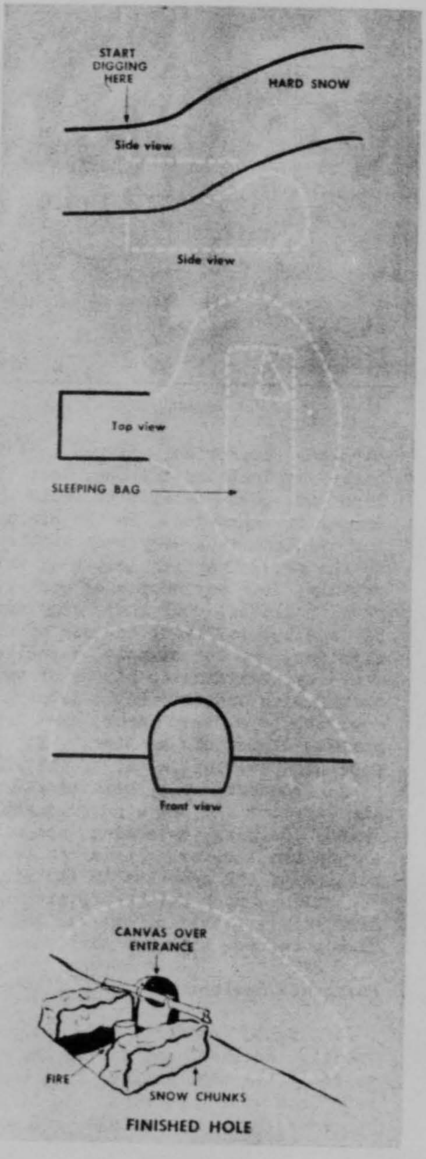
Still another feature of this tent is a disposal hole,12 inches square, fabricated at the left-hand corner of the floor for use as a latrine and for wastes from camp living. This hole is covered by a flap that extends 2 inches over all sides. It is sewn on one side and tied down on the opposite side by means of loops and tie tapes.

Airplane Shelter

In the summer, you can live in the airplane comfortably if you make it tight against mosquitoes, but be sure to cook outside to avoid the danger of explosion. In the winter, the airplane is a very poor shelter, as the metal carries heat away very rapidly from any source of heat you have, including your body. Any type of shelter involving the use of the airplane, as for example, a shelter made by building up blocks of snow to the wing and throwing a tarpaulin over it, is a very poor, even dangerous, type of shelter. It is poor because the metal of the airplane conducts the heat away from the shelter and the wind frequently raises the wing, releasing the warm air in the shelter. It is dangerous because of the gasoline in the wing. You will be much better off with any kind of improvised shelter not in direct contact with the airplane.

Parachute Shelter

For solid comfort, especially in drizzly weather and during the bug season, the best shelter is a tepee made from your parachute. In it you can cook, eat, sleep, rest, and make signals—all without going outdoors.



Building a Snow Hole.

To build a paratepee, you will need a number of good poles 12 to 14 feet long and the parachute. The details are described in the booklet in your parachute pack, "Emergency Uses of the Parachute".

You can make a simpler parachute shelter by using a single pole as a center pole, or even by holding up the center of your tent with a rope tied to a limb on a tree.

You can improvise a simple pup tent by placing a rope or pole between two trees or stakes and dropping your parachute over them. Stretch the corners down and secure them with stones or pegs.

Willow Shelter

On the tundra, where willow trees are available, you can make a satisfactory shelter by using a number of them tied together securely as a framework over which to put your tarpaulin as a cover. You can also use snow shoes from your emergency kit, skis, or parts of your plane as supporting parts of this framework. There is no particular detailed design for this type of shelter, except to make it in such a way as to provide only enough room for you, your extra clothing, and your emergency equipment. The open end of this shelter, as in any other type of shelter, should be at right angles to the prevailing wind. Arrange the tarpaulin cover over this shelter in such a way that you have a flap over the entrance to protect the entrance from drifting snow. Pack down all the edges of the tarpaulin around the shelter with snow to keep the wind from blowing snow under it.

Lean-to Shelter

In a wooded area, a lean-to makes

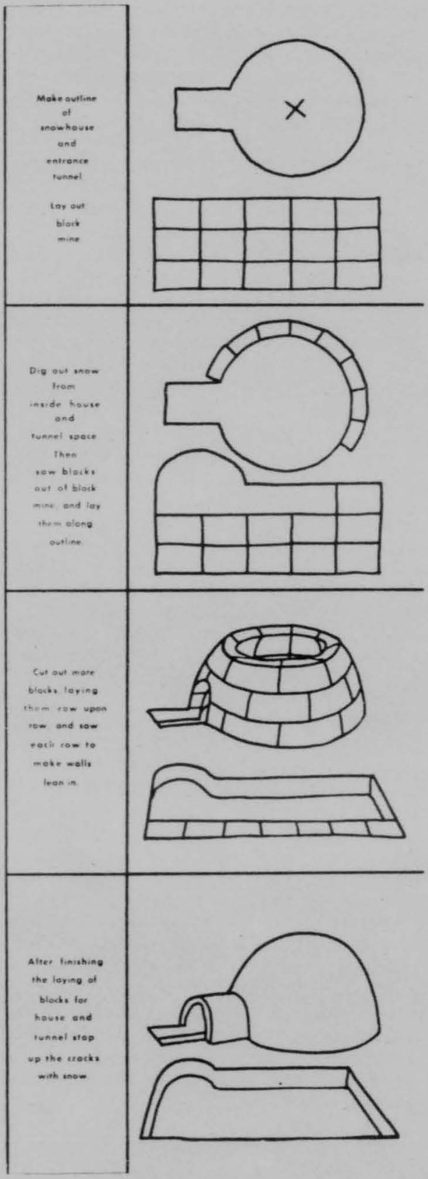
a good temporary shelter. Support a pole between two trees at a height of 4 to 6 feet from the ground by resting it on the branches or by binding it to the trees with a rope or even tough bushes or spruce roots. Lean poles against this ridge pole, closely together and slanting gently down to the ground. If the trees are too scattered to provide support for the ridge pole, cut partly through a single tree a few feet above the ground and push it over. The branches will hold it in a more or less horizontal position and will provide the framework for a satisfactory shelter. Cover the poles of the shelter with pine or evergreen boughs, with the pine needles facing downward. If you have a tarpaulin, you can use it to good advantage as a roof for the shelter. Make your fire in front of the shelter and, if possible, set up a wall of green logs behind your fire to reflect heat toward the lean-to.

Ice and Snow Shelters

On pack ice or snow covered barren land you have your choice of two methods of building a shelter - you can either dig in or build up. Digging in is easier and is more practicable for a man who is alone.

Snow Hole. The first thing to check for before digging in is the quality of the snowdrift. If the snowdrift is pretty compact and has a hard crust on it, you will be able to make a safe snow hole in it. Where the snow throughout the drift is light and fluffy, however, it is likely that the next heavy wind will move the drift - perhaps even blow it away altogether.

The larger the snow hole you attempt to dig, the more work it will be and the more heat you will require to stay warm in it. Don't try



Make outline of snowhouse and entrance tunnel

Lay out block mine

Dig out snow from inside house and tunnel space. Then saw blocks out of block mine, and lay them along outline.

Cut out more blocks laying them row upon row, and saw each row to make walls lean in.

After finishing the laying of blocks for house and tunnel stop up the cracks with snow.

Building a Snow House.

to dig a hole large enough for your whole family. All you need is enough space to get yourself, your clothes, sleeping bag, and some small pieces of emergency gear inside. Even that will take the best part of a day.

The best type of hole in a drift or edge of a snow bank is one that goes straight into the bank far enough to reach old, hard snow, then extends parallel to the drift, forming a "T" shape. The tunnel into the drift will serve as your entrance way and therefore should be no larger than is necessary for you to crawl into and throw out the snow you remove while digging your sleeping hole.

When you start digging into the drift, you will probably find the snow soft enough to dig out with a shovel. As you get deeper into the drift, however, into the older and more compact snow, it is best to cut out chunks of snow with a saw. If you have no saw, use your shovel as a knife, cutting out chunks of snow by jamming the shovel into the snow and prying out the chunks.

Make your sleeping hole long enough to permit you to stretch out and high enough to give you head room while sitting down or crawling in and out. Scoop out a shelf on one side of the hole for your candles. In such a small hole, a single candle will soon make it warm enough for you to shed your parka and outer trousers. The candle will produce enough heat also to melt some of the surface snow in the hole. Make the ceiling of the hole dome-shaped, therefore, so that the melted snow will run down the sides instead of dripping. The arch shape will also give greater structural strength to your shelter.

Cooking in the hole is dangerous because your stove may tip over and ignite your clothes or some survival equipment. Besides, there is the danger of carbon monoxide. A good place to set up your stove is right outside the entrance way. To break the wind, pile up the chunks of snow you sawed out in order to make your hole. Work them up in the form of a wall about four feet high. This will not only protect your stove from the wind, but will also serve as a good windbreak for your entrance. To make the entrance even more windproof, you can fashion a cover from your seat cushions, parachute, or other materials.

During the process of digging out the snow hole you will undoubtedly get warm enough to sweat. Shed your outer garments to prevent sweating, but be sure to roll them up tightly and put them into the plane or some other sheltered spot to prevent snow from accumulating on them. Remember, too, that you will get wet from the snow in digging this shelter; so set aside some dry spare clothing into which to change when you're through. An anti-exposure suit, if you have one, is an excellent outer garment to wear while digging a snow hole.

Snow holes built in the manner just described are excellent shelters but training stations have shown that a number of men dislike snow holes because of claustrophobia and unfounded fears that the snow hole might cave in, that they might become asphyxiated in it, or that the entrance might become so covered over with drifted snow that they might not be able to get out. These fears have no basis in fact. Snowdrifts of hard-packed snow with crusts on them are strong and sturdy. Snow is an excellent insulator because of the large amount of dead air in it and, for the same reason, provides sufficient air to enable you to breathe even when the hole is completely covered over. As for drifted snow piled up over your entrance way, if you take your shovel into the snow hole with you, you won't have to do more than a little pre-breakfast PTin order to get out.

Snow House. Another kind of shelter that utilizes all the insulating and structural qualities of snow is a house built of snow blocks. This type of shelter can house more than one person, and therefore two or three crew members can team up and build one.

Pick a spot where there is at least a foot of snow between you and the ground or ice. Figure out how much space you'll need - a house 6 feet in diameter is sufficient for one man, 8 to 10 feet for two or three men - and draw a circle that size in the snow. Probably the best way to draw the circle is to set up a center point (a stick or shovel) and describe a circle about it. After drawing the circle to the proper diameter, use a shovel and dig the snow outof the space in the circle. Since space inside snow is the requirement,it doesn't matter whether you build up or dig down — and digging is easier than building. So, if you have enough snow under you, dig down a couple of feet. While you're at it, dig yourself an entrance ditch along a line perpendicular to the prevailing wind.

After finishing the digging, start manufacturing blocks for the walls and roof of your house. Again lay out your work first by drawing lines on the snow surface. Keep your block mines close to the snow house to save lugging blocks any farther than necessary. Draw parallel lines on the snow about 15 inches apart and 14 feet long. Then draw more lines perpendicular to these, separating the surface of the snow into rectangles about 15 inches by 20 inches. You're now ready to start the block making. Saw down along the two outside 15-foot lines, cutting at least 15 inches deep. Then dig the snow away for several feet along the outer sawed line, cut under the line, and saw across the line to get your first block out. This one is the hardest. After you have removed this block, you can stand down in the hole and wield the saw with fine results, making all the 15" x 15" x 20" blocks you need. Carry the blocks over to the dug out area and set them around the outside of the circle on top of the surface snow to form the first ringof blocks.

It's time now to decide how high the dome is going to be. This depends, of course, on how far you've dug into the snow, how tall you are, and whether you want a palace in which you can stand or a hut in which you can sit. In making this decision, remember that the larger the house, the more energy you'll have to use to build it and the more fuel to heat it. Both are precious items in the polar regions. Don't figure on too gigantic a project.

Once you figure how many snow blocks high the house is going to be, you're ready to cut off the top of the first layer of blocks at an angle which will cause the next ring of blocks to lean in toward the center of the snow house. This repeated process - laying a ring of snow blocks, cutting off their tops at an angle, then laying another ring on top — will give you the dome shaped roof. A saw is the best thing for cutting off the angular wedge of snow from the tops of each ring of blocks. Stand inside the house and use a little mental geometry to determine the angle at which to cut each ring of blocks. This angle of cut increases as you approach the top of your house.

Keep on cutting, hauling, and setting up rings of blocks, trimming off the excess and cutting the tops at the proper angle, until you reach the top. The last block is the toughest, and there's no secret process or magic word to aid in getting it into place at the very top. Just look at the hole into which the block must fit, and cut out a block as close to that shape as possible. Lean over the snow house and drop it on. Then get inside and use the saw to trim it to fit.

Even an experienced builder finds that there are cracks between blocks and an irregular and rough shape on the inside when he's through. Now's the time to correct that. Fill the cracks with as moist a snow as you can find. Use it as a putty and you'll have a cozy,draft-free house. Then shave the inside of the house into a regular smooth surface and when you light a candle or gas stove, the melting snow will run down the sides instead of dripping on your clothes and sleeping bag.

There are still two things to do to put on the finishing touches - first, cover the entrance ditch with blocks to make a tunnel; then, provide a means to ventilate the house. The method of ventilating a snow house depends on whether you're going to have fire and do your cooking inside the snow house, or whether you wall up the end of the entrance and cook outside. If you cook outside, a small hole through the side of the snow house opposite the entrance tunnel will provide sufficient ventilation. However, if the snow house is large enough to cook in without danger of setting your clothes or sleeping bag on fire, you must have a ventilating system which will enable you to remove the carbon monoxide gas generated by the stove. There is a vent system you can use. It is based on two facts - one, that the air inside the snow house is much warmer than the outer air, and the other, that carbon monoxide is a heavy gas and will fall to the floor of the snow house as it is generated. Two holes are therefore needed to get the CO_2 out of the snow house - one entering the house at the lowest part of the floor and running vertically up through the wall of the snow house like the chimney of a fireplace, and the second starting as low as possible at the outside of the snow house, running at a very steep angle from the outside upward to the inside, and hitting the inside of the house a couple of feet above the floor. Using this system, you can cover up the entrance tunnel to your snow house and burn a gasoline stove with no danger of carbon monoxide poisoning.

The diameter of the holes will depend on the instrument you use to make them. Any type of pole or piece of metal that can be pushed through the snow can be used. If you are on a heavy bomber that carries a long handled shovel, just force the shovel handle through the snow to make the vent holes. On another type of plane, improvise something from your airplane or emergency equipment. Life raft oars and mast sections, for example, will do fine. Clear out vent holes from time to time to prevent drifting snow from blocking them.

Using the Shelter

After your shelter is constructed, use it - not only for yourself, but for your belongings as well. Snow is the greatest thief in the Arctic. If you leave any of your equipment out in the snow, it may well be buried or blown away. Keep your emergency equipment and extra clothes neatly arranged in your shelter. This will not only make it easier for you to find what you want quickly but will keep you from bumping into things and knocking them over when you crawl into your shelter.

Brush snow off your clothes and footgear before you enter your shelter. Inside, the snow will melt and you will find it quite difficult to dry your things. Whenever you leave your shelter, cover over the entrance for the same reason. Set up a pole of some sort to mark it in case snow drifts over it. Unless it's impossible to secure insulation, never place your sleeping bag on the bare ground or the ice. Always place something under your bedding; if nothing else, snow will provide a good insulation. Normally, however, you will be able to improvise some other insulation readily. You can use parachute seat cushions or even an inverted and inflated rubber life raft as a mattress. Other insulation materials from the airplane are seat cushions, snowshoes from the emergency kit, or cardboard from the rations boxes. In a snow hole or snow house, place a tarpaulin under your sleeping bag to prevent its getting wet from the melted snow running down along the wall.

In wooded country or in grasslands you can find natural insulating materials. On the polar tundra, dry reindeer lichen, shrubs, or dry grass are effective insulating and mattress materials. In timbered areas, evergreen boughs can be used. Twigs and small branches of trees are especially suitable for mattresses because they are springy and soft. Twigs and needles of evergreen boughs are preferable to twigs from broad-leaved trees. Your mattress can be as thick as your time and materials permit.

Usually a close, well-laid, bough bed a foot thick is adequate for all conditions. However, if the twigs are very bushy and springy, a much thinner bed will do. Areas in contact with pressure points of your body should be well padded. Bough beds that have been slept on for many nights gradually lose their resilience and need to be re-laid or replenished with fresh boughs. Tuck the stubs of fresh twigs into the old bed, laying them shingle-fashion. Peg or fit logs three or more inches in diameter at the side of the bough bed. This helps to keep the boughs in place and checks a restless sleeper who otherwise might roll into the fire. It also keeps the bed in shape by preventing men from walking or tripping on the boughs.

Polar Guide Chapter 18 Rest

FAMILIARIZATION QUIZ

(ANSWERS)

1	F-84	5	B-36
13	F-86	4	B-45
6	F-88	14	B-47
3	F-89	9	B-50
8	F-90	10	B-51
15	F-91	7	C-97
12	F-94	16	C-119
2	C-123	11	C-124

THE INTEGRITY OF THE SOVIET MAN IN THEORY-AND IN FACT

Soviet propaganda professes that the alchemy of the Bolshevik Party and Soviet socialist society has produced a morally superior type of man--a "Soviet man". The requirements of internal discipline and control, however, frequently force Soviet officials to publicize unvarnished facts which are at variance with the idealized portrait of the "Soviet man." Numerous Soviet press accounts of actual shortcomings on the part of its people and exhortations to change their ways offer ample evidence that the Soviet man, like other members of the human race, can also succumb to various malpractices such as embezzlement, graft, etc.

Graft, embezzlement, theft, etc., are obviously not the peculiar curse of any particular nation or group of peoples. Soviet propaganda, however, professes that these and other human failings have become but memories in the USSR, the land which allegedly provides the perfect milieu for evolving the perfect man. Chauvinistic eulogies in the Soviet press proclaim the superiority of the "Soviet man," whose averred superhuman attributes are said to be a product of the Bolshevik Party's careful nurture. The following passages, typical of Soviet writings on this theme, would be amusing if they were not a reflection of a chauvinism which blocks understanding among peoples and leads to imperialism.

> "Among all the great achievements of socialism with which our country astonishes the peoples of the world, the greatest and most brilliant attainment of the Bolshevik Party and Soviet power is the great Soviet people, a working people, a militant people, a creative people, a people who in war and peace do not consider themselves equalled on our old planet."

> "In literature and on the stage we must show the Soviet man — the builder of the future — in such a light that the audience and the whole world will see the moral and spiritual superiority of people who have been reared in a socialist society. It is the moral and ideological superiority of our people which makes our representatives superior to all others in the world tribunal."

The proper subordination of selfish personal interests to the common good is presented as major evidence of this remarkable transmutation of the former human being living in the Russian Empire into the "Soviet man." According to the late Andrei Zhdanov, "the Soviet people have become accustomed to place the public, state interest before everything. They have become accustomed to consider the common concern as a vital personal matter."

Yet the Soviet press itself, from its frequent reports of fraudulent practices, offers ample proof that the Soviet man continues to share bad as well as good instincts and habits with other members of the human race. Soviet propaganda regarding the alchemy of the Soviet environment which has created the faultless man invites attention to the numerous proofs of its falsity. A recital of some of the published Soviet accounts of dishonesty among Soviet citizens is not intended to convey the idea that the Soviet people have a monopoly on the described moral faults but is offered as merely an antidote.

That embezzlement and a multitude of other dishonest practices present a serious problem to the Soviet authorities is made evident by repeated complaints of the Soviet Prosecutor-General that his staff is not sufficiently diligent in bringing culprits to justice, and by exhortations to strengthen the fight against the plundering of state and private property.

It appears that the illegal use of socialized property is most common on collective farms, since public appeals to "liquidate fraudulence" on collective farms are so frequent. The government's postwar drive against these abuses was formally marked by the issuance on September 19, 1946 of the decree "On Measures for the Liquidation of the Violations of the Collective Farm Charter." The gravity of the situation was indicated by an announcement that in the year following the decree 1.3 million hectares (3.1 million acres) were returned to collective farms from illegal holdings of individuals. Three years later, however, misappropriation of collective farm lands and other property continues apace. A series of recent reports from the Ukraine and other localities indicate that the problem remains acute. *Pravda Ukrainy's* lead article of July 12, 1949, headlined "We Must Resolutely Abolish Violations of the Collective Farm Charter," decries malpractices which are common on many Ukrainian collective farms: the embezzlement of public lands, which are then cultivated for private profit; the stealing of collective farm property and monies; and the squandering of cattle.

One report describes in detail the pilfering by a chairman of a collective farm in Saratov Oblast (RSFSR):

> "Five years ago when he became chairman of the collective farm there were 227 sheep on the farm. During the period of his management the number was reduced to 83. In these years Dementev built a home in Balshov where he established his own sheep stable and bought a cow with 14 of the sheep. He did not begrudge collective farm property for either himself or his friends. In 1947 he distributed 400 truck-loads of rye straw; in 1948 he squandered 2 tons of bread and 90 poods (3,240 pounds) of hay. Dementev not only stole from the common storehouse but also from the collective farm cash fund — he appropriated for himself about 10,000 rubles which had been earmarked for distribution to the collective farmers. When he needed additional money he cut down a wooded area which extended for three kilometers and which served as a windbreak for the fields."

The Machine Tractor Stations (MTS), which provided collective farms with mechanical power, have also lately come in for sharp criticism for improper utilization of public resources. An order of July 9, 1949 issued by the Ministry of Agriculture deplores the squandering and embezzlement of fuel in the MTS of Kuibyshev Oblast. In 1948 about 200 tons of petroleum products were embezzled in this oblast. This year one of the directors of an MTS, Shcherbakov, "squandered to various organizations and persons 2,600 kilograms of petroleum products and permitted the theft and loss of 1,000 kilos of gasoline. In order to hide the squandering and theft of these products, Shcherbakov added transportation and tractor work not accomplished by the MTS and illegally reported the use of more than 2,000 kilos of petroleum products for these tasks. The order directs that similar misdeeds must be ferreted out and the wrongdoers brought to stern justice.

Illegal spending of state funds and falsification of accounts permeates the industrial front as well. In Chelyabinsk Oblast, for example, there were 1,000 cases of what is euphemistically referred to as "violations of financial discipline." A director of one enterprise spent more than 59,000 rubles from the wage fund. Other executives, such as the director of Moskvych automobile factory, fake plant output reports to cover up underfulfillment of plan.

Leningradskaya Pravda of January 26, 1949 exposes a group of engineers and technical workers who misappropriated large sums of state funds in 1945-46. They concluded agreements with plants for various types of work for which they fraudulently inflated the cost. Cash reserves which were accumulated by this method were divided among the group. They were also guilty of drawing up fictitious trade agreements and forging signatures.

Social insurance funds have proved no more immune to plunder. An extensive investigation in 1947 and 1948 turned up evidence of gross misuse of funds allocated for workers' benefits. As a consequence, Gurbunov, head of the social insurance division, and Khokhlachev, chief bookkeeper, were dismissed from their posts. Often sums assigned for special diets for sick workers were illegally spent on the arrangement of evening parties, the feeding of delegates to conferences, etc. Trade-unions were accused of financing vacation resort trips for their officials out of social insurance funds. According to Soviet reports, the case of the official who spent 6,000 rubles of social insurance funds on a 38-day spree is not at all uncommon.

In the face of accounts of plagarism and slanderous accusations made for personal advantage, it becomes even more difficult to understand what the Soviets mean by the alleged lofty moral superiority of Soviet man. Pravda of September 5, 1949, for instance, reports on one Druzhinin, who claimed as his own a poem which had been written by another. Particularly conscienceless behavior was displayed by an official of a publishing house who brought out under his own name a book which had been submitted to him for approval by the author who shortly thereafter was called to the fighting front. Anna Vasilieva's case provides an example of false accusation. Although violating no law she was condemned by a court following a campaign of persecution and slanderous accusations made by her superior. The latter initiated the campaign when Vasilieva rightfully refused the use of state lumber for building a fence for her superior's dacha. It was only when the case reached the Supreme Court, after 17 months of wending its way through channels, that the truth was ascertained and Vasilieva cleared of malicious charges.

In the words of S. Kovalev, a Soviet writer, "there are still a good many Soviet people who maneuver to establish their own prosperity at the cost of other members of society."
Soviet Affairs Notes 16 Sept 49 Rest

The Air Force program of standardization of air target materials, including air objective folders and target dossiers, is set forth in AFR 200-25, 13 December 1949. The standards for materials used in the planning, briefing and training of all types of air operation is established therein. A direct result of this standardization is familiarity and uniformity throughout the services and will in turn permit an interchange of personnel and ease the supply problem....Read AFR 200-25, 13 December 1949.

AIR FORCE LETTER)
NO. 205-25)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 30 MARCH 1949

SECURITY

Disclosure of Classified Information to Reserve Forces Personnel

(Effective until 30 September 1950 unless sooner rescinded or superseded.)

Paragraph
Purpose 1
Scope 2
Policy 3
Investigation and Clearance 4
Residents of Foreign Countries and Foreign Nationals 5
Requirements 6

1. Purpose. To provide uniformity, this Letter outlines the policy of the Air Force with respect to the dissemination of classified military information to Reserve Forces personnel.

2. Scope. This Letter applies to the Air Force Reserve and the Air National Guard, and in addition, its provisions will be followed in connection with activities concerning the Air Reserve Officers' Training Corps and the Senior Division of the Civil Air Patrol. This Letter does not apply, however, to personnel on extended active duty.

3. Policy. In compliance with the provisions of AFR 205-1 regarding security of military information, Reserve Forces personnel may be entrusted with classified information as follows:

a. RESTRICTED information may be disseminated for official military purposes to any Reserve Forces personnel.

b. Except as authorized in c below, information classified no higher than CONFIDENTIAL may be disclosed to Reserve Forces personnel not on active duty who are actively participating in official training activities, provided that possession of the information is essential to the training course or program.

c. SECRET information may be disclosed to Reserve Forces personnel on active duty for training purposes and personnel not on active duty who have a mobilization assignment, provided that possession of the information is necessary in the performance of official assigned duties.

d. TOP SECRET material will not be used for training purposes in connection with Reserve Forces training programs. As authorized by paragraph 7, AFR 205-1, 14 March 1949, however, individuals serving on short periods of active duty whose assignments require it may be given access to the TOP SECRET information essential for the performance of their assigned duties.

e. Documents containing information classified higher than RESTRICTED will not be disseminated for retention by individuals. Such documents will be stored in military files only.

f. Reserve Forces personnel not on active duty who receive classified information will be informed that the information affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation or transmission to an unauthorized person is prohibited.

g. Upon termination of active duty training, personnel will be briefed on the necessity for maintaining security of their professional knowledge while on inactive status.

4. Investigation and Clearance. Commanders concerned are responsible for requesting personnel security investigations and clearing personnel referred to in this Letter whenever required or necessary in accordance with separate Regulations.

5. Residents of Foreign Countries and Foreign Nationals. The provisions of AFL 182-4 and 8f, AFR 205-1, 14 March 1949, will be observed regarding dissemination of military information to persons residing in foreign countries, or to foreign nationals as defined in paragraph 2i, AFR 205-1.

6. Requirements. Although it is the desire of the Air Force to make available to Reserve Forces personnel such classified information as is required for training purposes within established training programs and courses, it is of primary concern that no breach of security will result from this policy. Commanders concerned will review continuously all classified material required by or of direct value to Reserve Forces activities, and whenever appropriate, will initiate down-grading action thereon in accordance with paragraph 27, AFR 205-1, 14 March 1949.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

---

*This Letter supersedes AFL 205-25 (formerly 46-7), 31 March 1948.
This Letter has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.

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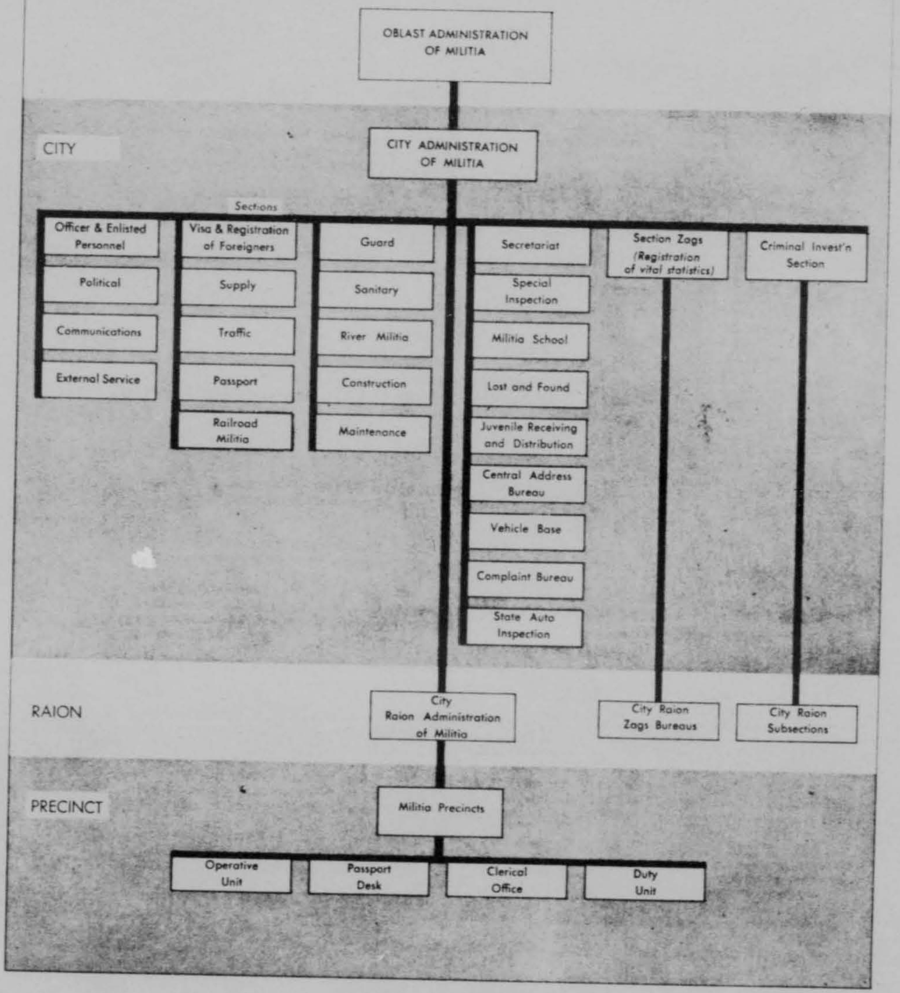
This is the twelfth of fourteen charts on USSR organization of Government and Communist Party.

CHART 12

Typical City Militia Administration


OBLAST ADMINISTRATION OF MILITIA
CITY
CITY ADMINISTRATION OF MILITIA
Sections
Officer & Enlisted Personnel
Political
Communications
External Service
Visa & Registration of Foreigners
Supply
Traffic
Passport
Railroad Militia
Guard
Sanitary
River Militia
Construction
Maintenance
Secretariat
Special Inspection
Militia School
Lost and Found
Juvenile Receiving and Distribution
Central Address Bureau
Vehicle Base
Complaint Bureau
State Auto Inspection
Section Zags (Registration of vital statistics)
Criminal Invest'n Section
RAION
City Raion Administration of Militia
City Raion Zags Bureaus
City Raion Subsections
PRECINCT
Militia Precincts
Operative Unit
Passport Desk
Clerical Office
Duty Unit

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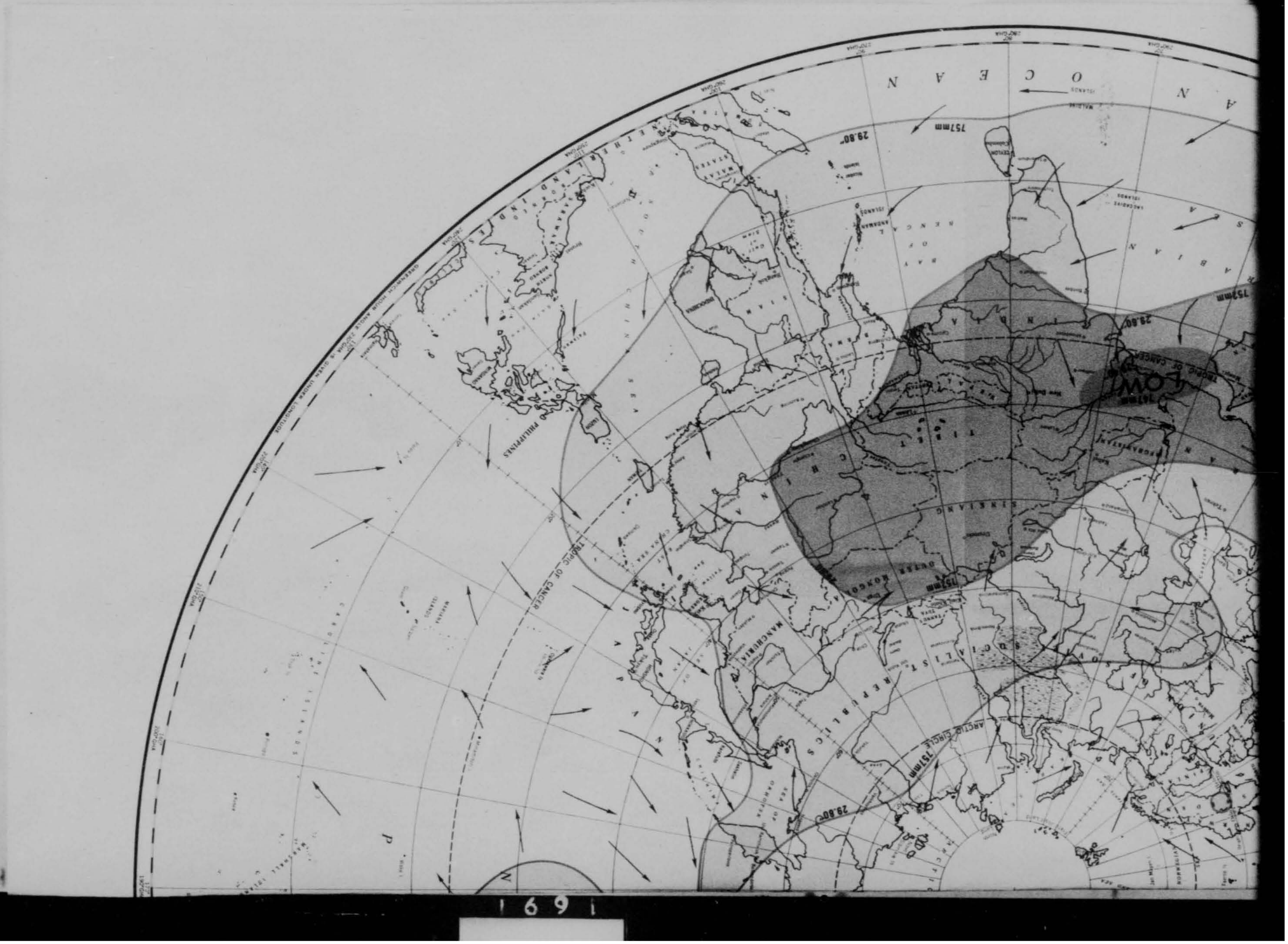
O C E A N
757mm
29.80"
BAY OF BENGAL
LOW
753mm
TROPIC OF CANCER
TIBET
SINKIANG
PHILIPPINES
MANCHURIA
ARCTIC CIRCLE
P

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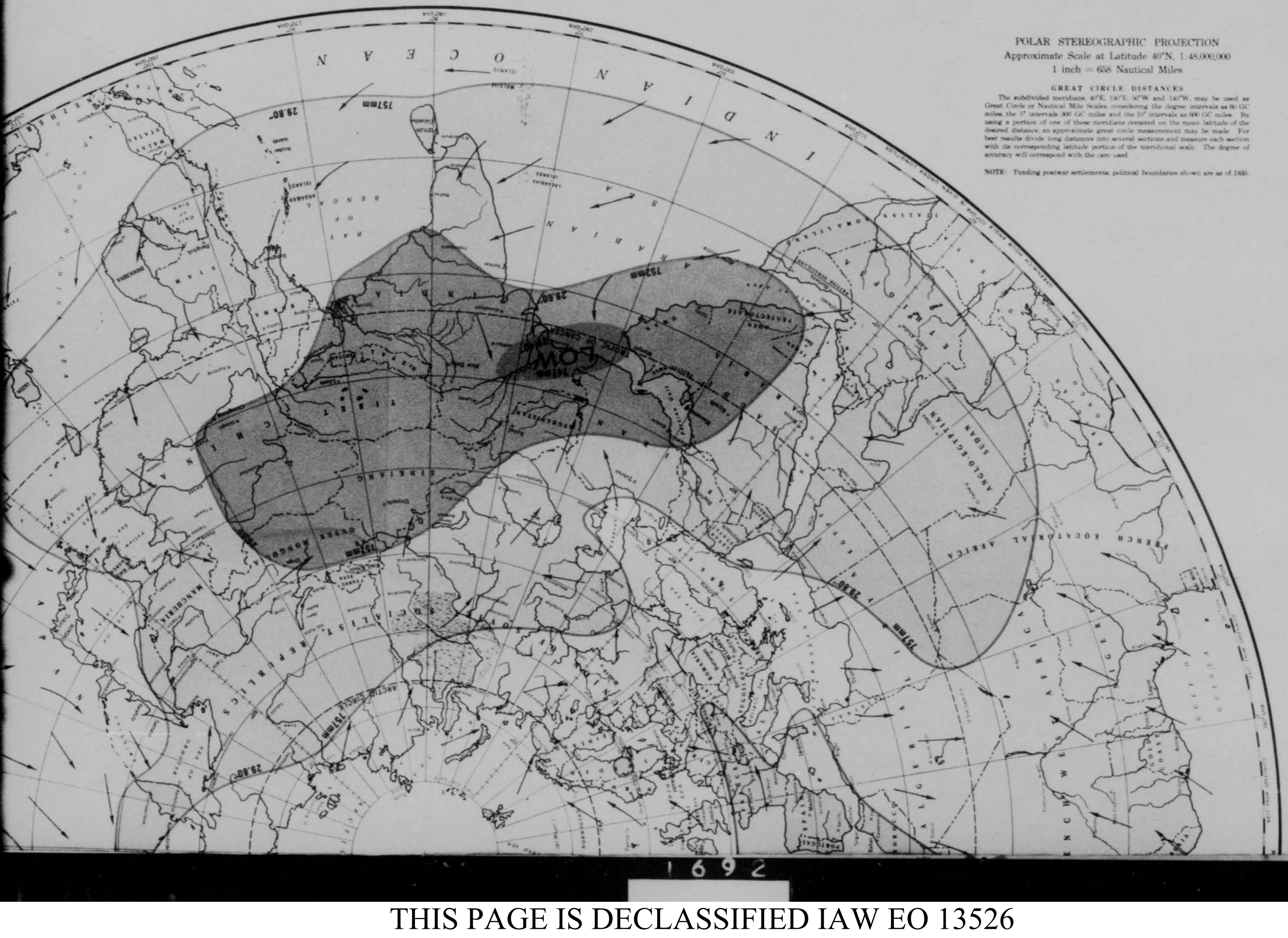
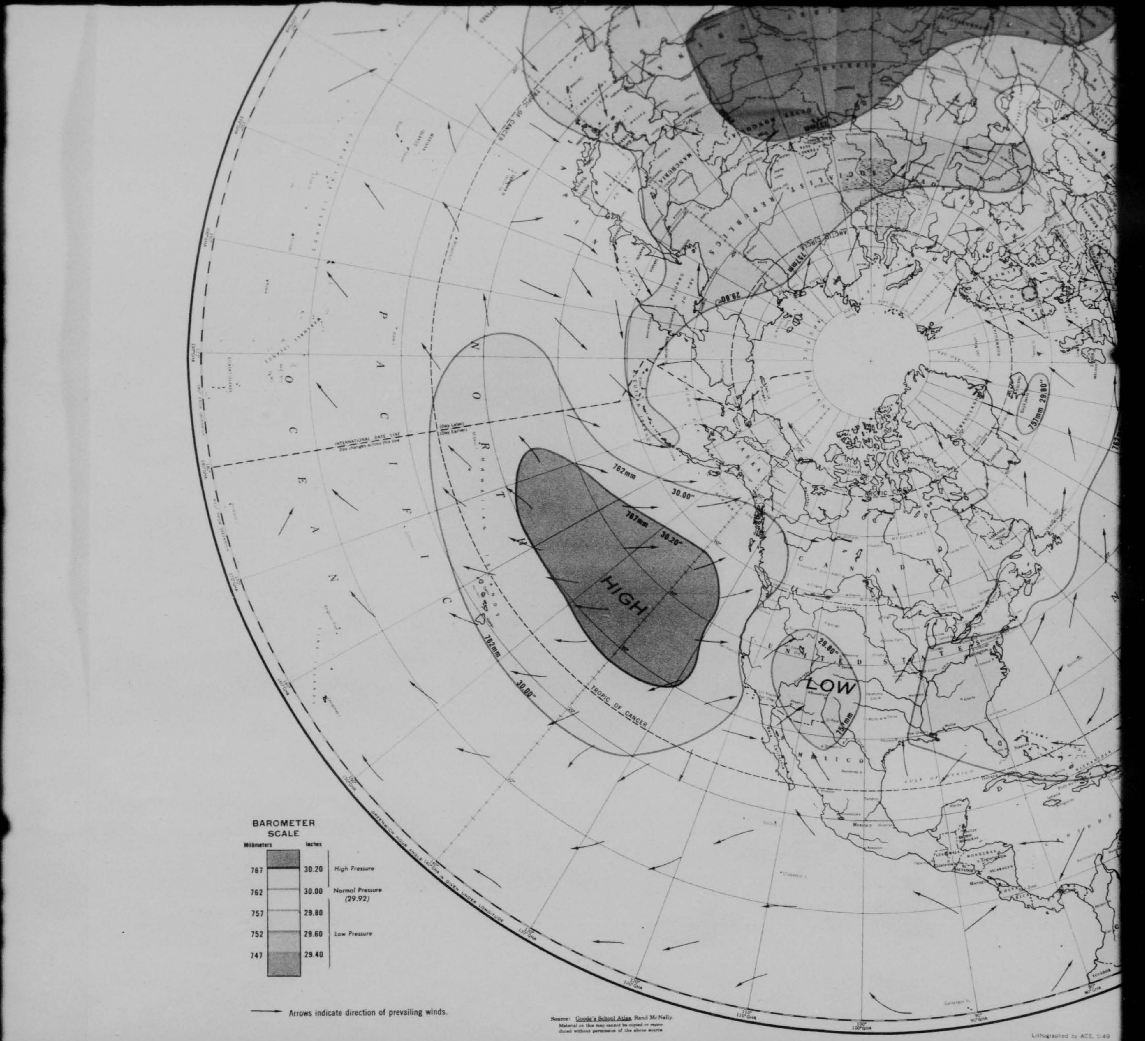

INDIAN OCEAN
ARABIAN SEA
BAY OF BENGAL
757mm
29.80
753mm
LOW
TROPIC OF CANCER
SINKIANG
TIBET
CHINA
OUTER MONGOLIA
MANCHURIA
JAPAN
ANGLO-EGYPTIAN SUDAN
FRENCH EQUATORIAL AFRICA
FRENCH WEST AFRICA
ALGERIA
ARCTIC CIRCLE

POLAR STEREOGRAPHIC PROJECTION
Approximate Scale at Latitude 40°N, 1:48,000,000
1 inch = 658 Nautical Miles

GREAT CIRCLE DISTANCES

The subdivided meridians 40°E, 130°E, 50°W and 140°W may be used as Great Circle or Nautical Mile Scales, considering the degree intervals as 60 GC miles, the 5° intervals 300 GC miles and the 10° intervals as 600 GC miles. By using a portion of one of these meridians centered on the mean latitude of the desired distance, an approximate great circle measurement may be made. For best results divide long distances into several sections and measure each section with its corresponding latitude portion of the meridional scale. The degree of accuracy will correspond with the care used.

NOTE: Pending postwar settlements, political boundaries shown are as of 1935.


BAROMETER SCALE
Millimeters
Inches
767
30.20
High Pressure
762
30.00
Normal Pressure (29.92)
757
29.80
752
29.60
Low Pressure
747
29.40
Arrows indicate direction of prevailing winds.
HIGH
LOW
767mm
30.20"
762mm
30.00"
757mm
29.80"
29.60"
N O R T H
P A C I F I C
O C E A N
C A N A D A
U N I T E D S T A T E S
M E X I C O
TROPIC OF CANCER
ARCTIC CIRCLE
INTERNATIONAL DATE LINE
(Day Later)
(Day Earlier)
Day changes across this line
GREENWICH HOUR ANGLE (GHA) IS GIVEN UNDER LONGITUDE
140° 140°GHA
130° 130°GHA
120° 120°GHA
110° 110°GHA
100° 100°GHA
90° 90°GHA
GULF OF MEXICO
SOCIALIST REPUBLICS
MANCHURIA

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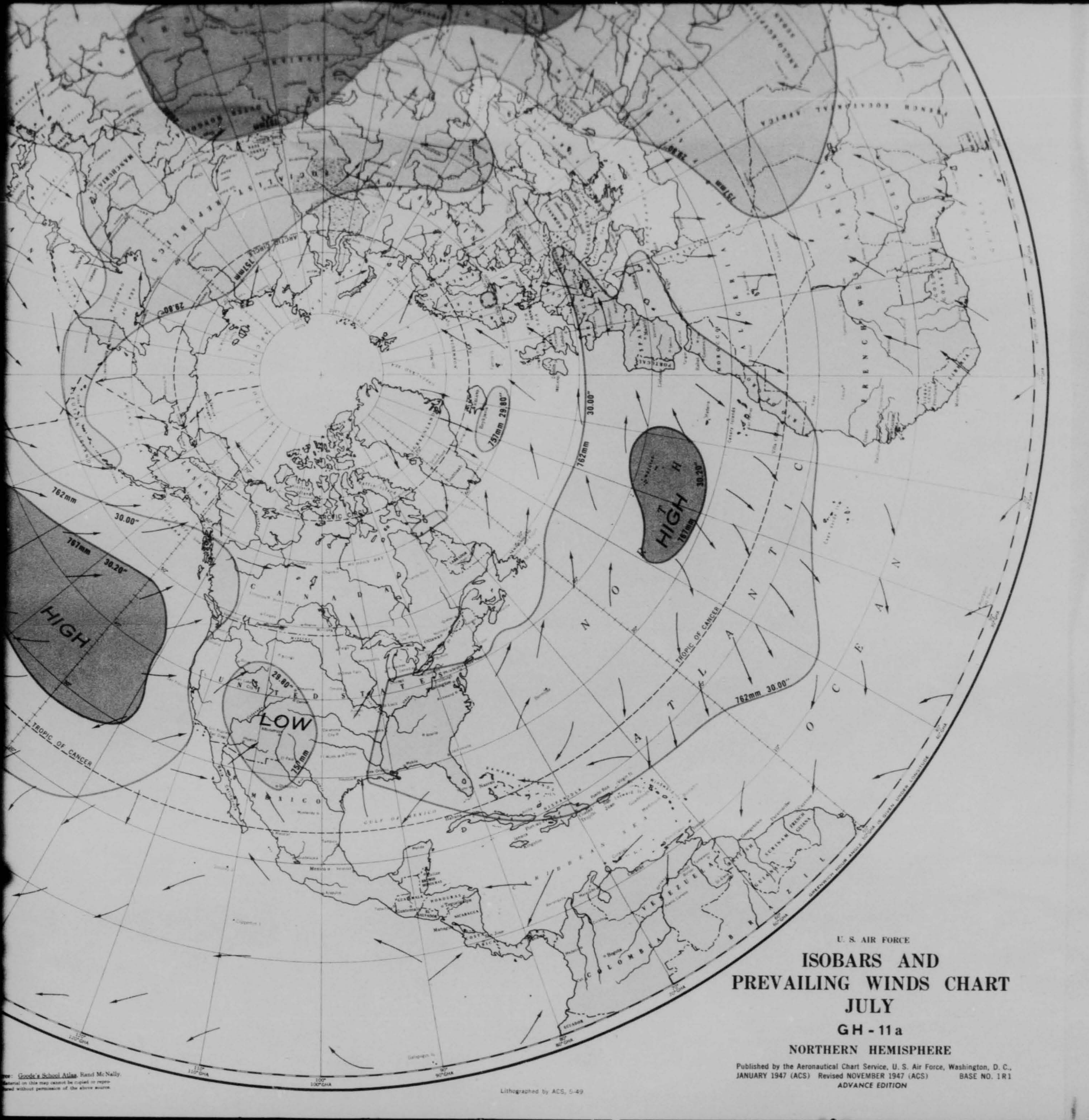
1693


HIGH
767mm 30.20"
762mm 30.00"
757mm 29.80"
LOW
HIGH
NORTH ATLANTIC OCEAN
CANADA
UNITED STATES
MEXICO
TROPIC OF CANCER
GULF OF MEXICO
CARIBBEAN SEA
COLOMBIA
VENEZUELA
BRAZIL
FRENCH WEST AFRICA
ALGERIA
120° 120° GHA
110° 110° GHA
100° 100° GHA
90° 90° GHA
80° 80° GHA
Galapagos Is.
ECUADOR

U. S. AIR FORCE

ISOBARS AND PREVAILING WINDS CHART JULY

GH - 11a

NORTHERN HEMISPHERE

Published by the Aeronautical Chart Service, U. S. Air Force, Washington, D. C.,
JANUARY 1947 (ACS) Revised NOVEMBER 1947 (ACS) BASE NO. 1R1
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HIGH
TROPIC OF CANCER
762mm 30.00"
767mm 30.20"
757mm 29.80"
PHILIPPINES

THIS PAGE IS UNCLASSIFIED

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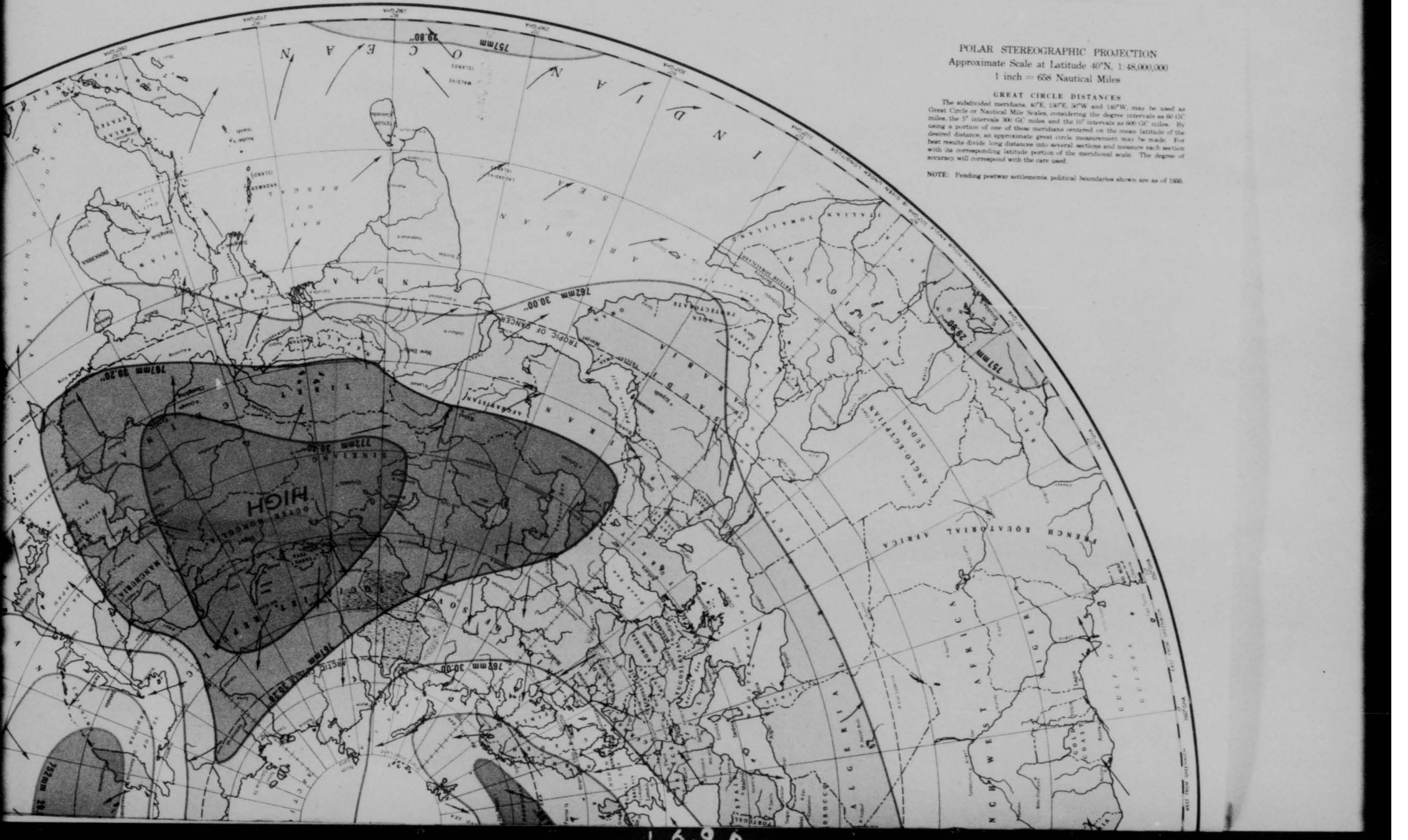
INDIAN OCEAN
ARABIAN SEA
BAY OF BENGAL
INDIA
TROPIC OF CANCER
757mm 29.80"
762mm 30.00"
767mm 30.20"
772mm 30.50"
HIGH
SINKIANG
MANCHURIA
ANGLO-EGYPTIAN SUDAN
FRENCH EQUATORIAL AFRICA
ALGERIA

POLAR STEREOGRAPHIC PROJECTION
Approximate Scale at Latitude 40°N, 1:48,000,000
1 inch = 658 Nautical Miles

GREAT CIRCLE DISTANCES

The subdivided meridians, 40°E, 130°E, 50°W and 140°W, may be used as Great Circle or Nautical Mile Scales, considering the degree intervals as 60 GC miles, the 5° intervals 300 GC miles and the 10° intervals as 600 GC miles. By using a portion of one of these meridians centered on the mean latitude of the desired distance, an approximate great circle measurement may be made. For best results divide long distances into several sections and measure each section with its corresponding latitude portion of the meridional scale. The degree of accuracy will correspond with the care used.

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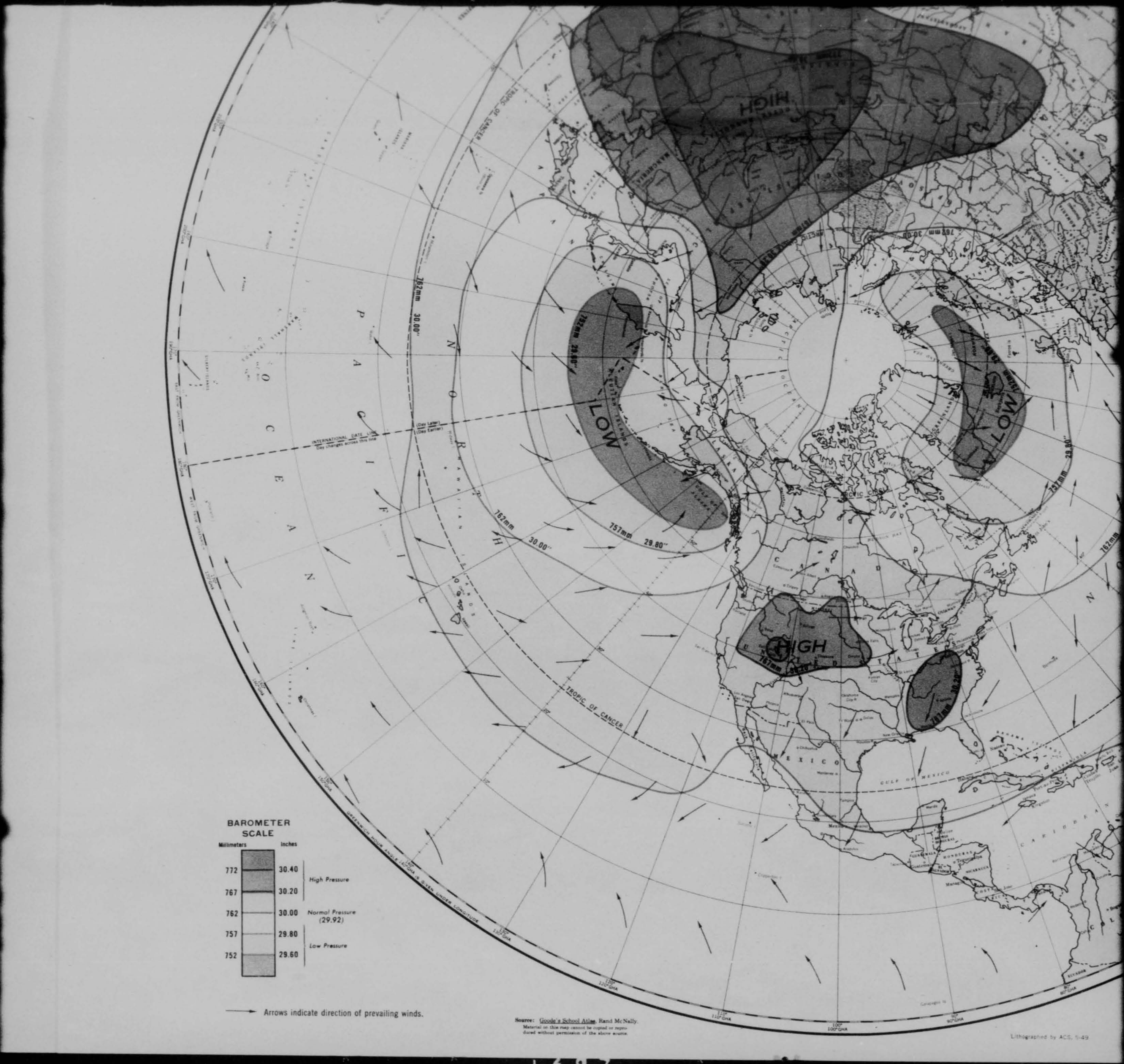
HIGH
LOW
LOW
HIGH
767mm 30.20"
762mm 30.00"
757mm 29.80"
752mm 29.60"
N O R T H
P A C I F I C
O C E A N
INTERNATIONAL DATE LINE
Day changes across this line
(Day Later)
(Day Earlier)
TROPIC OF CANCER
C A N A D A
U N I T E D S T A T E S
MEXICO
GULF OF MEXICO
CARIBBEAN
ARCTIC OCEAN
GREENWICH HOUR ANGLE (GHA) IS GIVEN UNDER LONGITUDE
150° 150°GHA
140° 140°GHA
130° 130°GHA
120° 120°GHA
110° 110°GHA
100° 100°GHA
90° 90°GHA
80° 80°GHA
ECUADOR
BAROMETER SCALE
Millimeters
Inches
772
30.40
767
30.20
High Pressure
762
30.00
Normal Pressure (29.92)
757
29.80
752
29.60
Low Pressure
Arrows indicate direction of prevailing winds.

Source: Goode's School Atlas, Rand McNally.
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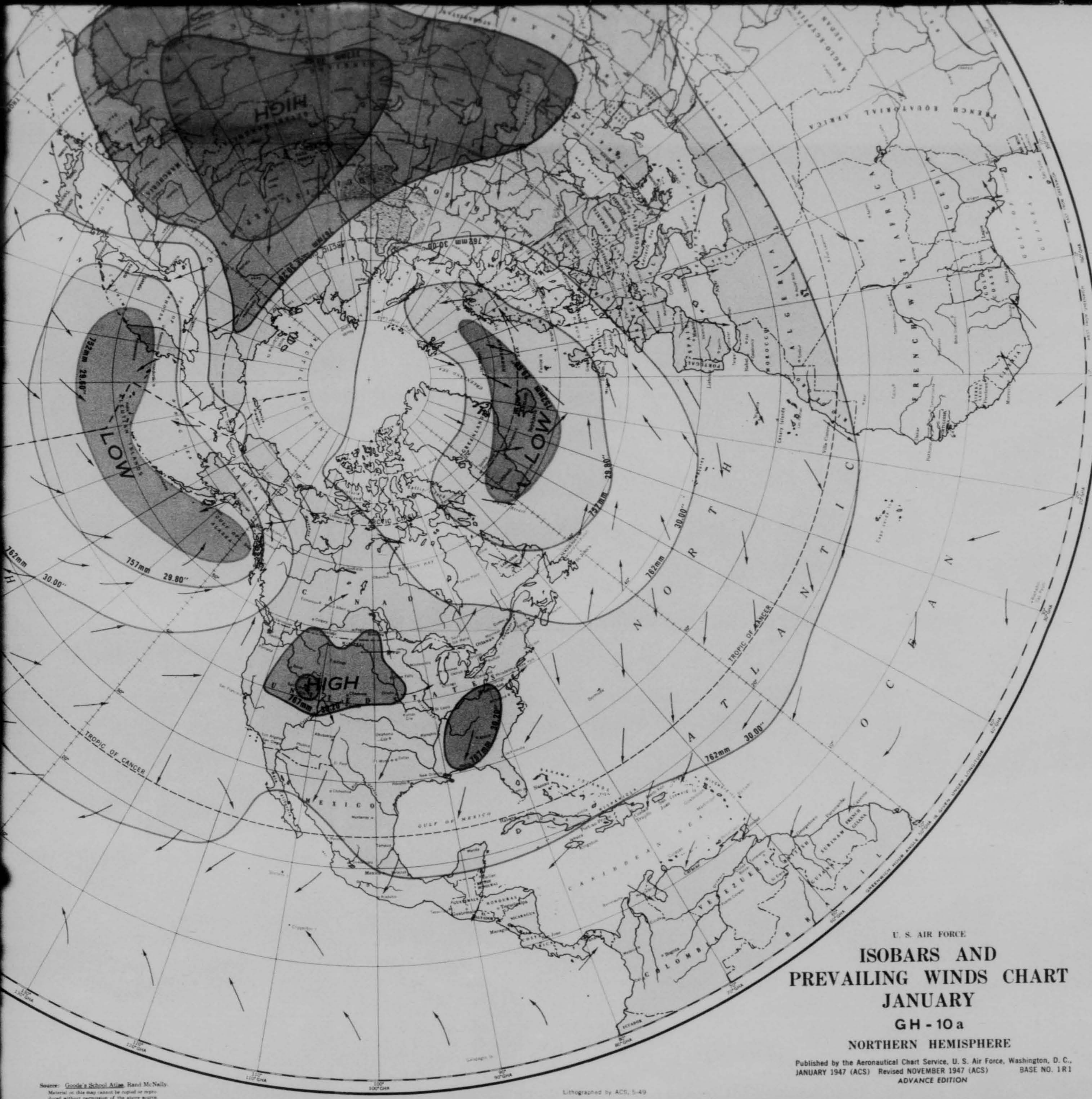
HIGH
LOW
LOW
HIGH
762mm 30.00"
757mm 29.80"
767mm 30.20"
NORTH ATLANTIC OCEAN
TROPIC OF CANCER
CANADA
UNITED STATES
MEXICO
GULF OF MEXICO
CARIBBEAN SEA
FRENCH EQUATORIAL AFRICA
FRENCH WEST AFRICA
ALGERIA
MOROCCO
ALASKA
COLOMBIA
VENEZUELA
BRAZIL
120° 120° GHA
110° 110° GHA
100° 100° GHA
90° 90° GHA
80° 80° GHA

U. S. AIR FORCE

ISOBARS AND PREVAILING WINDS CHART JANUARY

GH - 10a

NORTHERN HEMISPHERE

Published by the Aeronautical Chart Service, U. S. Air Force, Washington, D. C.,
JANUARY 1947 (ACS) Revised NOVEMBER 1947 (ACS) BASE NO. 1R1
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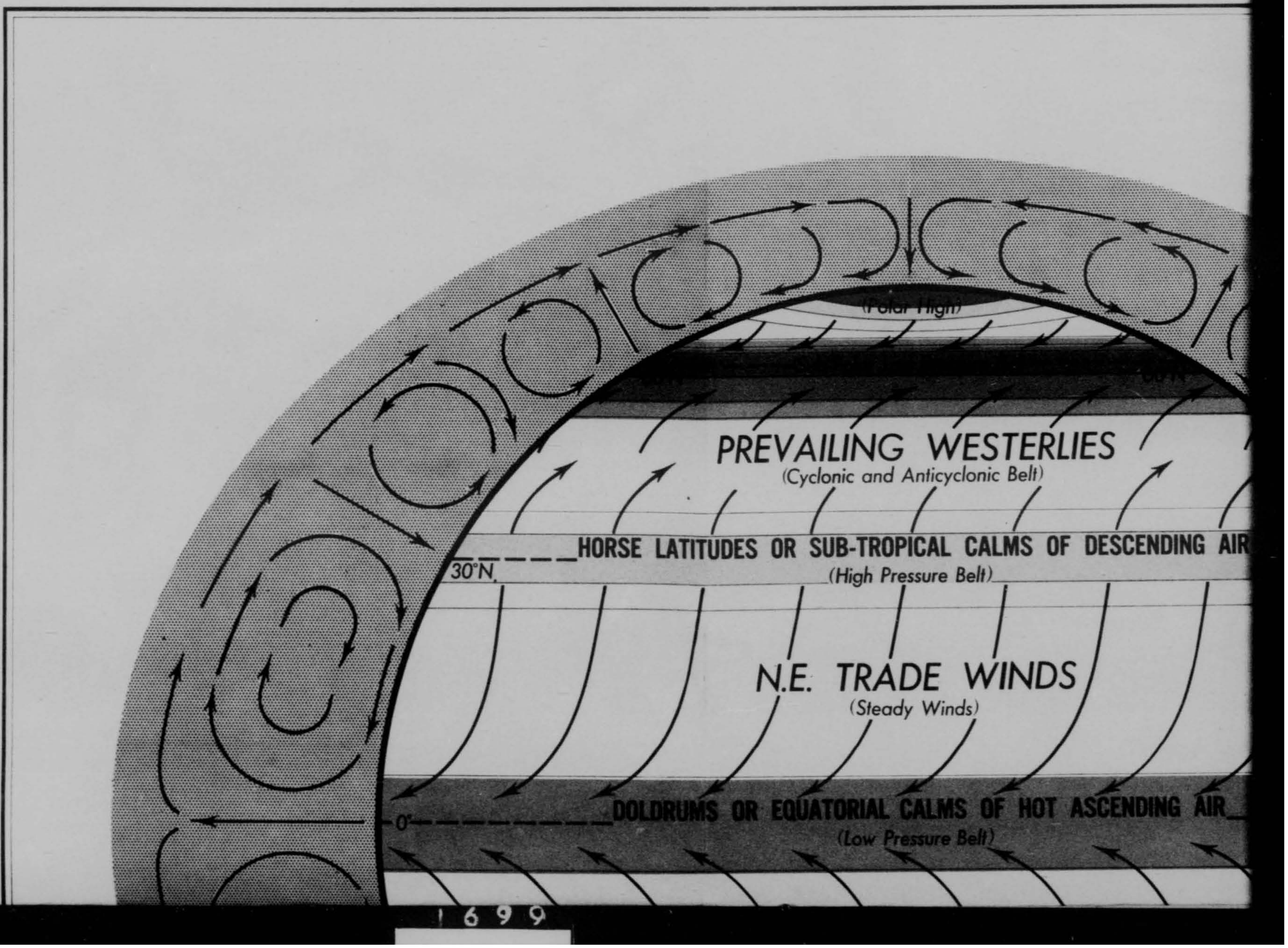
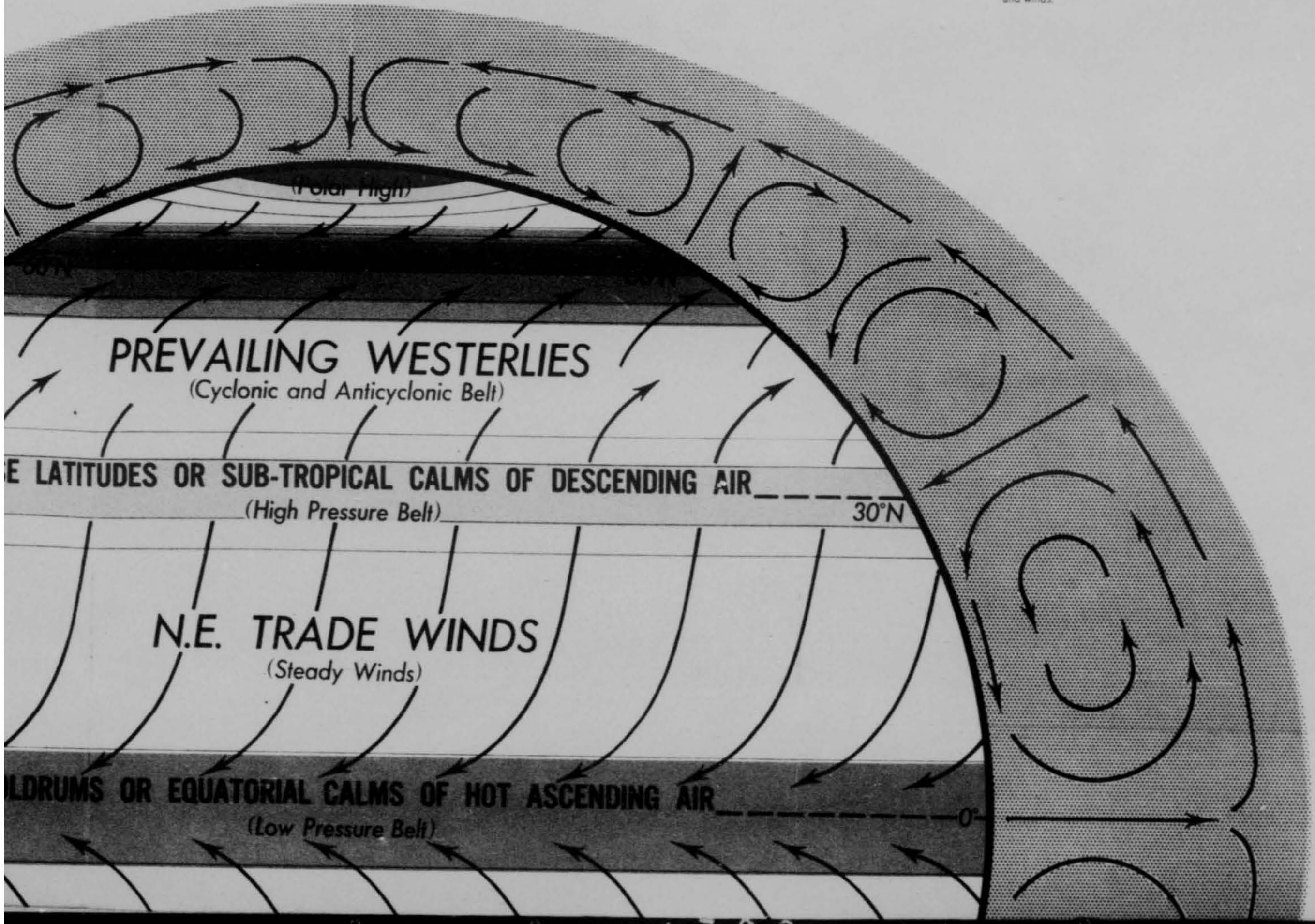
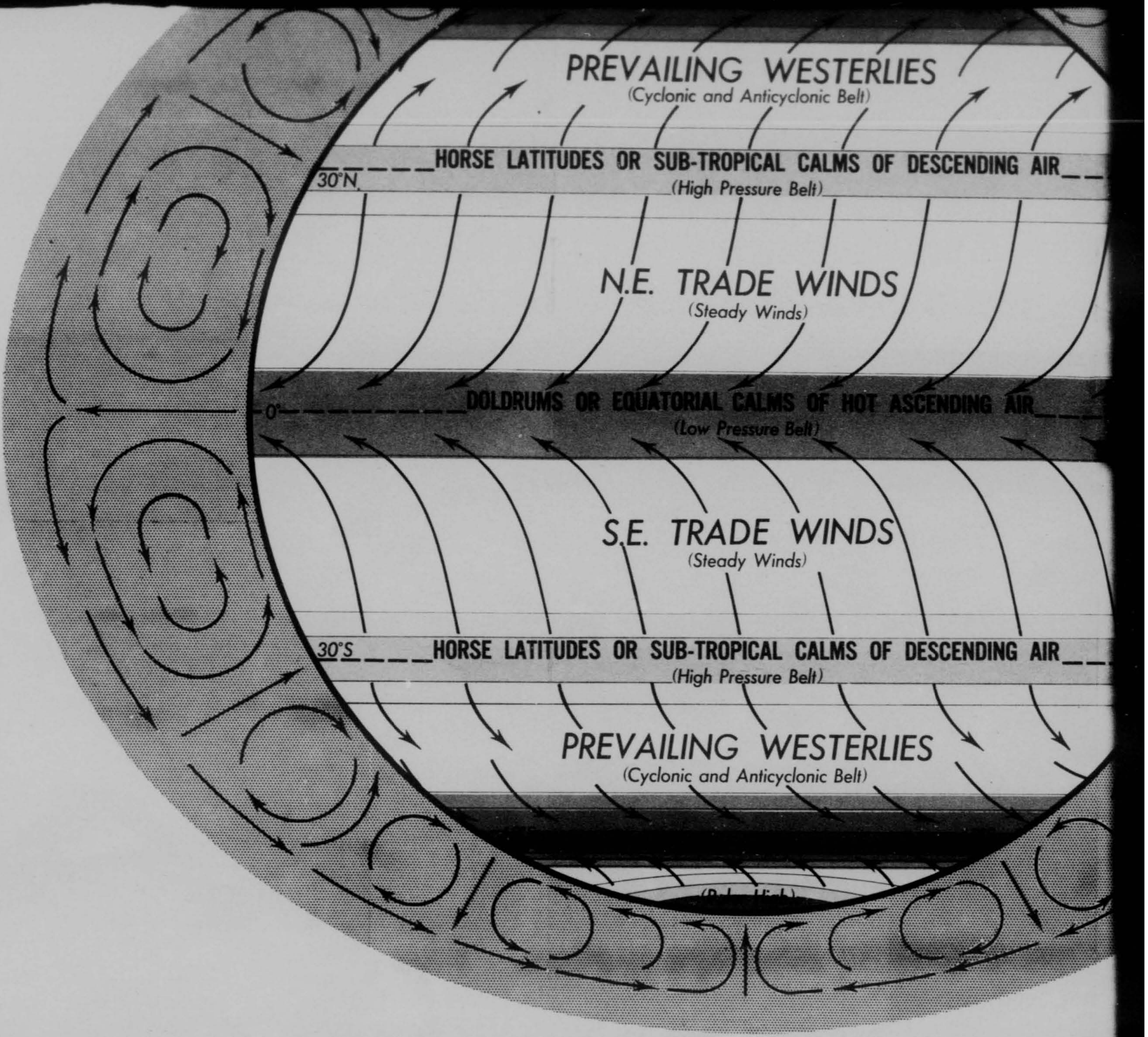
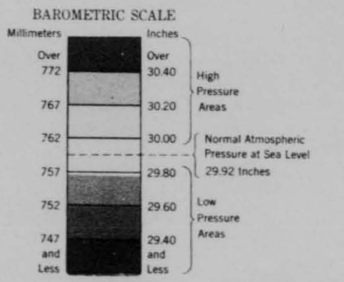

(Polar High)
60°N
PREVAILING WESTERLIES
(Cyclonic and Anticyclonic Belt)
30°N
HORSE LATITUDES OR SUB-TROPICAL CALMS OF DESCENDING AIR
(High Pressure Belt)
N.E. TRADE WINDS
(Steady Winds)
0°
DOLDRUMS OR EQUATORIAL CALMS OF HOT ASCENDING AIR
(Low Pressure Belt)

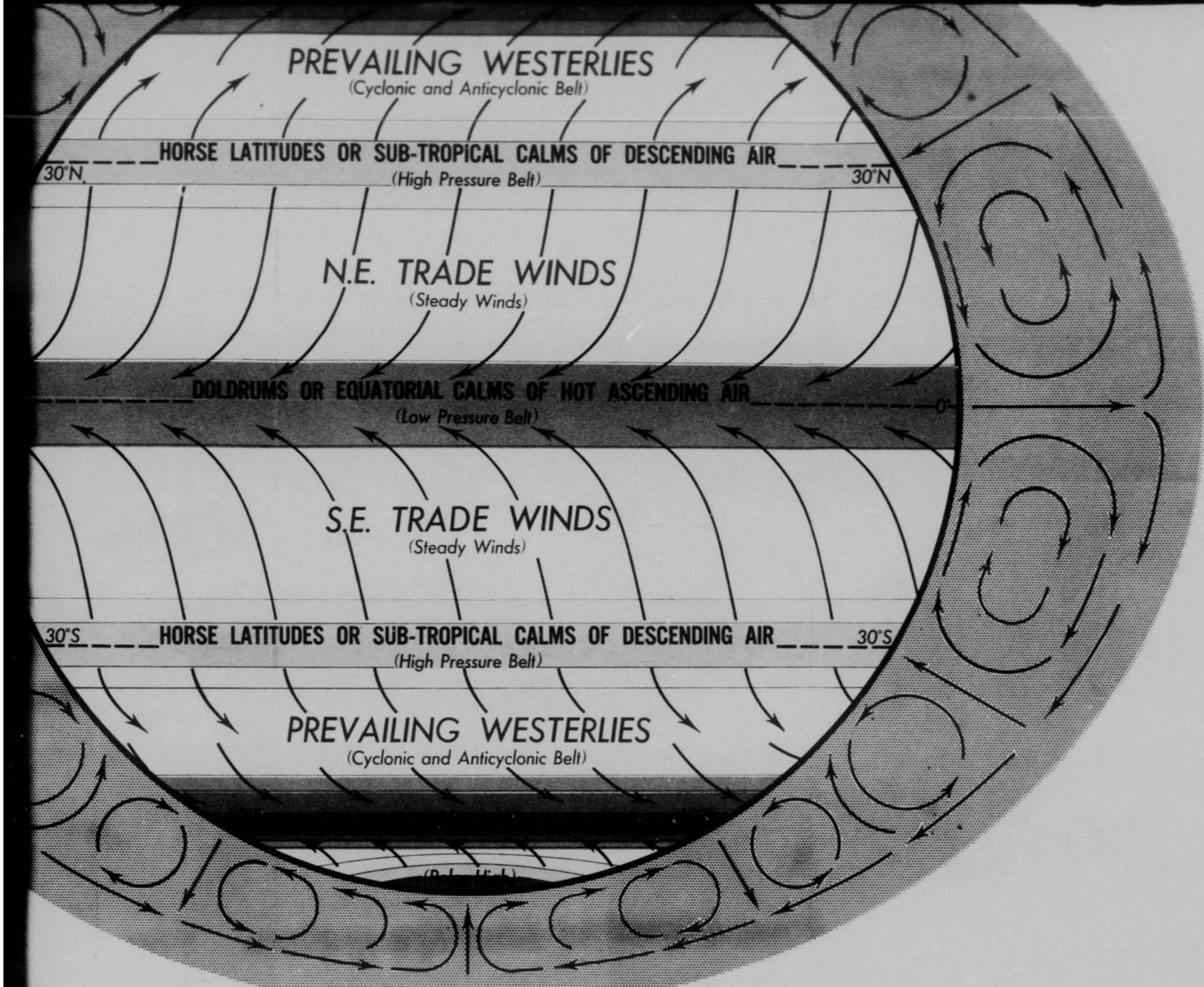
Note: This chart shows the atmospheric pressure zones and the air circulation of the world as they would be if the earth's surface were smooth and uniform and there were no seasonal changes. Charts GH 10 and 11 show the effects of the unequal distribution of the great land and water areas and the seasons on atmospheric pressure and winds.


(Polar High)
60°N
60°N
PREVAILING WESTERLIES
(Cyclonic and Anticyclonic Belt)
E LATITUDES OR SUB-TROPICAL CALMS OF DESCENDING AIR
(High Pressure Belt)
30°N
N.E. TRADE WINDS
(Steady Winds)
LDRUMS OR EQUATORIAL CALMS OF HOT ASCENDING AIR
(Low Pressure Belt)
0°


PREVAILING WESTERLIES
(Cyclonic and Anticyclonic Belt)
30°N
HORSE LATITUDES OR SUB-TROPICAL CALMS OF DESCENDING AIR
(High Pressure Belt)
N.E. TRADE WINDS
(Steady Winds)
0°
DOLDRUMS OR EQUATORIAL CALMS OF HOT ASCENDING AIR
(Low Pressure Belt)
S.E. TRADE WINDS
(Steady Winds)
30°S
HORSE LATITUDES OR SUB-TROPICAL CALMS OF DESCENDING AIR
(High Pressure Belt)
PREVAILING WESTERLIES
(Cyclonic and Anticyclonic Belt)
(Polar High)


BAROMETRIC SCALE
Millimeters
Inches
Over 772
Over 30.40
767
30.20
762
30.00
757
29.80
752
29.60
747 and Less
29.40 and Less
High Pressure Areas
Normal Atmospheric Pressure at Sea Level 29.92 Inches
Low Pressure Areas

Lithographed by ACS, 6-49


PREVAILING WESTERLIES
(Cyclonic and Anticyclonic Belt)
30°N
HORSE LATITUDES OR SUB-TROPICAL CALMS OF DESCENDING AIR
(High Pressure Belt)
30°N
N.E. TRADE WINDS
(Steady Winds)
DOLDRUMS OR EQUATORIAL CALMS OF HOT ASCENDING AIR
0°
(Low Pressure Belt)
S.E. TRADE WINDS
(Steady Winds)
30°S
HORSE LATITUDES OR SUB-TROPICAL CALMS OF DESCENDING AIR
30°S
(High Pressure Belt)
PREVAILING WESTERLIES
(Cyclonic and Anticyclonic Belt)
(Polar High)

U. S. AIR FORCE
GENERALIZED DIAGRAM
OF
ATMOSPHERIC PRESSURE ZONES
AND
WORLD AIR MOVEMENTS
CHART AU 50a

PUBLISHED BY THE AERONAUTICAL CHART SERVICE,
U. S. AIR FORCE, WASHINGTON, D. C.,
FEBRUARY 1947 (C&GS) Revised MARCH 1948 (ACS) BASE NO. 2R
FIRST EDITION

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NAVY GETS TURBOPROP ENGINE

The Navy and the Allison Division of General Motors took the wraps off the new XT-40 turboprop engine which will power the XP5Y-1 seaplane and other large Navy planes of the future.

The engine is simply two small turbojet units with drive shafts extending forward to a common gear box and driving counter-rotating propellers. The new engine is smaller than the standard J-35 jet used in the FJ-1. Since its energy goes mainly into turning propellers, its power is reckoned at 5500 horsepower. Its exhaust thrust, although present, produces only 10 percent of its total power.

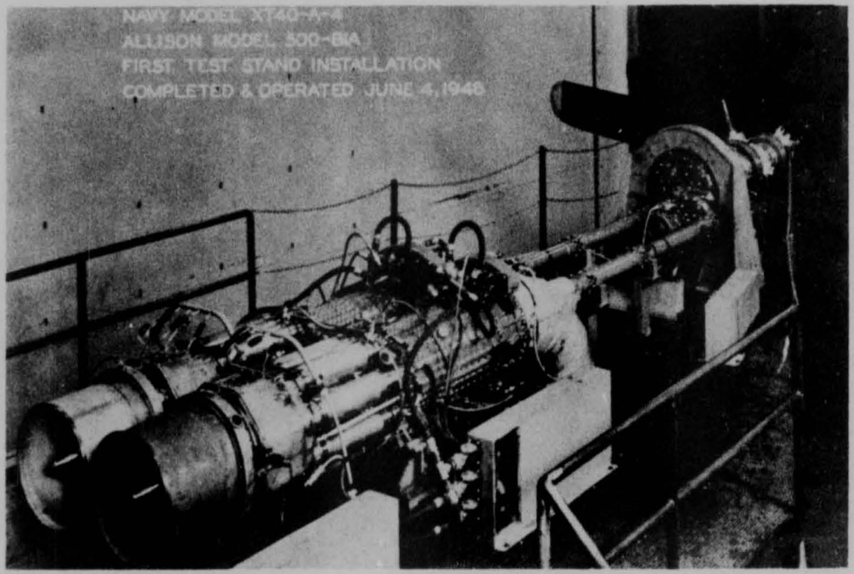
The XT-40 produces two horsepower per pound of weight and is the most powerful propeller-type engine ever cleared for flight. Through its gearing, the engine can utilize both jet units for take-off, and cruising is done on one unit for fuel economy. Conventional reciprocating engines of World War II weighed about a pound per horsepower, double that of the XT-40.

By operating on jet fuel and outperforming engines requiring high octane leaded gasoline, the XT-40 simplifies the supply problem for aircraft. Using extension shafting to drive propellers is not a new idea. Allison used it during the war in the Bell P-39 and P-63 fighter planes which were powered by reciprocating engines located in the rear of the fuselage.

Use of this shafting permits location of the engines at the point most favorable for airplane design and still allows location of propellers at the point where they can contribute most to airplane performance.

The Consolidated Vultee XP5Y-1 has been completed at San Diego and installation of the XT-40 engines soon will enable it to make its first flights.

Naval Aviation News January 1950 Rest



NAVY MODEL XT40-A-4
ALLISON MODEL 500-B1A
FIRST TEST STAND INSTALLATION
COMPLETED & OPERATED JUNE 4, 1948

MC-30274-1-R
V.2, No.6

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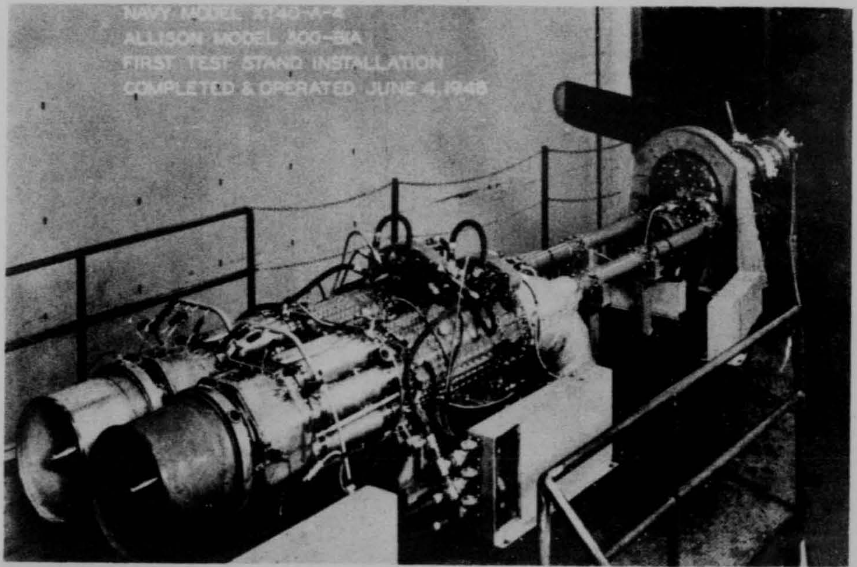
Naval Aviation News January 1950 Rest


NAVY MODEL XT40-A-4
ALLISON MODEL 500-B1A
FIRST TEST STAND INSTALLATION
COMPLETED & OPERATED JUNE 4, 1948

MC-30274-I-R
V.2, No.6

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H-19 Helicopter, page 21

CONTINENTAL AIR COMMAND

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AIR INTELLIGENCE Review

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D-558-2 SKYROCKET, page 15

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..For The Air Reserve Forces
...By The Directorate Of Intelligence
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2. Air [illegible] – Doctrine ([illegible])
3. Foreign Policy

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COR	46	110	24	39	97	55
	755	776	463	650	389	417

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A Int Sch			2
Alaskan Comd			2
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CairC	2	MATS, AD	2
TAC	1	MATS, PD	12
AU	4	AACS	6
APG	2	CWW	1
1A	4	SAC	10
2A	2	AMC	69
3A	2	USAFE	50
4A	2	20AF	10
5A	2	FEAF	55
6A	2	AAC	30
AFF	2	ATC	21
NGB	2	ConAC	175
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AIR INTELLIGENCE Review

This "Review" is published for three reasons:

1. To provide timely data regarding new techniques, practices and general information whereby intelligence personnel can maintain proficiency.
2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

Two types of material are solicited for publication:

1. Stories and pictures relating to the intelligence activities being conducted within an organization.
2. Original articles of a noncontroversial but informative nature.

Material submitted must include sources utilized and the authors name, rank and present military affiliation. Mail stories to: The Editor, "Air Intelligence Review," ConAC, Mitchel Air Force Base, New York.

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SOVIET AIR POWER

AN ADAPTATION OF AN ARTICLE BY ASHER LEE

The Soviet Union deservedly holds the blue ribbon for inaccessibility. Her highly developed system of secrecy is worth many fighter squadrons and antiaircraft guns to Air Marshal Constantin Vershinin, who is head of the Soviet Air Force and who plans the air defense of Russia. But in spite of Soviet Security, intensive research and study over the years permit the specialist to assess, within reason, the strength, organization, and fighting value of Russia's air squadrons; not with complete accuracy, of course, but that is no more possible in Moscow than in London or Washington. No one can predict the date or the climatic conditions in which Soviet air squadrons may have to do battle. Nearly all air weapons are today in the melting pot. Except for a few American six-jet planes, the long-ranged jet bomber isn't yet an operational reality. Flying faster than sound has been achieved experimentally; but not for two or three years will supersonic flight be a serious military factor. Radio and radar-controlled antiaircraft shells and rockets may or may not revolutionize air defense in the next few years. The atomic bomb is untested against effective air opposition. Its hitting power may be further reduced by defensive dispersal and underground factories. The range of military rockets of the V2 type, their degree of accuracy, and their explosive potential are as much a subject for scientific conjecture on Soviet rocket ranges near Irkutsk as on America's White Sands.

One thing must be said at once about the Soviet Air Force of today. It has benefited enormously in the last four or five years from the contributions of German scientists,

5
ILYUSHIN-4 JET BOMBER

The Russians are progressing in the field of long-range jet bombers.

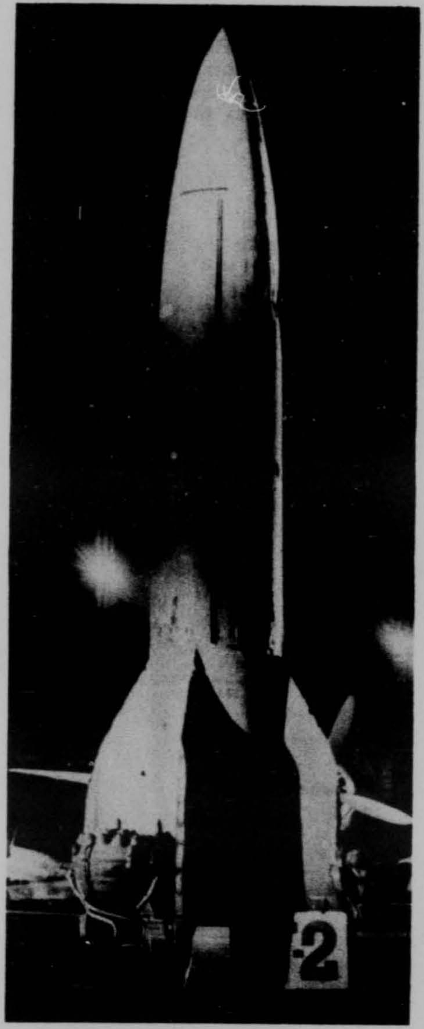
technicians, and tacticians. Vast strides have been made in almost every field of aviation. In mobility, in the design of its jet-engines, in the improvement of its aviation fuel, in the manufacture and use of radar equipment, and in the development of rockets, German influence is predominant. We can accept the published testimony of Colonel Grigori A. Tokaev that the Soviet Air Force scientific legacy from the Luftwaffe in 1945 was considerable. Equipment from dozens of Germany's aircraft factories and experimental air stations was heaped on the Kremlin's eager lap.

In World War II one of the greatest of the Soviet air weaknesses was the absence of any kind of radar equipment in operational aircraft. It is not surprising that three American Superfortresses which force-landed in Siberia at the end of the war, were pounced upon and retained by the Soviet as war booty. Valuable radar bombing equipment was aboard.

The operational use of radar is one of the keys to modern long-range bombing. Heed should be given to Britain's Air Chief Marshal Arthur Harris on this point. In his book Bomber Offensive, he writes: "Unless an effective nonvisual (radar) navigational aid is provided, the task of the night bomber is immensely difficult." It is a fact that all Soviet long-range bombing of Germany in World War II was done at night without the use of radar. There should be no surprise that it proved to be second-rate and ineffective. The USSR never used more than 250 long-range bombers on any of these operations. Three-quarters of the bomb loads were usually wide of the target area. There are thousands of German Air Force prisoners and German emigre factory workers in the U.S.S.R. who now are helping to remedy this state of affairs. There are German radar technicians lecturing and expounding at the aviation schools at Frunze, Novosibirsk, Sverdlovsk, Khabarovsk, Baku, and elsewhere. The U.S.S.R. also has the use of thousands of German radar workers from the Siemens Telefunken and Askania factories working in Leningrad, Kuibischev, and Kiev. In the next few years, these Germans may atone for some, but not all, of the Soviet ignorance of the use of radar in war.

The Germans not only bequeathed their radar equipment and technicians to the U.S.S.R. The Soviet have also acquired the secrets of a whole range of Nazi radio-controlled bombs and rockets which they are now exploiting. There are the Henschel radio bombs that the Germans used against Atlantic convoys and in the Salerno operations off Italy in 1943. These bombs were still in the experimental stage during World War II. The Germans pressed them prematurely into operations, but the Russians have had time to develop them at leisure. The same story of German legacy is to be told about radar-controlled and antiaircraft rockets, such as the Henschal V3 projectile. In fact, any future opponents of the Soviet Air Force may have to reckon with the whole gamut of Luftwaffe scientific weapons.

However, long before the Soviet Union gained possession of the German flying bomb (V1) and the long-range rocket (V2), Russian technicians had been working on their own domestic models of these air weapons. The doyen of Soviet rocket scientists is Constantin Ziolkowsky. With his colleagues Rynin, Perelman, Petrovitch, and Schershevsky, he was making large fuel rockets at the Soviet ZAGI research centers at Moscow, Leningrad, and Kazan, in the

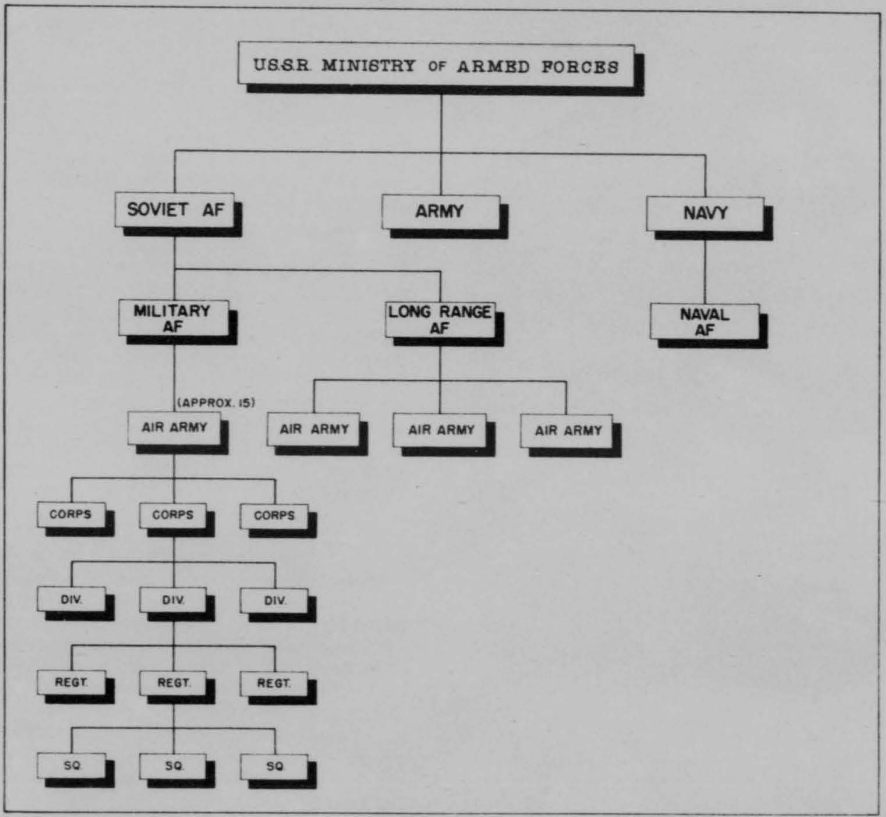


GERMAN V-2 LONG RANGE ROCKET
Gaining possession of this and other type guided missiles spurred Russian advances in this field.

1928-30 period. ZAGI is the central organization for Soviet air design, production, and experimentation. In the 1930's, the Soviet acquired some refugee workers from Germany's chief rocket center at Pennemunde. Most notable was Herman Oberth. Stalin failed to realize, however, that heavy rockets were to become a major weapon of war. He concentrated on developing a small rocket projectile used with moderate success on his fighter planes throughout World War II. The Soviet flying bomb was a failure. In the last three or four years Russia has been catching up. The Soviets have already improved on the performance of Nazi rockets and flying bombs. Of the two weapons, the rockets are likely to be developed most--especially for use from the increasing number of new Soviet long-range submarines. But the range of Russian heavy rockets delivering a ton of explosives will not exceed about 500 miles for a year or so. Nor will they exceed 1,000 miles in the foreseeable future. Soviet metallurgists and radio-control experts have the same problems to solve as those of other countries. Rocket cases get hot. Fuel takes up a lot of room and adds weight. The difficulties of radio-controlling large missiles traveling at over 3,000 miles an hour are far from solution. In fact, really effective long-range military rockets are at the moment beyond current scientific knowledge.

Numerically, the Soviet Air Force is smaller than at the end of World War II. It has a personnel strength of about half a million, but that is only the total of the men and women in uniform. There are, of course, thousands of civilian helpers--test pilots, cooks, clerks, and the like. From the peak war operational strength of about 22,000 planes, split up into about 650 air regiments, each with a strength of thirty to thirty-five planes, the Russian Air Force is down to about 15,000 planes and about 500 air regiments. This reduction is not to be interpreted as a disarmament gesture. It is simply the slow-down effect of building larger and more modern planes in the last three years. The war-time monthly peak production of 2,500 to 3,000 military planes, excluding trainers and production in the satellite countries, is down to about 2,000 to 2,500 a month. But this smaller Soviet Air Force has much greater hitting power and is a much better instrument of air defense than the rather clumsy machine which enjoyed air domination against a much weakened Luftwaffe on the Eastern Front during the last two years of World War II.

The Soviet Air Force made extraordinary progress during the second World War. When it had to go to war with Germany in the summer of 1941, it was, on the whole, a second-rate fighting machine. Large numbers of its fighters were obsolescent and


USSR MINISTRY OF ARMED FORCES
SOVIET AF
ARMY
NAVY
MILITARY AF
LONG RANGE AF
NAVAL AF
(APPROX. 15)
AIR ARMY
AIR ARMY
AIR ARMY
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CORPS
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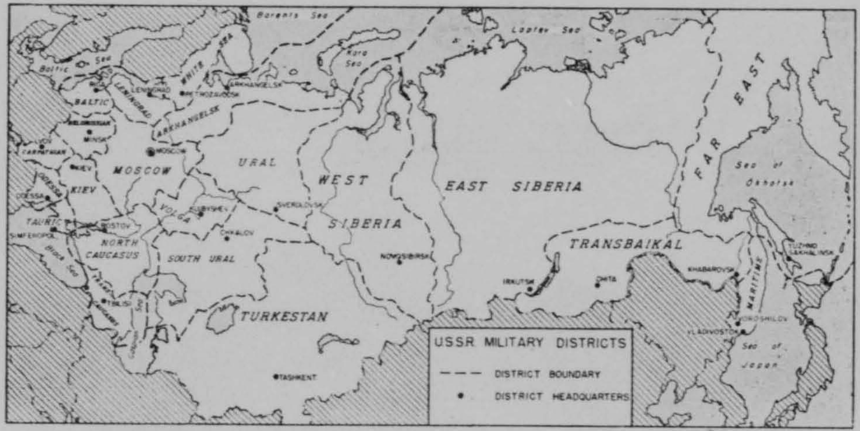
Barents Sea
Laptev Sea
Kara Sea
Baltic Sea
White Sea
LENINGRAD
PETROZAVODSK
ARKHANGELSK
BALTIC
RIGA
BELORUSSIAN
MINSK
LVOV
CARPATHIAN
MOSCOW
KIEV
ODESSA
TAURIC
SIMFEROPOL
ROSTOV
NORTH CAUCASUS
Black Sea
TRANS-CAUCASUS
TBILISI
BAKU
Caspian Sea
VOLGA
KUIBYSHEV
CHKALOV
URAL
SOUTH URAL
SVERDLOVSK
WEST SIBERIA
NOVOSIBIRSK
EAST SIBERIA
TURKESTAN
TASHKENT
TRANSBAIKAL
IRKUTSK
CHITA
FAR EAST
KHABAROVSK
MARITIME
VOROSHILOV
VLADIVOSTOK
YUZHNO SAKHALINSK
Sea of Okhotsk
Sea of Japan
USSR MILITARY DISTRICTS
DISTRICT BOUNDARY
DISTRICT HEADQUARTERS

Air Army Commanders have their headquarters at Odessa, Minsk, Leningrad, Tashkent, Chita, and Tiflis (Tbilisi).

had top speeds of little more than 300 miles per hour. Many of its bombers lacked the protection of adequate gunnery and armor plating. The standard of blind flying was low. There was a general lack of mobility fatal to an air force largely designed for tactical continental air warfare over vast European spaces. During the war, things improved rapidly. By 1944 Soviet designers Lavochkin, Mikoyan, Gurevich, and Yakovlev were turning out fighter planes almost as good as the Focke Wulfs and Messerschmitts, Spitfires and Tempests, or Thunderbolts and Mustangs. Soviet cannon-firing fighters with top speeds of 375 miles an hour were the rule rather than the exception in the Soviet Air Force of 1945. Soviet twin-engined planes designed by Ilyushin and Petlyakov had also become modernized and were then comparable in performance with their German opposite numbers. Large-scale production of American Dakota transport planes was in full swing at Moscow and Tashkent. Production of four-engined heavy bombers, which had been slowed up between 1941 and 1944, resumed at the prewar rhythm during the last year of the war in Moscow and Kazan. In addition, Soviet Air Force radio communications and the supply organizations were vastly improved.

But when the end of the war came, the Soviet Air Force was lacking in many operational respects. It had never been pitted for long against a modern air force of approximately its own size. The Soviet Air Force had gained no experience of operating radar equipment, jet-propelled planes, large rockets, radio-controlled bombs, or aircraft carriers. It had shown the world little of the hitting power of its long-range bomber force reformed in the Spring of 1942 under General Golovanov's command and Stalin's particular patronage. The Soviet air defense system had hardly been tested, for

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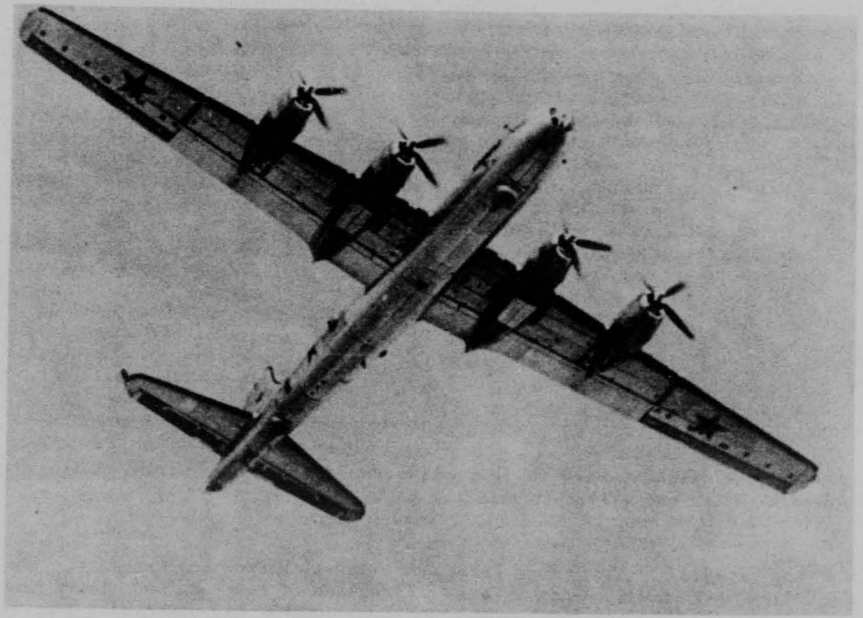
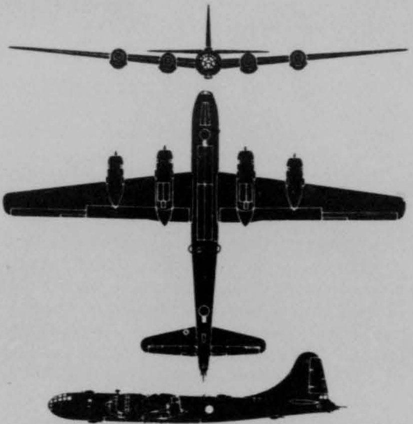




The U.S.S.R. B-29, probable Soviet designation TU-4, is a four-engine, low-wing bomber. This aircraft is apparently an identical copy of the U.S. B-29 Superfortress, several examples of which were confiscated by the Soviets after being forced to land in Soviet occupied territory before the end of the war. From the captured B-29's the Soviets have also produced a 72 seat pressurized passenger transport designated the TU-70. The redesign of the B-29 was produced by the versatile Andrei Tupolev, co-founder of the U.S.S.R. aviation industry.

SPAN: 141' 3"
ENGINE: Ash-90; radial/2200 hp
SPEED: 320 knots/30,000 ft.
RANGE: 3925 nautical miles/195 kn
ARMAMENT: 11 x 12.7 mm.
LENGTH: 99' 0"

the Luftwaffe was never able to launch a full-scale attack on Soviet cities. The German raids on Moscow in the summer of 1941 were modest in size, averaging about seventy-five planes per attack, and they petered out after half-a-dozen operations.

The Soviet Air Force today consists of air force units, airport ground service units, signal units, air bases, and meteorological service. According to its assignment, the air force units are divided into fighter, dive-bomber, bomber, reconnaissance, artillery-liaison communications, transport, and medical elements. As in the United States, the Soviet Air Force is a separate branch of the armed services equal to the Army and Navy. For administrative purposes, the Soviet Air Force is subdivided into two functional branches: the Military Air Force (for cooperation with ground troops) and a relatively small Long-Range Air Force.

The Air Force of the Soviet Union is organized into air armies, each being composed of three corps, further subdivided into three divisions per corps. Each air division comprises three air regiments, three squadrons per regiment.

The air armies are under direct authority of the Red Army Commanders, who have their headquarters at Odessa, Minsk, Leningrad, Tiflis, Tashkent, and Chita. The Soviet Long-Range Commander-in-Chief is General Golovanov. Both Long-Range and Military Air Forces are directly controlled by Marshal Constantin Vershinin.

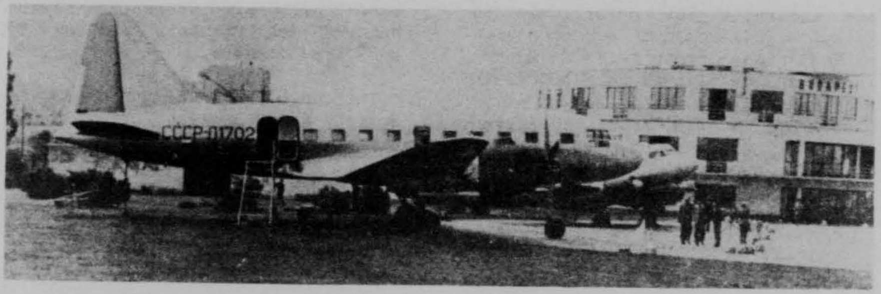
Over two-thirds of the 14,000 aircraft (400,000 personnel) in units are organized into over a dozen tactical air armies of about 1,000 aircraft each. Of these 14,000 operational aircraft there are several hundred jet fighters and some 300 B-29 type bombers.

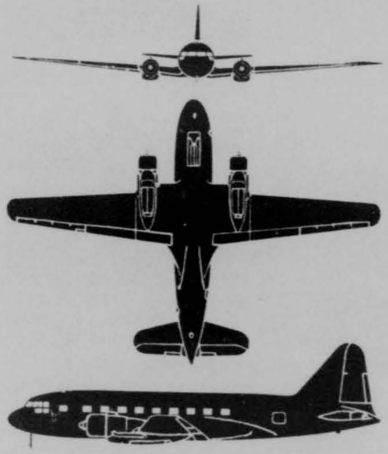
The Naval air components of the Soviet Navy consist primarily of shore based aircraft as well as seaplanes and flying-boats. These components are administered by the respective naval commands. The naval air components are organized in naval air divisions and naval air regiments in the same way as the Military Air Force. The role of the naval components in World War II was primarily in operations supporting the ground forces and protecting naval shore installations. They are now engaged in training for naval escort duty, anti-shipping operations, and mine-laying and sea reconnaissance. There are no aircraft carriers.

Soviet transport planes number about 3,000. This figure includes the civil air lines. These need to be taken into the military account because they could and would be quickly integrated with the military transport units, some of which are also part of the Long-Range Bomber Command. The war-time twin-engined P.S. 84, the Soviet version of the Dakota, is being replaced by the more powerful twin-engined Ilyushin 12. In addition, Ilyushin is building a heavier four-engined transport plane and there is a transport version of Tupolev's four-engined bomber, the TU-70.

In the bomber field the current Soviet long-range plane is the TU-4, apparently an identical copy of the U.S. B-29 Superfortress.

Soviet aircraft and engines are designated by an abbreviation of the designer or designing committee, followed by a number which is not always in the correct chronological





The IL-12 is a twin-engine, low-wing monoplane transport. The wing has positive dihedral; and its center section is rectangular while the outer sections are trapezoidal with rounded tips. Single tailed, it has a retractable tricycle landing gear. The main wheels are dual and the nose wheel is single. The IL-12 has a capacity of 27 passengers or 19 paratroops. Designed by Ilyushin, the plane is similar to the C-47, but the IL-12 wing is placed farther aft than the C-47. First public appearance of the IL-12 was at Tushino Airport, Moscow, on August 18, 1946.

SPAN: 104' 0"
ENGINE: Ash-82; radial/1680 hp
SPEED: 220 knots/8800 ft.
RANGE: 1080 nautical miles/164 kn
ARMAMENT: None
LENGTH: 69' 10"

order. An obvious example is the Yak-3 which was developed from the Yak-9, both designed by Alexander Yakovlev, one of U.S.S.R.'s foremost aeronautical engineers.

Soviet jet-fighters and fighter-bombers have been replacing the war-time conventional fighter planes in Air Force units since 1946. Svetzov, chief Soviet jet-engine designer, has been working on jet-engines since before the German war, but by the summer of 1945 the U.S.S.R. was still without its first jet fighter squadron. Then came the German windfalls. Hundreds of Junkers 004 and B.M.W. 003 jet-engines were acquired in 1945 from the Junkers Dessau factories and the aero-engine plants in Austria,Czechoslovakia, and Hungary. The Luftwaffe abandoned to the Soviet Air Forces dozens of samples of the single-jet Heinkel 162,the twin-

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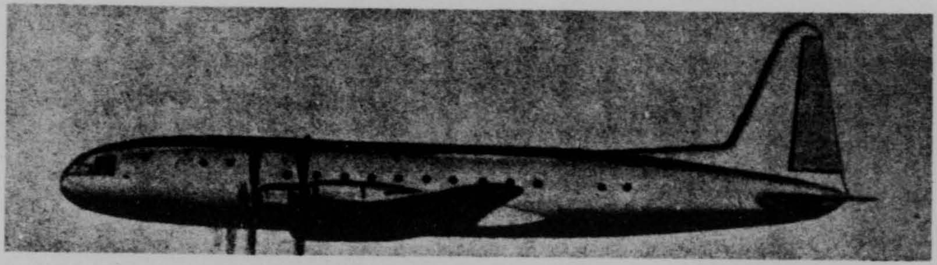
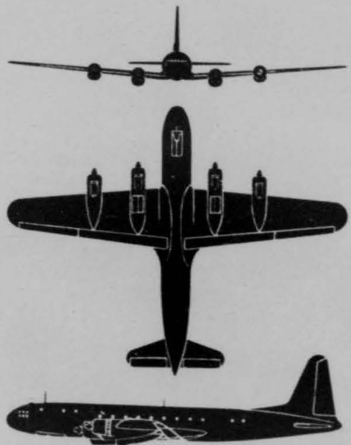


The IL-18 is a four-engine, low-wing transport. The fuselage is cigar-shaped with no prominent windshield. The wing root is faired into the fuselage with the fairing extending aft of the trailing edge of the wing. The wing tapers on the leading and the trailing edge to relatively narrow chord wing tips. There is a single tail. It is fitted with a retractable tricycle landing gear with dual wheels. The IL-18 has a 66 passenger capacity with crew of 6. Superficially the IL-18 resembles the British Avro Tudor 7 and is evidently a scaled-up model of the Soviet twin-engine transport, the IL-12.

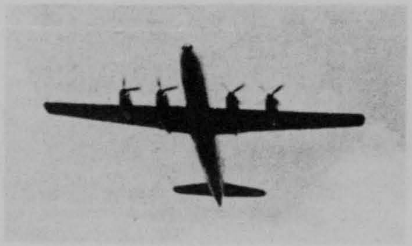
SPAN:	131' 0"
ENGINE:	Ash-82 FNW;radial/1825 hp
SPEED:	270 knots/20.000 ft.
RANGE:	2000 nautical mi/175 kn
ARMAMENT:	None
LENGTH:	100' 0"

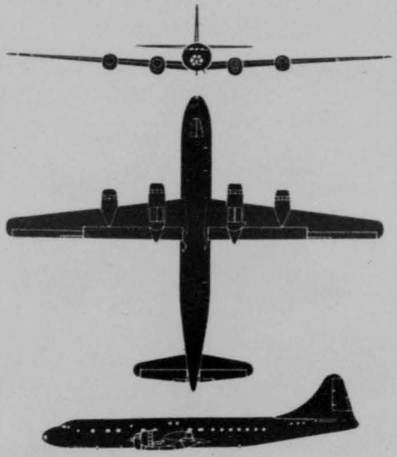


jet Messerschmitt 262, and the two-jet Arado 234. Long before the first fifty British Rolls-Royce jet engines arrived in the U.S.S.R. in 1946, the Soviets were flying their own Yak and Mig jet planes. Today they have between 1,500 and 2,000 jets in squadrons. The Soviet fighters have 30 and 37-mm cannon, against the more general British 20-mm gun, but their engines lack the power and speed of the latest types of British Meteor and Vampire. Most Soviet jet-engines in service have a static thrust of about 4,000 lbs., though engines of about 5,000 lbs thrust will shortly be in squadron service.

And what about the men behind the planes? What about the human factors of morale, training, and leadership?

The morale of the Soviet Air Force is currently high. It gained great





The TU-70 is a four-engine, low mid-wing transport that resembles the B-29 in configuration. The design is obviously based on the B-29 bomber. The fuselage of the TU-70 is longer and mounted higher on the wing, and incorporates a step-down pilot's windscreen. Soviet plants are also producing a complete copy of the B-29 as a bomber. The TU-70 has a capacity of 72 passengers.

SPAN: 141' 3"
ENGINE: Ash-90; radial/2320 hp
SPEED: 260 knots/sea level
RANGE: 3000 nautical miles/195 kn
ARMAMENT: None
LENGTH: 119' 0"

national prestige in World War II. It is, of course, a bad second to the Red Army in the Press and annals of the U.S.S.R. Nevertheless, it has received a generous allowance of national back-slapping and a generous allocation of war decorations. If the staple breakfast diet for many is Vodka, there is also a generous allocation of fruit, meat,

The following list shows the more important designers by name in alphabetical order:

ANT-Andreas Nickolaievitch Tupolev
BI-Berendjakand Issariev
ER-Ermolaev
IL-Ilyushin
LA-Lavochkin
LAAG-Lavochkin, Gorbunov and Gudkov
LI-Lisitsin
MI-Miassishchev
MIG-Mikoyan and Gurevich
PE-Petlyakov
PO-Polikarpov
SHCHE-Shcherbakov
SU-Sukhoi
TU-Tupolev
YAK-Yakovlev

Soviet aircraft were previously designated according to the duties for which designed. The following list shows the old designations which may still be referred to in some of the older types.

I-Fighter
BB-Short Range Bomber
SB-Medium Bomber
DB-Long Range Bomber
TB-Heavy Bomber
MT-Mining and Torpedo
R-Reconnaissance
PS-Transport
MR-Reconnaissance Seaplane
MBR-Short Range Reconnaissance Seaplane
MDR-Long Range Reconnaissance Seaplane
KOR-Shipborne
U-Elementary Trainer
UT-Advanced Trainer

SOVIET EQUIPMENT

Type	Designation	Manufacturer	Country
Bomber	PE-2,8	Petlyakov	U.S.S.R.
	TU-2	Tupolev	U.S.S.R.
	IL-4	Ilyushin	U.S.S.R.
	DB-3	Ilyushin	U.S.S.R.
	SU-2	Sukhoi	U.S.S.R.
	USSP B-29 type	Tupolev	U.S.S.R.
Attack	IL-2,10 (Stormovik)	Ilyushin	U.S.S.R.
Fighter	YAK-3,5,7B,9, 15	Yakovlev	U.S.S.R.
	LA-5,7,9,11	Lavochkin	U.S.S.R.
	MIG-9,11	Mikoyan&Gurevich	U.S.S.R.
	LAGG-3	Lav. Gorb. & Gud.	U.S.S.R.
	PE-3	Petlyakov	U.S.S.R.

Type	Designation	Manufacturer	Country
Reconnaissance	PO-2	Polikarpov	U.S.S.R.
	MBR-2 (Naval)	Blochavinlin	U.S.S.R.
	GST (Catalina Type) (PBY) (A-10)	State Factory	U.S.S.R.
	MDR-6 (Naval)	Blochavinlin	U.S.S.R.
Transport	IL-12,18	Ilyushin	U.S.S.R.
	YAK-6,8,12, 14,16	Yakovlev	U.S.S.R.
	LI-2 or PS-84 (Skytrain type C-47, R4D)	Wasalov	U.S.S.R.
	MI-6	Miassishchev	U.S.S.R.
	SHCHE-2	Shcherbakov	U.S.S.R.
	TU-70	Tupolev	U.S.S.R.
Trainers	YAK-7,11,18	Yakovlev	U.S.S.R.
	UT-2	Yakovlev	U.S.S.R.

FOREIGN EQUIPMENT

American, British and German types presently available in the U.S.S.R.

Type	Designation	Manufacturer	Country
Light Bomber	Mitchel B-25 (PBJ)	North American	U.S.A.
	Ju 287	Junkers	Germany
	Havoc A-20 (BD)	Douglas	U.S.A.
Attack Fighter	Spitfire 2,5	Vickers-Armstrongs	G.B.
	Hurricane 2B	Hawker	G.B.
	Aircobra F-39	Bell	U.S.A.
	Warhawk F-40	Curtiss	U.S.A.
	Thunderbolt F-47	Republic	U.S.A.
	Kingcobra F-63	Bell	U.S.A.
	Me 262	Messerschmitt	Germany
	Me 109	Messerschmitt	Germany
	Me 163C	Messerschmitt	Germany

Type	Designation	Manufacturer	Country
Fighter (Continued)	Fw 190A-1	Focke-Wulf	Germany
	Ta 152H	Focke-Wulf	Germany
	He 162	Heinkel	Germany
	Ar 234C	Arado	Germany
Reconnaissance	Catalina PBY (A-10)	Convair	U.S.A.
	BV 138 (Naval)	Blohm & Voss	Germany
	Do 18E (Naval)	Dornier	Germany
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Ju 390	Junkers	Germany
Trainer	Texan T-6 (SNJ)	North American	U.S.A.

cheese, and chocolate at main meals; there are also special Air Force holiday centers. On the whole, a healthy atmosphere exists in the Soviet Air Force engendered by healthy grumbling about aircraft and senior officers, by a blind passion for flying, and by a devoted patriotism to their country.

Basically, training in the Soviet Air Force is run on sound lines. In the holocaust of defeat and withdrawal in the summer of 1941, there were chaotic phases. Flying instructors were sent to the front-lines. There was a shortage of planes in the schools, particularly for the vital later operational stages of training. But the Soviet got over that and they are now back to peace-time schedules. Luxury training standards can be indulged in once again. Young Soviet hopefuls begin at the aero clubs (there are over 500 in the U.S.S.R.). Some of the smaller ones have only about ten old-fashioned biplane trainers with perhaps half-a-dozen flying instructors. But the larger clubs at Leningrad, Moscow, Kiev, Kuibischev, Irkutsk, Tashkent, and elsewhere run to twenty or thirty modern planes with one instructor per machine. They pick out promising boys and girls at school and give them basic technical training, elementary navigation, and a bit of flying. These clubs have over 100,000 young aspiring pilots using their facilities.

The next stage is military flying proper. Soviet citizens are selected for the Air Force during their period of military conscription, which has been, of course, a non-stop feature of Soviet life ever since the 1917 revolution. Air

RESTRICTED

SOVIET EQUIPMENT

Type	*Designation*	*Manufacturer*	*Country*
Bomber	PE-2,8	Petlyakov	U.S.S.R.
	TU-2	Tupolev	U.S.S.R.
	IL-4	Ilyushin	U.S.S.R.
	DB-3	Ilyushin	U.S.S.R.
	SU-2	Sukhoi	U.S.S.R.
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	MIG-9,11	Mikoyan&Gurevich	U.S.S.R.
	LAGG-3	Lav. Gorb. & Gud.	U.S.S.R.
	PE-3	Petlyakov	U.S.S.R.

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	YAK-6,8,12, 14,16	Yakovlev	U.S.S.R.
	LI-2 or PS-84 (Skytrain type C-47, R4D)	[illegible]	U.S.S.R.
	MI-6	Miassishchev	U.S.S.R.
	SHCHE-2	Shcherbakov	U.S.S.R.
	TU-70	Tupolev	U.S.S.R.
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	Hurricane 2B	Hawker	G.B.
	Aircobra F-39	Bell	U.S.A.
	Warhawk F-40	Curtiss	U.S.A.
	Thunderbolt F-47	Republic	U.S.A.
	Kingcobra F-63	Bell	U.S.A.
	Me 262	Messerschmitt	Germany
	Me 109	Messerschmitt	Germany
	Me 163C	Messerschmitt	Germany

Type	*Designation*	*Manufacturer*	*Country*
Fighter (Continued)	Fw 190A-1	Focke-Wulf	Germany
	Ta 152H	Focke-Wulf	Germany
	He 162	Heinkel	Germany
Reconnaissance	Ar 234C	Arado	Germany
	Catalina PBY (A-10)	Convair	U.S.A.
	Bv 138 (Naval)	Blohm & Voss	Germany
	Do 18E (Naval)	Dornier	Germany
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Ju 390	Junkers	Germany
Trainer	Texan T-6 (SNJ)	North American	U.S.A.

cheese, and chocolate at main meals; there are also special Air Force holiday centers. On the whole, a healthy atmosphere exists in the Soviet Air Force engendered by healthy grumbling about aircraft and senior officers, by a blind passion for flying, and by a devoted patriotism to their country.

Basically, training in the Soviet Air Force is run on sound lines. In the holocaust of defeat and withdrawal in the summer of 1941, there were chaotic phases. Flying instructors were sent to the front-lines. There was a shortage of planes in the schools, particularly for the vital later operational stages of training. But the Soviet got over that and they are now back to peace-time schedules. Luxury training standards can be indulged in once again. Young Soviet hopefuls begin at the aero clubs (there are over 500 in the U.S.S.R.). Some of the smaller ones have only about ten old-fashioned biplane trainers with perhaps half-a-dozen flying instructors. But the larger clubs at Leningrad, Moscow, Kiev, Kuibischev, Irkutsk, Tashkent, and elsewhere run to twenty or thirty modern planes with one instructor per machine. They pick out promising boys and girls at school and give them basic technical training, elementary navigation, and a bit of flying. These clubs have over 100,000 young aspiring pilots using their facilities.

The next stage is military flying proper. Soviet citizens are selected for the Air Force during their period of military conscription, which has been, of course, a non-stop feature of Soviet life ever since the 1917 revolution. Air

Force personnel are usually the elite. The basic military flying training takes about two years. The first three months are spent in marching, drilling, handling guns, physical training, and a fairly hefty dose of political instruction. The inevitable lectures on theories of flight, air navigation, aircraft instruments, map reading—all are there. A written and oral examination follows. The following year or so is devoted to circuits and bumps, and short cross-country flights with the air instructor at this stage guessing whether his protege shows more promise as a bomber or as a fighter pilot. When this decision has been made the young pilot receives his wings and is ordered to bomber, fighter, or reconnaissance school.

If one had to select a point of major interest in the Soviet air training system it would be the merging of the small wartime specialist bomber, fighter, and reconnaissance schools into giant training centers each of which accomodates several thousand pupils. Here Soviet air gunners, fighter pilots, and radio operators are trained in one big communal flying camp. Flight mechanics, army support specialists, and bombardier-observers rub shoulders in the same mess huts. This makes a fine breeding ground for the exchange of ideas. It generates flexibility, camaraderie, and sympathy between bomber, fighter, and reconnaissance crews. Apart from that, these combined training centers are more economical to run than a large number of small camps.

Just as you would expect there is a place for women in the Soviet Air Force training schemes. Girls get the same chance as the boys in the aero clubs and the best of them become flying instructors. During the war military training centers for women were set up in the Urals, at Astrakhan and just east of Moscow. Soviet airwomen played a slightly greater role in their country's Air Force annals than women in other countries. They ferried aircraft, worked in aircraft plants, manned AA batteries, did photo interpreting. The exceptional fact is that some of the best female pilots did fly on combat duties--usually on short-range night-bomber operations and as fighter pilots usually in a defensive role, covering Soviet cities and industrial centers. It would be sheer feminist or Stalinist exaggeration to say, however, that they played, are playing, or will play more than a token part in operational flying duties. One per cent of Soviet Air Force combat sorties would more than cover their past or future contribution. On the ground, however, they played and continue to play an important role. With the post-war introduction of radar, Soviet airwomen may become more important in guiding young Ivan's flights, in identifying the approach of hostile planes, and plotting the paths of raids or flights in and out of the U.S.S.R. Most Soviet women, in spite of undoubted emancipation opportunities, want to bring up a family. Military flying is a long way from the home.

The great weaknesses in Soviet air training are in the realms of radar and long-range bombing. In World War II, the Soviet had a very second-rate long-range bomber force led by Air General Golovanov. The transport and close support demands of the Red Army, the lack of sound navigational training, the effective Anglo-American bombing of targets all over Germany, Central Europe, and the Balkans, all contributed to clip Golovanov's long-range wings. Today, Russia's air leaders undoubtedly regret their lack of know-how

1722

Women of the Soviet Air Force grouped in front of Yak-1.

in strategic bombing, and are doing all they can to remedy the situation. Radio Moscow may pour out bogus post war pity for Germany's battered cities just in order to make political capital. Their transmitters may blare out the fairy story that it was the wicked Fortress, Liberator, and Lancaster crews from U.S.A. and Great Britain who vented their barbarian bombing spite on the poor German population. The truth is that Soviet air leaders like Novikov, Gromov, Golovanov, and Vershinin took more than a passive interest during the war in both British and American strategic targets, planes, and bombs.

Who are Russia's air leaders today? In the Politburo Malenkov and Molotov have most influence on air matters at the direction and control level. Stalin is anxious to build a large strategic bomber force and to build large numbers of trans-oceanic rockets on the German blueprint of Dr. Sanger, but the ex-Generalissimo is not well-versed in the difficulties of developing modern air weapons. Vershinin, Chief of the Soviet Air Force, and General Sudets, his chief-of-staff, have a reasonably free hand in developing their own ideas. Colonel Tokaev has published statements on the Soviet Air Force implying that the threat of purges or imprisonment, plus a centralized bureaucracy, handicap the development of the Soviet Air Force. There is little evidence to support this view. Sudets and Vershinin are well aware that the average reign of their predecessors was from one to two years--that Soviet air chiefs like Alksnis, Loktionov, Rychagov, and Novikov lost the Kremlin favour and suffered violent treatment. But Vershinin and Sudets, his chief-of-staff, are full-blooded commanders, and like most Russian airmen, accept the normal operational risks of life in war and peace.

What are their air plans and hopes? Defensively, they must build up the chain of radar stations along the Arctic, Baltic, and Black Sea coasts as well as along the shores of the Far Eastern maritime provinces. As quickly as they can, they are manufacturing and installing these radar stations which will give warning of the height, direction, and numbers of incoming planes. They are practicing and training intensively so that their radar operators can interpret the "blips" in the cathode ray tubes reliably and quickly. But it is a long process which will take several more years to complete. Apart from radar, they will need to stiffen their fighter and antiaircraft defenses. No doubt, when the time comes, many of the fighter regiments at present under tactical command with the Army and Navy, will be switched to a master fighter command responsible for the strategic defense of the U.S.S.R. It is, however, a vast area to defend, and should always be vulnerable to feints and tactical variations by incoming bombers.

Offensively, the Soviet Air Force will do well in a tactical role, and it should succeed strategically if it confines itself to night and bad-weather bombing.

In daylight operations, its long-range bombers, unescorted, would be ready victims of jet-fighters provided there was adequate warning of their approach. We cannot assume that the Soviets have no immediate plan for long-range daylight bombardment. Long before air leaders like Generals Arnold and Spaatz laid stress on the future strategic importance of the Arctic air-lanes, Soviet aircraft were making test flights over the North Pole routes. One of Golovanov's long-range bomber divisions specializes in Arctic flying and operates from Siberian bases.

The Air Defense squadrons of the Soviet Air Force are being made as mobile and self-contained as possible. This is partly the Russian answer to the threat of atom bombing, partly the inevitable result of having multi-air fronts in prospect over the Black Sea, Western Europe, the Far East, and the Arctic.

In any final survey of Russia's air power, one inevitably compares it with that of the United States. Although the "Price of Power" (Royal Institute of International Affairs) finds Russian industry more vulnerable to bombing than that of the U.S.A., that is compensated for to some extent by the ignorance outside Russia as to where the vital war factories in the U.S.S.R. are located. Industrial intelligence, as the records show, was a weakness in the war against Germany. It is likely to be an even greater weakness of any power waging war against the U.S.S.R. On the other hand, America has a big technical lead in radio-controlled bombs and rockets, in the development of long-ranged jet-propelled bombers, and in total industrial potential. Both powers are committed to providing air forces for others, but it is likely that this will prove a greater drain on the Soviet than on the U.S.A. Moreover, the forces of the Western Alliance are likely to provide a better operational return and more industrial cooperation than the satellite countries of the Cominform. In the over-all manpower situation, Russia and her satellites are likely to provide fewer first-class pilots than the Western Powers. This does not imply that Soviet pilots are not fearless, well trained, and competent—it is simply that the Balkan and Transcaucasian populations are likely to produce less first-class airmen and technicians per million head of population than the inhabitants of Western Europe, North America, and the Commonwealth.

Under no circumstances should the Russian Air Force be regarded lightly. The Russians have shown as great a capacity for successful imitation as did the Japanese. It is well known that they have succeeded in building a formidable strategic air force. It may be that they have mastered the techniques of in-flight refueling and cruise control. It has been noted that they are competent arctic navigators. Their possession of the atomic bomb has changed the entire concept of their long-ranged capability. Tactical air forces have been expanded and brought to a high degree of efficiency. They are currently deployed to act instantly in support of the Red armies. It can be concluded positively that the known power and the predictable potential of the Soviet Air Force make it a factor which must be regarded with the gravest concern.

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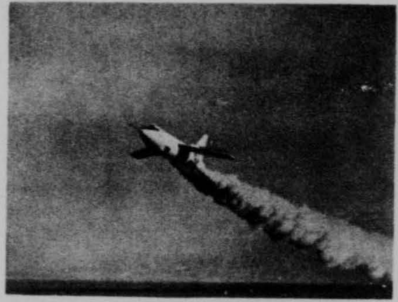
COVER PHOTO



Pictured on the cover is the Navy's new D-558-2 "Skyrocket." Produced by Douglas in cooperation with the Navy and the National Advisory Committee for Aeronautics, it is a jet and rocket powered experimental craft designed for high speed and high altitude testing. (The JATO attachment shown is not an internal part of the plane, but was added in a test to reduce take-off run. The bottles are dropped when the plane is in the air).

The first jet-rocket plane of its type, it can take off under its jet power, climb to high altitude, and cut on its rockets to approach the speed of sound. The jet power is resumed for landing.

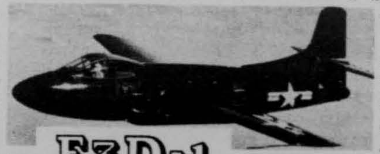
The Westinghouse J-34 turbojet engine generates a 3000-lb thrust. The four-unit Reaction Motors rocket engine produces a 15000-lb thrust per unit.

The D-558-2 is designed for greater speeds than its predecessor, the D-558 "Skystreak" which at one time held the world's speed record of 650.6.

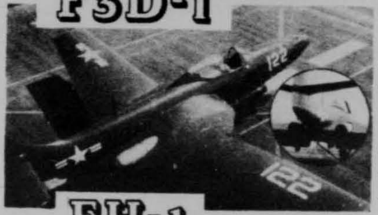
Magnesium alloy is used for the greater portion of the fuselage skin. Wing and tail surfaces are 75S aluminum alloy. Aerodynamic brakes are provided on the aft fuselage for drag and speed control. The cockpit is pressurized for high altitude flight, and refrigerated to counteract heat created by the friction at critical speeds.

Air for the turobjet is scooped in by ducts on each side of the fuselage. The plane carries 250 gallons of aviation gasoline (not kerosene) besides liquid rocket fuel.

To protect the pilot, the forward section of the fuselage is jettisonable. In an emergency, the pilot blasts the nose compartment clear; and when his compartment slows down, he parachutes out in a normal fall.



F3D-1



FH-1

In the centerspread of the 5 March 1950 Issue (Vol. 2, "No. 5), captions on the Navy FH-1 Phantom and the F3D-1Skyknight are reversed. The identity is as pictured above. The Air Intelligence Review appreciates the promptness of the 22nd Bomb Wing, March AFB, in calling attention to this matter.

Lord Tedder
ON AIR DEFENSE

This article paraphrases the remarks of Marshal of the Royal Air Force, Lord Arthur William Tedder, G.C.B., in a speech to the Royal Empire Society in London, November 1949.

Lord Tedder, one of the world's leading airmen and a profound student of modern war, considers the problem mainly from Britain's viewpoint. Nonetheless, his views are of interest and importance to everyone concerned with the security of the United States.

Before specifically discussing air defense, the Air Marshal discussed defense as a whole, pointing out the prime fact that in modern days war is total. It is a unity involving every branch of national life. Defense is not merely a matter of guns, ships, and aircraft. Every man and woman in the nation has his or her share in defense. A nation is very much like a boxer. If he is going to fight it is not good enough for him merely to have bulging biceps and knobby knuckles. He has got to be fit all around. First and foremost his morale must be good. Surely everyone would readily accept the fact that high morale is the first principle governing the effectiveness of armed forces. But not everyone realizes that the real key is national morale. The armed forces are, after all, merely that part of the nation whose particular role in national war effort involves them in actual fighting or direct support of fighting units. If the morale of the nation is weak, the morale of the forces will not be high. The strength of Britain has always been in its unshakeable morale—its flat refusal to consider the possibility of defeat. When the Battle of Britain is commemorated each year, the airmen who fought that battle in the air over England, the channel, and the North Sea are rightly honored. Yet one factor no less vital to that victory than the courage and skill of the airman was the unquenchable morale and spirit of the people.

There have been many signs recently that that spirit is as live now as ever it has been. Nevertheless, there is one thing which must be watched carefully. The British are rather proud of talking about "backs to the wall" and "last ditches," and it is in one way something for the people to be proud of, that the tougher things look the tougher they become. Complacency, however, is dangerous. During the awful period so appropriately called "the phoney war," it frequently was said that until the nation was honestly frightened it would not really get down to business properly. There is a modicum of truth in that comment. In the last war all the first rounds of the contest were lost; and, in fact, the country was unpleasantly near being knocked out. With modern developments in the techniques of warfare, it must be realized that Britain cannot afford to take such chances again.

In the British press, mention has been made of some public differences of opinion in America between admirals and airmen. Nevertheless, without entering that controversy, this is what one American admiral said:

"It behooves countries whose people, like all free peoples, object to paying for large military establishments, to see to it that they are strong enough to gain the time to turn the spirit and capacity of their subjects into the new activities that war calls for."

Since Admiral Mahan died some years ago, it is trusted that this quoting will not be regarded as any intervention in current controversy on the other side of the Atlantic. That statement is as true now as it was when written;but its application must be adjusted to fit in with modern conditions. There are two main points; firstly the time factor; secondly expense or, preferably, economy.

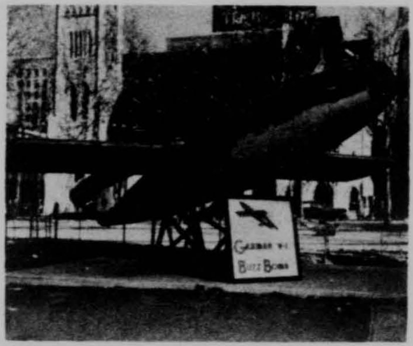
As regards the last war,providence was very kind to Britain. The country was given considerable warning before the war. It was four years before the Battle of Britain that the Royal Air Force expansion began. Further warning and breathing space resulted from Munich and from the eight months of "phoney war."

Despite all that, the British were overwhelmed in Normandy, in France, in Greece, and in Crete. Those were the days when soldiers and sailors who had passed through hell in those tragic campaigns came home with bitterness against the Air Force—the R.A.F. had let them down. Yet those were also the days when many of the brightest and best had given their lives in the air against hopeless odds, gallantly attempting to help our men on land and at sea. England can only be thankful to providence and those in authority at the time that there were enough left—the few—to hold the fort in the crucial struggle, the Battle of Britain.

What had happened? What was wrong? The position was really quite simple. Once air power had become a real factor in war, as it now had, nothing (whether military, naval or economic) could carry on effectively on land or sea without air superiority. Unless and until command in the air was established, the army and navy were virtually paralyzed. Were the battle for command of air over England to be lost, the whole economic life would be in danger of collapse. In those days the R.A.F. was superior in quality of aircrew and aircraft, but lacked the numbers needed to deal with the overwhelming numbers of the Luftwaffe. Too, there were no secure bases in Norway, France, Greece, or Crete.

People may think this old stuff—Ancient history: We are concerned with the future, not the past; what about "push button warfare"?

That may come, in some form or another, in the future. But not now or in the immediate future. The principle which was proved again and again in the last war is true now and will remain true for years; and that is, that in war, nothing on the surface of land or sea can operate effectively unless and until the situation in the air is under firm control. This is sometimes expressed by saying that the air battle must first be won. That is rather an over simplification. The air battle is not a matter of hours like a naval battle or of days like a land battle it is a continual fight which continues so long as any enemy bombers can operate. It is often thought that the Battle of Britain took place in August and September of 1940. One phase of it did—the daylight phase over the country—but it continued, first at night over England and then gradually, as first Bomber Command at night and later the American bombers by day, step by step, forced the fight across the Channel, across the Rhine. Finally, it was being fought out over the heart of Germany. There are people who think that air defense is simply a matter of fighters and antiaircraft guns. There is no more dangerous fallacy. One might as well say that because we sometimes call boxing the noble art of self defense that all that a boxer need do is to cover up In the later part of 1944 the Nazis had nearly a million people directly involved in operating their air defense organization—guns, searchlights, radar, and control. They were producing more fighters than the total combined production of Britain and the United States who had to meet worldwide commitments. Yet Allied air superiority over the whole of Germany daily became more and more complete, and systematically the whole war effort of Germany was being paralyzed. No, the Bomber Command attack on Peenemunde which wrecked the V-bomb development and set it back for many months, the attacks on the V-1 sites in North France which delayed the V-1 attack by three or four months, the attacks on transportation in North Europe and West Germany which utterly disorganized the supply of V weapons and enormously reduced the scale of the attacks—these were as much a part of the Battle of Britain as the fighter battles which weaved in the sky over London in September 1940. Moreover, has the fighter or the gun which can deal with the rocket yet been conceived? The bombers dealt with them—and, thus far, alone can do so.



Against the buzz bomb, the bomber (by bombing the source) was the only effective weapon. We have no better weapon today.

To return to Admiral Mahan's statement, he spoke of being "strong enough to gain the time to turn the spirit and capacity of the subjects into the new activities that war called for." That was all very well in the old days, as when Shakespeare so beautifully described England as "this little world, this precious stone set in the silver sea which serves it in the office of a wall, or as a moat defensive to a house." That moat gave time—time to turn the spirit and capacity of the nation to war fitness. That moat still has its value, but against air attack it means little. The purely passive defense afforded by the Channel covered by the Navy will no more give the time which is needed than did the Maginot Line manned by the French Army in 1940. Yet time must be had. Since no democracy will be an aggresor, it will always be relatively unprepared and must somehow gain time at the outset of a war.

In this connection, however, as in most others, time costs money and, as the admiral so surely remarked, "free peoples object to paying for large military establishments." Moreover, unfortunately, in these days when modern equipment becomes more and more expensive, it becomes more and more difficult to provide forces which will be "strong enough to gain the time." In point of fact, if great care and discrimination are not used it is quite conceivable that a country might spend so much on its "military establishments" as to sap its economic health and so render its military defense quite valueless. Said Lord Tedder: "I do not myself believe that any single democratic country—even the United States—can or will pay for forces which by themselves will suffice to gain the time."

No one will contest the statement that the most immediate and the most dangerous threat would come from the air, and the trouble is that that threat can develop a great intensity so rapidly. The time factor is vital. The inevitable relative unpreparedness of democratic nations has in the past often proved to be an irresistible temptation to an aggressor; and the trouble is that potentialities of a sudden blow from the air are now so great that that temptation may well be even greater than it has been in the past. On the other hand there is ample evidence for the whole world to see that long wars do not pay either victor or vanquished. In other words, while the possibilities of a short blitzkrieg are probably more tempting to an aggressor than ever before, the prospects of a long war are most unappetizing. If, therefore, the free peoples can ensure that they are strong enough to gain time and make it clear to the world that they can defend themselves effectively during the opening phase of a war, the risk of any would-be aggressor trying a blitzkrieg will be greatly reduced. Hence the association of nations now being formed under the Atlantic Pact. By thus combining their efforts the free peoples aim to provide forces which will meet the admiral's requirement, each nation providing for the common pool forces appropriate to its special position and its capabilities. In the past one of the prices of democracy has been a military unpreparedness which only too often has had tragic results. The pooling of resources and collective defense now being organized should provide a combined strength to deter aggression in place of the separate weakness which in the past has invited aggression.

There is just one point on which to comment regarding the Allied Air Forces. It has been suggested a number of times recently that in view of the fact that while the United States has long range bombers and the R.A.F. at present has none, it should be arrangedthat the R.A.F. concentrate on air defense and a tactical air force, leaving the role of strategic bombing to the American Air Force. "I believe that those who make proposals of this sort have the completely erroneous idea that an air defense force is composed entirely of fighters, and a tactical air force of fighters and fighter bombers. I must plead guilty to having been largely responsible for coining the phrases 'strategic' bombing and 'tactical' bombing," the Air Marshal stated. At that time, in 1943, those titles were valuable in defining two somewhat different roles, but it is feared that recently they have come to be misunderstood and dangerously misused. Because we have called forces which are assigned to the role of strategic bombing "strategic air forces" and those assigned to the tactical role "tactical air forces" it has come to be thought in some quarters that they comprise quite different types of aircraft, different forces.

Actually of course "strategic" is a relative term. What is "strategic" to an army divisional commander is "tactical" to an air force commander and what is "strategic" to an air force commander is probably completely outside the ken of an army commander. People who talk of strategic air forces would say that in the late war Bomber Command and the Eighth Air Force as previously pointed out, played a vital and direct part in the air defense of U.K.: Bomber Command and the Eighth Air Force not only carried out a number of attacks in very close support of the armies but also, for many weeks carried out operations which paralyzed the movement and supply of German forces trying to reach Normandy— "strategic" work from the Army point of view, but "tactical" from the Air Force point of view. These mistaken attempts to draw hard and fast distinctions between strategic and tactical are not merely unsound but actually dangerous. If applied in this way such distinctions would destroy that flexibility which is one of the chief characteristics of air forces, the quality which makes it possible to concentrate air power in a manner quite unattainable by any other force. Nothing could be more dangerous than to weaken that power of concentration. This is particularly true as regards air defense.

Speaking of the air battle, it has been pointed out how inevitable it is that the air battle must come first, and the critical nature of that battle needs no emphasis. The deduction from that is clear the initial job of the R.A.F. as a whole will be air defense. Bomber, fighter/bomber, and fighter, each in accordance with its own particular powers and limitations, will be directed towards the single aim of gaining air superiority, and pushing the air battle away from British skies. The fighter, the fighter/bomber, and the bomber are complementary. An air force without a punch is no force and the punch is the bomber. The noble art of self-defense would mean little if the boxer had no punch. Moreover, let us not forget that it is the bomber that pushes the air battle back from our skies. The less one's own people and one's own land and sea forces see of the air war, the better that war is proceeding. In this last war the air situation was not safe until the air war had moved away from our skies and the Battle of Britain had become the Battle of Berlin. In any possible future war, more than ever would it be vital that the air battle be pushed far from our own skies.

Natl Air Rev Feb 50 Uncl

THE BOOK SHELF

RECOMMENDED READING FOR YOUR OFF DUTY HOURS

TITLE: War and Peace Aims of the United Nations
EDITOR: Louise W. Holborn
PUBLISHER: World Peace Foundation, Boston

The first volume under this title was issued in 1943. It was a collection of documents and speeches showing the Allied efforts to define the nature of World War II and the order of postwar society. The present volume now carries the documentation on through the San Francisco Conference and the defeat of the Axis powers in 1945. Most of the documentation is from United States, British, British Dominions, Russian, and United Nations sources. Fifty-two pages pertain to the American republics.

TITLE: A Short History of the Middle East
AUTHOR: George E. Kirk
PUBLISHER: Public Affairs Press, Washington, D. C.

In the modern conception, and as treated in this history, the Middle East comprises the Arabian Peninsula and the Arabic-speaking lands on its northern border; the Arabic-speaking lands of Northeast Africa (Egypt, Anglo-Egyptian Sudan, Cyrenaica, and Tripolitania); Asia Minor; and Iran. The first six chapters of the book bring the history of the area up to World War II. The succeeding chapters deal with the war and postwar years, current economic and social conditions, Russia and the Middle East, and the Western Powers and the Middle East.

TITLE: Strategic Intelligence
AUTHOR: Sherman Kent
PUBLISHER: Princeton University Press, Princeton, N. J.

As considered by this author, intelligence is the knowledge which "our highly placed civilians and military men must have to safeguard the national welfare." At the same time, strategic intelligence is seen as an extension of the search for useful knowledge. The "extensions" which the author visualizes in strategic intelligence are: that the knowledge sought is vital for national survival; that it involves long-range speculation by experts; that its investigations assume a clandestine nature; and that it is a large-scale job, performed by groups and involving a division of labor. The author divides his book into three major parts. First, he considers intelligence as a kind of knowledge. Second, he looks at intelligence as a type of organization which produces knowledge; in this section, he takes up the organizational and administrative problems of central and departmental intelligence. Third, he examines intelligence as the activity pursued by an intelligence organization, covering what intelligence work involves and the problems peculiar to it.

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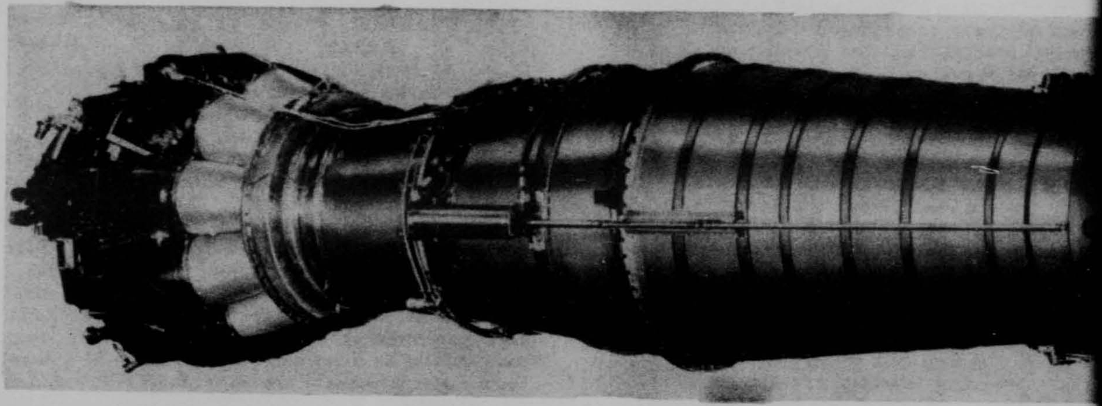
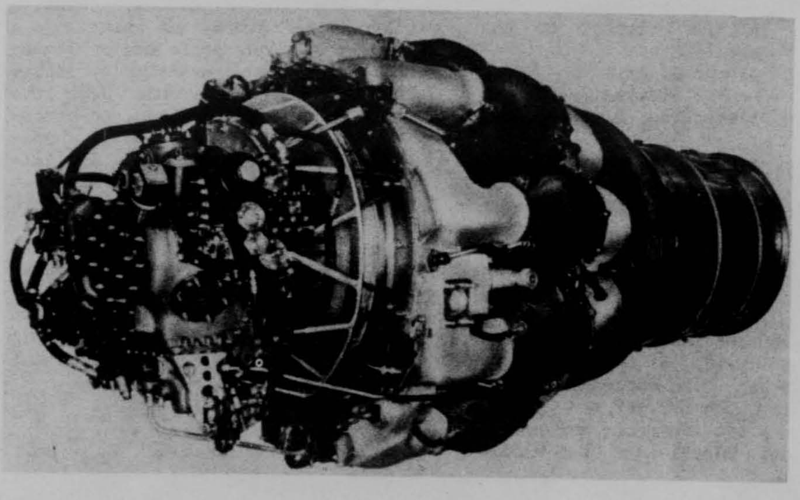
Mil Rev CGSC Feb 50 Uncl

TODAY'S MOST POWERFUL U.S. JET ENGINE

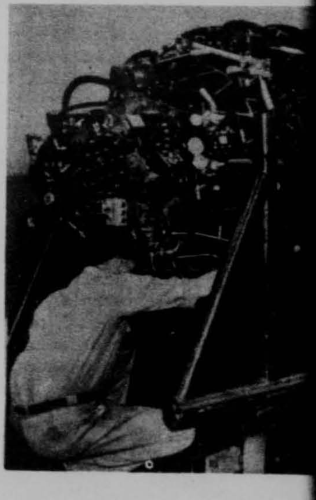
F-93



The most powerful jet engine now operating in the U.S. is Pratt and Whitney's J-48 Turbo-Wasp, developed in collaboration with Rolls-Royce. Developed under the auspices of the Navy, the J-48 is being used in both the Navy's Grumman Panther (F9F-5) and the Air Force's F-93A. With a basic dry rating of 6250 pounds static thrust at sea level, this jet engine provides each plane with approximately 11,000 horsepower.



The J-48 is a centrifugal flow turbojet using a single stage compressor with double faced impeller and double air entry. It will operate on kerosene, gasoline, or special jet fuel. Overall diameter is 50", length 8' 10 3/4", weight less than 2000 lbs. At fighter operating speed, the engine delivers the equivalent of five hp per pound of engine in contrast to one hp per pound in the most powerful piston engines.



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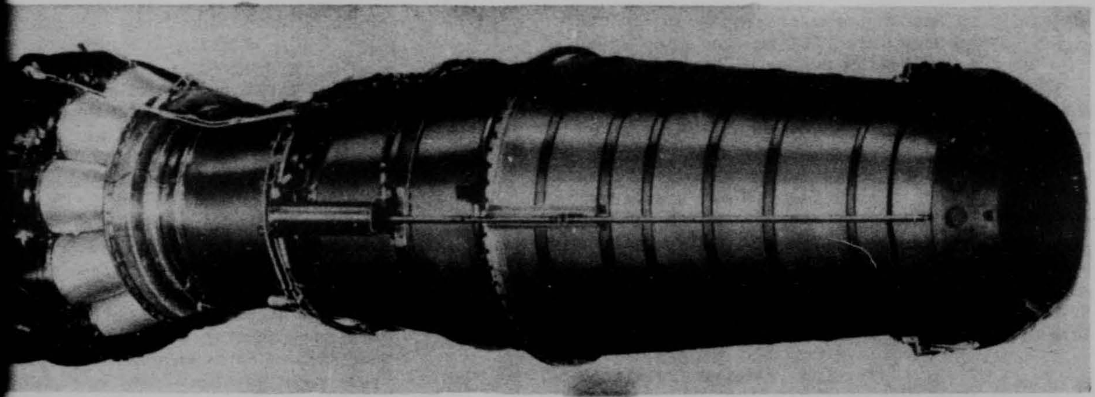
TODAY'S MOST POWERFUL U.S. JET ENGINE

F 9F PANTHER



In addition to more than 20 successful flights, the J-48 has completed 1800 hours of ground development. Additional flight tests will be run from a Boeing B-29 rigged as a laboratory carrying the J-48 with afterburner in its bomb bays. An initial contract for 264 J-48's has been let by the Navy. Production tooling on the 12000 special tools required is under way and full scale production is scheduled to begin next summer.

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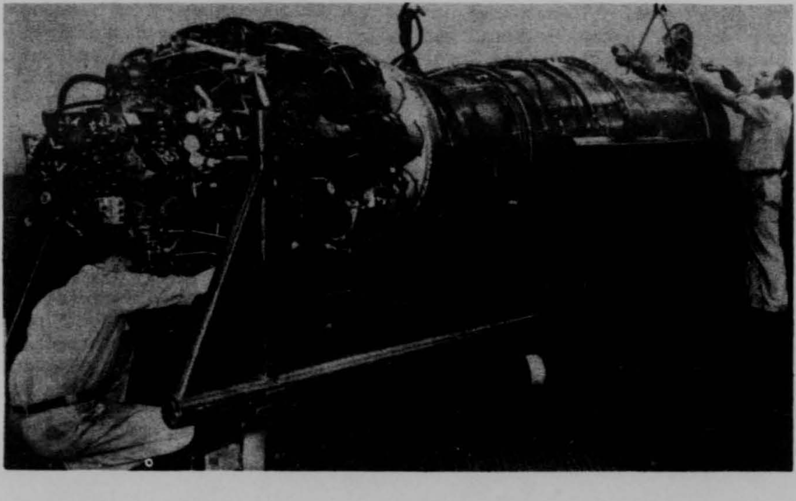


Formulation of UNITED STATES FOREIGN POLICY

Our Armed Forces are important instruments of our foreign policy. Thus the American officer should know something of the principles, processes, and policies which guide our foreign relations. It is with that thought in mind that this article is presented.

HOW HAVE OUR TRADITIONAL POLICIES CHANGED?

Foreign affairs and the foreign policy of the United States are now of paramount concern to every citizen of the United States. The era has passed when this country could count upon self-sufficiency and a remote location to cushion it from the woes and wars of other continents.

Today we are neither remote nor self-sufficient, in the sense that we once were. Transmitted by the many modern communications media, ideas and ideologies cross international boundaries much more freely and more quickly than they did heretofore. Similarly, our technological development has made us dependent on imports for critical raw materials such as manganese for making steel, and upon exports to foreign markets to keep our economy sound. In the military field, modern science has produced weapons which have nullified the cushion of distance once provided by the Arctic wastes and the Atlantic and Pacific oceans.

Thus our traditional policies of isolationism and strict neutrality, outdated by the realities of the modern world, have been abandoned. In their stead we have chosen a collective approach to problems of security and welfare. This new principle of international cooperation is one of great consequence. It has greatly complicated the shaping of our foreign policy. Nowadays, the views of every country concerned must be considered in order to secure the cooperation essential to any effective action. In adopting a basic policy of international cooperation, the United States, because of its strength, has assumed a new and unprecedented position of responsibility and leadership.

THE OFFICERS'S DUAL INTEREST IN FOREIGN POLICY

The pressing foreign relations problem today is that of security. Our involvement in two world wars in this century (and indeed in every major European conflict since 1789) provides ominous indications supporting Mr. Roosevelt's conclusion that, in the world of tomorrow, "peace is indivisible."

The business of our Armed Forces is the security of the United States. They are the cutting edge of foreign policy in war—which is the violent form of policy implementation. They are a supporting arm of foreign policy in peace—providing an element of that strong national posture essential in giving substance to the views and voice of the United States. On this last point Mr. Truman has said:

"If we can make it sufficiently

clear, in advance, that any armed attack affecting our national security would be met with overwhelming force, the armed attack might never occur."

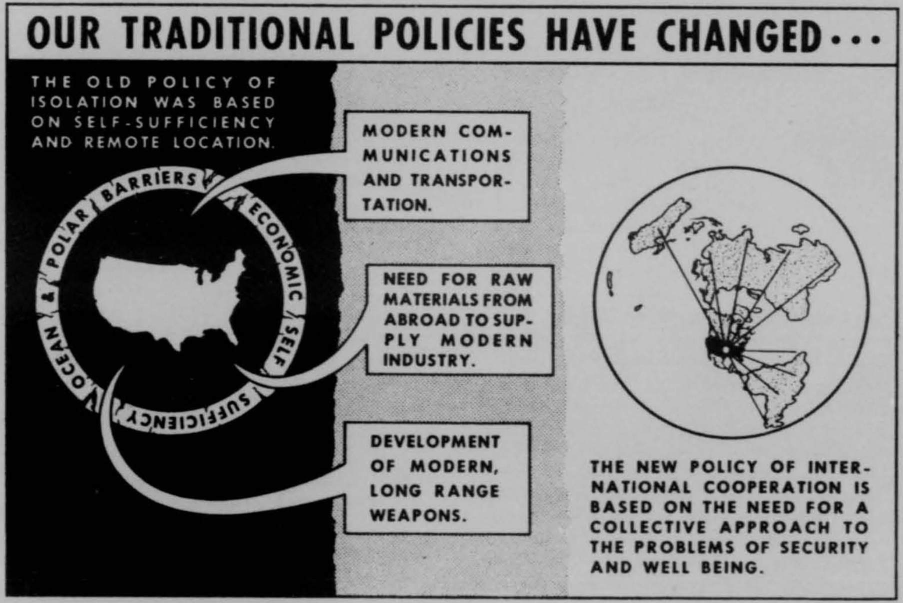
Furthermore, the armed forces act as the hewers of wood and drawers of water for the civilian agencies charged with policy-making. The occupation of Austria, Germany, and Japan; the Berlin airlift; the military missions in Greece and Turkey—all these are examples of how our armed forces implement our foreign policy.

The officer of the armed services has a dual interest in acquiring some knowledge of the ways in which foreign policy is formulated. First he has an interest, as a citizen, in one of the most important tasks of our people and their government today. Second, as an officer he has a close personal interest in those determinations which may make the differences between peace and war and which certainly decide the nature and location of a great deal of his service.

FOREIGN POLICY IS DEVELOPED BY COMPLEX PROCESSES

Most of us have considerable knowledge of the process of formulating internal policy in the United States. This is the legislative process of making laws and, in the field of detailed policy formulation, the administrative process of carrying them out by various means, from presidential executive orders to minutely detailed policy determinations such as those sometimes found in Army regulations.

The process of foreign policy formulation is more obscure. Until re-


OUR TRADITIONAL POLICIES HAVE CHANGED...
THE OLD POLICY OF ISOLATION WAS BASED ON SELF-SUFFICIENCY AND REMOTE LOCATION.
OCEAN & POLAR BARRIERS
ECONOMIC SELF SUFFICIENCY
MODERN COMMUNICATIONS AND TRANSPORTATION.
NEED FOR RAW MATERIALS FROM ABROAD TO SUPPLY MODERN INDUSTRY.
DEVELOPMENT OF MODERN, LONG RANGE WEAPONS.
THE NEW POLICY OF INTERNATIONAL COOPERATION IS BASED ON THE NEED FOR A COLLECTIVE APPROACH TO THE PROBLEMS OF SECURITY AND WELL BEING.

cently the United States has not required a great mass of foreign policies. Although we did become involved in foreign armed conflicts, we were comparatively aloof and detached from international matters in the policy making sense. Now, with a more integrated world, it becomes necessary that we maintain views and positions on almost every issue and subject discussed among nations. Our representatives enter dozens of meetings every week with officials of other countries. Our participation in the United Nations has already meant that our representatives have had to propound a United States view in thousands of committee meetings. Participation in these meetings is not confined to State Department officials. Army officials, uniformed and civilian, have also presented United States policy in the occupation areas since the close of hostilities. Obviously there now exists an everpresent and everchanging need for policy guidance to be provided for our representatives on the "contact-line" of international affairs.

Another reason for the obscurity concerning formulation of foreign policy is the impossibility of reducing it to any simple cut-and-dried formula. A chief reason for this is that a foreign policy must be not only acceptable to the President, the Congress, and the American people, but also realistic as to conditions outside the United States. Hence foreign countries and their policies inevitably have an enormous influence on the formulation of our foreign policies. The problem is far more difficult than passing a law or issuing an order in the nation's internal affairs. Instead, many courses of action in foreign affairs may have to be worked out by conference and compromise with other nations. The policies of foreign governments may force our government to formulate policies which, of its own free will, it would never choose. The aggressive and expansionist policies of Germany and Japan in the 1930's caused the United States to evolve such policies as the Neutrality Acts, and finally to enter that ultimate in foreign policy—war. The foreign policy of Soviet Russia today obviously activates a considerable portion of our foreign policy as do the foreign policies of the western European nations cooperating with the United States in Germany, in the European Recovery Program, the Atlantic Pact, and the United Nations. The Berlin airlift was necessitated by the Soviet policy of blockading Berlin; the Greek-Turkish aid program and the Truman Doctrine were developed within a few weeks to meet the situation created by Britain's decision that she could no longer afford to continue assistance to Greece and Turkey on the scale previously provided.

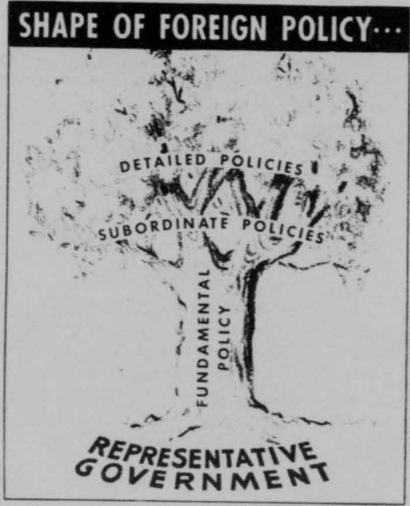
OUR POLICIES CHANGE, BUT OUR OBJECTIVES DO NOT

America's foreign policy objectives of security and well-being have remained unchanged since 1778, when Benjamin Franklin took this nation's first major foreign policy step. In that year, Franklin arranged with France a military alliance to last "forever." Our country shortly reversed this initial trend and adopted "no entangling alliances" as a fundamental policy. This policy was indorsed by Washington in his Farewell Address (1796), in which he pointed out that "Europe has a set of primary interests which to us have none or a very remote relation," and that "our detached and distant situation invites us to pursue a different course from Europe..." In 1949, we are no longer "detached and distant" from Europe or any other place and find ourselves neck-deep in world responsibilities. Incidentally Washington urged his country to maintain a "respectable defensive posture," a policy never heeded in peacetime prior to World War II.

Other fundamental policies in our history, in addition to "no entangling alliances" include: freedom of trade on the seas during wars between other nations; the Monroe Doctrine which states that we opposed any further colonization or interferences by European nations in this hemisphere; the Open Door Policy which implemented the United States view that parts of China should not be taken over by foreign nations and that every nation should have an equal chance in trade with China; and the Pan-American policy. Obviously even such long-range and general policies may go out of date and require major changes, but the objectives of security and well-being remain unchanged.

FUNDAMENTAL POLICIES ARE SUPPORTED BY MANY DETAILED POLICIES

The fundamental policies and most important supporting policies are usually broad general statements; e.g., "no entangling alliances," the Monroe Doctrine, the support of a world order (UN), the policy of helping free nations in Europe to help themselves toward recovery (Marshall Plan). In the early history of the United States these broad general statements were often sufficient. For instance, the Monroe Doctrine was little more than rhetoric for 40 years. Then France supported Maximilian in Mexico and the United States had to become specific. In today's fast-moving international situation any generally stated policy usually requires that specific and frequent action be taken on it.


SHAPE OF FOREIGN POLICY···

A whole family of minor policies and implementing actions usually must be produced to define and support each major policy. For instance, the general policy in the Cairo Declaration (1943) contains a statement that "in due course Korea shall be free and independent." This statement did not decide whether the United States should put occupation forces into Korea; it did not decide what sort of government General Hodge should set up when he arrived there with the XXIV Corps; and it did not decide what his relations ought to be with Soviet forces.

Turning to even more minor policies, the Cairo Declaration gave General Hodge little guidance as to what to do when the Soviet forces shut off the electric power for the capital city of Korea. It gave even less guidance to a lieutenant commanding a platoon on the 38-degree parallel when he first met the problems of a lot of people without homes or food trying to move from North to South Korea. That would have been a very minor policy matter to policymakers in Washington. It would certainly be a major matter to the lieutenant. The formulation of policy can be compared to the growth of a grove of trees in which the trunks are the fundamental policies.

There are branches, twigs, and leaves on eacy policy tree representing subordinate and detailed policies. Like twigs and leaves, some of these minor policies are coming into being every day, some are growing, some are dying. Once in a while a fundamental policy dies. For example, the "no entangling alliance policy" was uprooted by the new fundamental policies of support of the United Nations and the Atlantic Pact.

The Pan-American policy, once primarily an expression of good will, has grown during a century to include a military agreement (Rio Pact). It includes such minor branches as appointing United States military missions to Latin-American countries, and sending Latin-Americans as cadets and midshipmen to West Point and Annapolis. The major policy of the Marshall Plan is, in a few words, the helping of European nations to help themselves toward recovery. This major policy has resulted in the appropriation of billions by Congress and the setting up of a complicated administrative organization—the Economic Cooperation Administration.

It is obvious that policies may conflict in their implementation even as the branches of trees in a forest crash against each other in a storm. There are then presented the most difficult problems of policy formulation. Perhaps a compromise solution is indicated. Perhaps reference to the objectives of security and well-being will often be clarifying.

THE PEOPLE—THROUGH THE PRESIDENT AND CONGRESS—SHAPE OUR POLICY

The American people determine foreign policy in the long run through approval or disapproval of the President and Congress, expressed at the voting polls. They also have a tremendous day-to-day effect through their expression of views in the press, in public opinion polls, and through pressure upon government policy-formulating agencies by private citizens and organized citizen's groups. The policy-formulating agencies are staffed by persons elected, appointed, or in the profession of government service. They are bound to be influenced by their backgrounds and particularly by their education.

The neutrality legislation of the 1930's is an example of policy greatly influenced by public pressure. Even when initially there is no developed public view on a proposed policy, the long-term public reaction may be of great importance. If a policy fails of public support it will probably be unsuccessful in the long run. This is particularly true if the implementation of the policy requires continual provision of taxpayers' dollars—as does the European Recovery Program. War is the most costly of all detailed policies and affects all citizens. Hence it requires an overwhelming public will in order to be effective. A 51% support is not enough for such costly policies. This is one of the main reasons why broad public knowledge in the field of international affairs is now of such great importance. The taxpayer tends to view coolly any costly policy—at least until he understands its necessity.

The President is the single individual primarily responsible for the foreign policy of the United States. The Constitution provides that he shall have power to make treaties, provided that two-thirds of the senators present concur. He may appoint ambassadors, ministers, and consuls with the consent of the Senate. He is empowered to receive the representatives of other nations. He recommends to Congress the legislation and appropriations required to carry out foreign policy. As Commander in Chief of the Armed Forces he directs their activities in support of foreign policy.

THE STATE DEPARTMENT

Primary responsibility is delegated to the State Department by the President for formulation and supervision of foreign policy. It carries the load for the President.

The State Department is organized so that its staff branches are in daily contact with more than 60 United States diplomatic representatives for foreign countries and international agencies. The most important of the latter is the United Nations. There must be a continual flow of policy guidance to these representatives. The other departments of the Government, in their contacts with foreign nations, also require continual policy guidance from the State Department. The Armed Forces, particularly the Army in occupation matters, and the Economic Cooperation Administration are probably the State Department's best customers, but the Department of Commerce, the U.S. Treasury, and other agencies also need advice.

THERE IS NO AUTOMATIC POLICY-MAKING MACHINE

The State Department does not formulate policy in a vacuum.

It does not have a policy-making contraption with which it turns out answers by pressing a button. Foreign policy cannot be reduced to fixed mathematical formulae and filed away on index cards. It is a living evolutionary force defined in direction and method but often not in detail.

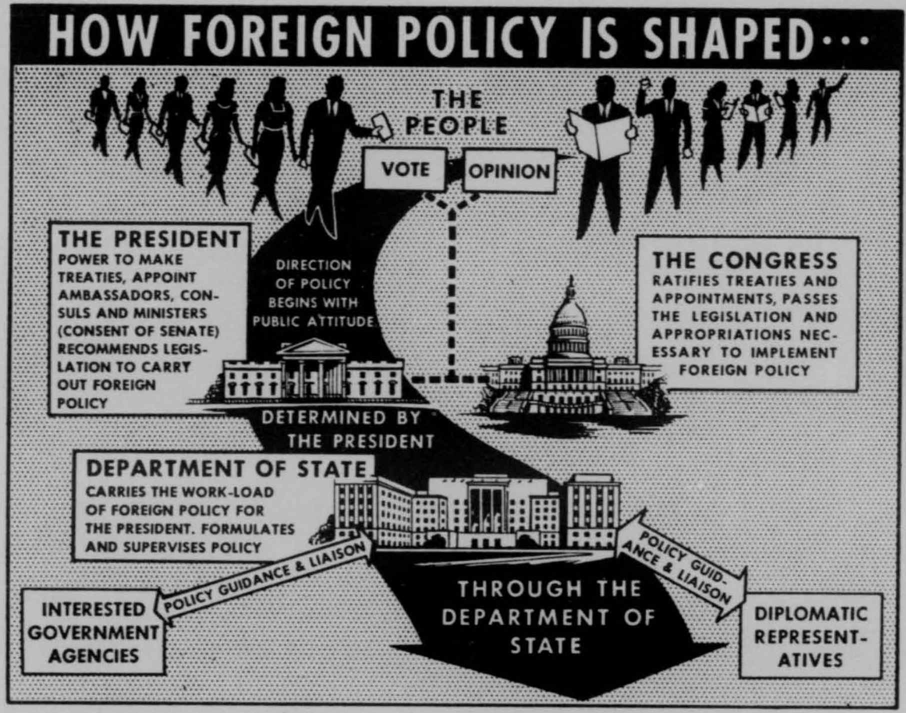
The mechanism for policy formulation includes an elaborate system of informal liaison between the State Department and other Government agencies, and informal conferences with the President and leaders of Congress as well as formal written communications. The National Security Council, headed by the President, is charged with making determinations on foreign policy matters involving security. Its membership includes the Secretary of Defense and the Secretaries of the Army, the Navy, and the Air Force, as well as the Secretary of State.

CONGRESS PLAYS AN INCREASING ROLE

The Congress is taking an ever-increasing part in formulation of foreign policy.

Policies require means to make them effective. Often these means are not available unless Congress provides the authorizing legislation and the appropriations.For instance, the Marshall Plan would have had little meaning unless Congress had voted the billions to give it effectiveness. There is a committee in the Senate (Foreign Relations) dealing with foreign policy matters. The appropriations committees, particularly that of the House, also can materially affect foreign policy.

It is apparent that a nonpartisan foreign policy is now very important.


HOW FOREIGN POLICY IS SHAPED...
THE PEOPLE
VOTE
OPINION
THE PRESIDENT
POWER TO MAKE TREATIES, APPOINT AMBASSADORS, CONSULS AND MINISTERS (CONSENT OF SENATE) RECOMMENDS LEGISLATION TO CARRY OUT FOREIGN POLICY
DIRECTION OF POLICY BEGINS WITH PUBLIC ATTITUDE
THE CONGRESS
RATIFIES TREATIES AND APPOINTMENTS, PASSES THE LEGISLATION AND APPROPRIATIONS NECESSARY TO IMPLEMENT FOREIGN POLICY
DETERMINED BY THE PRESIDENT
DEPARTMENT OF STATE
CARRIES THE WORK-LOAD OF FOREIGN POLICY FOR THE PRESIDENT. FORMULATES AND SUPERVISES POLICY
POLICY GUIDANCE & LIAISON
POLICY GUIDANCE & LIAISON
INTERESTED GOVERNMENT AGENCIES
THROUGH THE DEPARTMENT OF STATE
DIPLOMATIC REPRESENTATIVES

Foreign countries know that in the United States no political party remains in power permanently. Hence if a foreign policy were partisan—that is an issue between the parties—it would lose some or much of its strength. This situation makes formulation of policy more complicated since a course of action which both parties will support is highly desirable and sometimes necessary to success.

The size and the components of United States Armed Forces should logically be consistent with the international situation and the United States policies for dealing with it. Hence the State Department and armed services often find themselves closely associated in explaining, to Congress and the public, policies pertaining to United States security including the Armed Forces budget. For instance, General Bradley's Army Day speech in 1949 concerned, at the request of the State Department, many aspects of the Atlantic Pact which were not purely military. This was a recognition that military factors are so interwoven with other factors in foreign affairs than an attempt to separate them into compartments makes no sense. More than ever before in its peacetime history the United States is now attempting to relate its military security arrangements to foreign policy and the foreign situation, and vice versa.

FORMULATION OF POLICY CAN BE DIVIDED INTO FOUR STEPS

It sometimes helps to divide a complicated problem into parts even though the subdivisions are somewhat arbitrary. Four steps (not necessarily in proper sequence) in policy-making are:

1. Recognition of the need for a policy or a change of policy on a specific problem.

This is not always easy. Many people may argue that no new policy or change in policy is required. They may even argue that no problem exists affecting the United States. There was a great deal of such argument between the date Hitler came to power and Pearl Harbor.

For years after Hitler gained control of Germany the United States continued its policies of isolation and "no entangling alliances." It supported these policies by detailed actions such as the Neutrality Acts forbidding United States ships to carry goods to a country at war, and the "cash and carry" act requiring that a belligerent pay cash for any goods bought in the United States. But, starting definitely as early as President Roosevelt's speech in 1940 calling Italy's attack on France a "stab in the back," the United States began to reverse its age-old policy.

Within a few weeks thereafter the President of the United States and the Prime Minister of Canada agreed to set up a Permanent Joint Board of Defense. In 1941 came "lend lease" to the countries fighting the Axis. In 1945 the United States joined the United Nations and also contributed a great proportion of the resources for UNRRA. In early 1947 the United States recognized that words needed to be backed by acts if the words were to be effective in preventing Greece and Turkey from being forced to adopt measures contrary to the wishes of those countries. Hence the Greek-Turkish aid program. In 1947 the United States signed the Rio Pact previously mentioned, binding the United States and all Latin-American nations on the basis that an attack on one is an attack against all. In 1948 came the Marshall Plan and in 1949 the Atlantic Pact emerged, which, if ratified, will complete the change from the fundamental policy of isolationism of 1939. The United States has now been committed to policies of collective security and of aiding friendly countries willing to help themselves. The objective of these policies is security. Furthermore, the sequence of policy steps described above indicates the true nature of policy formulation. Policy is not born overnight. Often it evolves with only direction and method being clearly apparent.

2. The development of the policy among the responsible and affected agencies of the government.

This process may be viewed as another step in policy-making-recognition of the need for a policy. There may be major disagreement as to what the policy should be. For instance, there is now general recognition of a need for some definite policy concerning China. But there now also exists a difference of opinion as to what should be done about it. The State Department has not favored increased economic and military aid to Nationalist China, yet various bills to the contrary have been introduced in Congress by individual congressmen.

The development of the policy of the European Recovery Program (Marshall Plan) is probably the most complete program of planned policy development ever undertaken in the United States. Following careful studies made by the State Department in collaboration with other interested governmental departments, Secretary Marshall put forth the general idea in a speech in June of 1947. He said:

"...before the United States Government can proceed much further in its efforts to alleviate the situation and help start the European world on its way to recovery there must be some agreement among the countries of Europe as to the requirements of the situation and the part these countries themselves will take...The initiative must come from Europe. The role of this country should be friendly aid in the drafting of a European program and of later support of such a program as far as it may be practical for us to do so."

Secretary Marshall's brief general statement immediately touched off tremendous activity. The western European nations met to consult among themselves and draw a plan. There were consultations between diplomats of the United States and those of Western European nations, both individually and as a group. Several expert committees studied the problem in the United States and made detailed proposals thereon.

A bill sponsored by the State Department was introduced in Congress. The contents of this bill, as it became law, constituted detailed policy formulation. Congress held hearings at which government officials and private citizens expressed their views. Throughout the United States there was wide public discussion on the proposal. Finally, 11 months after Secretary Marshall's speech, Congress passed the Economic Cooperation Act of 1948 and the policy initiated nearly a year before was completely formulated—in this case by a law.

3. Enunciation of the policy.

The more important policies normally are stated initially and in general terms by the President as in the case of the Truman Doctrine, or by the Secretary of State as in the case of the Marshall Plan. But policies may be promulgated in a great variety of ways. They may appear in speeches by responsible Government officials, in press releases, in statements by the senior United States representatives in the occupied areas, or in diplomatic notes.

Policies sometimes are not formally enunciated at all but rather become apparent through a consistent pattern of detailed actions. For instance, a program of strict and formal reciprocity with another nation might be first indicated by limiting the visitors to the United States from that nation to the same number as the United States citizens permitted to enter the other country concerned.

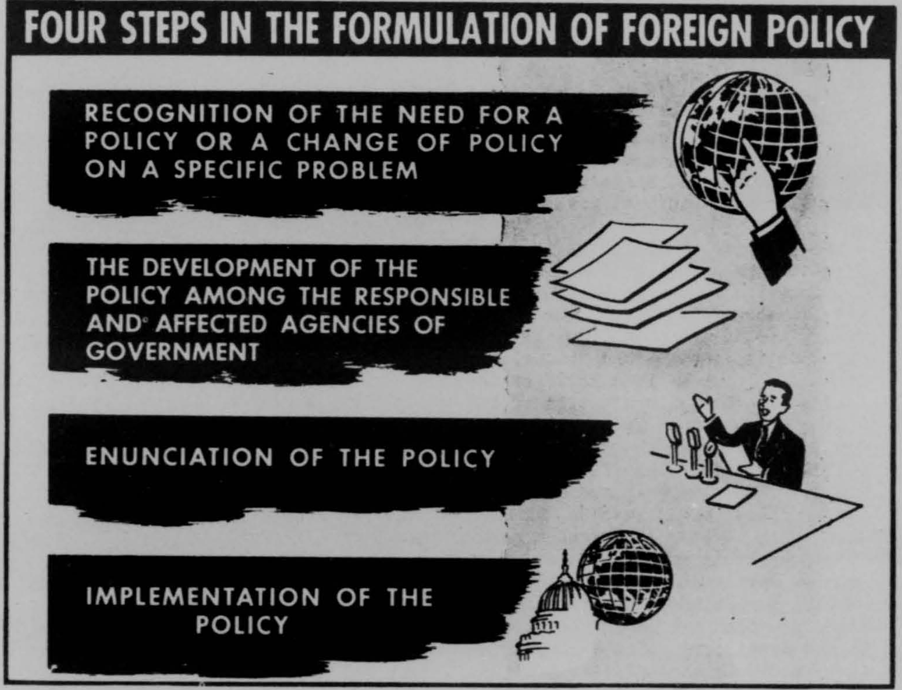
4. Implementation of the policy.

In some instances a policy may be completely formulated and enunciated without necessity for any implementing action. The Monroe Doctrine did not require any positive actions for years after its enunciation.

Today policies are usually ineffective or only partially effective unless something concrete, and often costly, is done about them. Implementation often requires passage of laws by Congress (which in themselves formulate details of the policy as in the case of the Marshall Plan) and provision of appropriations by Congress.

Congress, after approving the legislation for the Marshall Plan then went on to provide the funds to support it. An organization to administer the law and the funds was required. Hence the European Cooperation Administration, headed by Paul G. Hoffman, was organized with a large office in Paris and missions in each of the 18 countries (including Trieste, Western Germany, and Austria) participating in the program. The day-to-day operations of the ECA required continual detailed policy formulation. Typical questions were: "Should there be any limitation on trade to Iron Curtain countries of items particularly useful for armaments?" and "Should the ECA pay any attention to the Netherlands failure to adhere to the wishes of the United Nations concerning the disturbances in Indonesia?"

Many agencies of the Government other than the State Department are engaged in implementing and supporting foreign policy. These include the armed services, the ECA, the Department of Commerce in connection with foreign trade, the United



FOUR STEPS IN THE FORMULATION OF FOREIGN POLICY

RECOGNITION OF THE NEED FOR A POLICY OR A CHANGE OF POLICY ON A SPECIFIC PROBLEM

THE DEVELOPMENT OF THE POLICY AMONG THE RESPONSIBLE AND AFFECTED AGENCIES OF GOVERNMENT

ENUNCIATION OF THE POLICY

IMPLEMENTATION OF THE POLICY

States Treasury in connection with loans and monetary matters. Each requires detailed policy guidance which is worked out on a day-to-day basis by the State Department in consultation with the other agencies which are affected and hence can provide expert advice.

It is obvious that a policy may be changed by the detailed laws passed by Congress. It also may be changed or even stalemated by the reaction of foreign countries. For instance, the ECA, as initially enunciated by Secretary Marshall, conceived economic cooperation among all the countries of Europe. The refusal of the Soviet Union and countries behind the Iron Curtain to participate in the plan changed it materially. As another example the original United States policy of treating Germany as an economic whole has been completely frustrated by lack of agreement between the USSR and the United States, Britain, and France. A new policy had to be devised which has now resulted in steps to set up a west German provisional government.

The North Atlantic Treaty in its present form resulted from conversations which began in Washington in the summer of 1948 among the representatives of the five Brussels Pact Signatories, the United States, and Canada. It stems from policies included in the Constitution of the United States, the Monroe Doctrine, the Inter-American Treaty of Reciprocal Assistance, the Fulbright and Connally Resolutions, and the Charter of the United Nations, to mention only the more important ones. It may be truly stated, however, that Senate Resolution No. 239 (The Vandenberg Resolution) approved in June 1948, provided the immediate impetus to the development of a North Atlantic Treaty. This resolution provides for: "Association of the United States, by constitutional process, with such regional and other collective arrangements as are based on continuous and effective self-help and mutual aid, and as affect its national security." In taking this action, the Senate leaders responsible for this bill no doubt consulted with the State Department and the National Military Establishment. Ten months later, based on this formal declaration of the United States Senate, the United States formalized the policy quoted above by becoming a signatory member of the North Atlantic Treaty.

THREE IMPORTANT ASPECTS OF POLICY-MAKING

1. A policy should be logically within United States capabilities to carry it out.

2. The Government agencies charged with implementing a policy, and with providing the means, usually need to be consulted on any policy. On security matters the State Department would either need an "armed forces general staff" on its payroll or alternately would need to consult the armed services. In practice the National Military Establishment is consulted and makes recommendations through informal contacts and through the National Security Council.

3. There is a four-cornered check on the formulation of important foreign policies. The corners are occupied by:

a. The President and State Department.

b. The United States public.

c. The Government agencies whose responsibilities are affected by the proposed policy.

d. Congress, which provides the means.

This four-cornered situation requires integration and consultation among all concerned. For instance, this need was recognized by Secretary of State James F. Byrnes when he took with him to conferences on the Italian and Balkan peace treaties the senior Democratic and Republican senators on the Senate Foreign Relations Committee. There usually must be a substantial meeting of the minds of the people in the four corners before a policy will work with certainty. An in addition it must be considered from the standpoint of the reaction of affected foreign countries.

SUMMARY

Policy formulation has become steadily easier in some respects as the United States has settled on those basic policies which we feel we wish to follow or are forced to follow in the post-war years. Some of these basic policies now seem clearly to be: (1) support of the UN, (2) preparedness in a troubled world, (3) support of like-minded peoples by such concrete programs as the ERP and Atlantic Pact, and (4) resistance to communism. These basic policies are pillars supporting the objectives of security and well-being now and in the future. Now that the basic policies are developed and generally accepted by the United States people, it is easier to formulate minor supporting policies.

Nevertheless, the formulation of major foreign policy is a continuous and very complicated matter. It is affected by foreign nations and international agencies as well as by the wishes of the United States public and United States government. Policy formulation involves development of basic policies, and of minor policies which are plans and programs supporting each basic policy. All should stand the test question as to whether they further the objectives of our foreign policy.

The State Department has the primary responsibility for formulation of foreign policy or—to put it another way—for making recommendations to the President on foreign policy. The National Security Council has a primary responsibility to make such recommendations on security matters. Many other Government departments and agencies are now deeply and vitally concerned. Usually policy cannot be effected long unless accepted by the United States public, and by Congress which makes the laws and provides means and money. Congress can formulate policy through legislation, providing the President does not veto the legislation.

One of the most important responsibilities of an officer of the armed forces, both as a servant of the United States and as a citizen, is the comprehension of international affairs and of the detailed effect of our different foreign policies on the objectives of security and well-being of the United States. In the long run, the achievement of these objectives, and hence the survival of the United States, depends on public understanding and support in these matters, and on the understanding and wisdom of Government officers in carrying out policies in peace, cold war, and—if it comes—hot war.

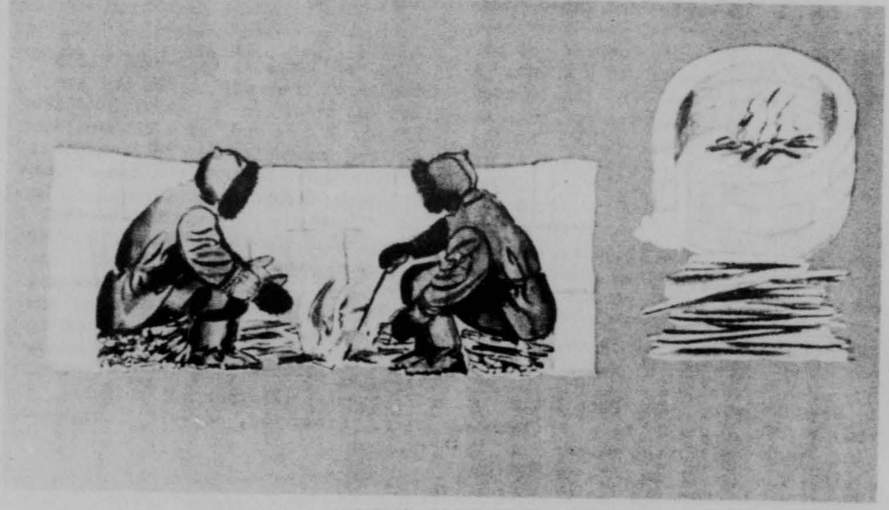
POLAR GUIDE

THIS IS THE NINTH OF A SERIES OF ARTICLES ON ARCTIC INDOCTRINATION

Chapter 18--Land Survival (Continued)

FIRE

In survival, there is no question at all as to the value of a large cheerful fire. Aside from its warmth, it is a great asset from a morale standpoint and an aid to rescuers as well. However, many people have sacrificed so much just to have a large fire that they have defeated some of its purposes. So, instead of starting a raging inferno as soon as you hit the ground, stop for a minute and figure out what you want it for. Then design a fire to meet your needs. A B-29 crew picked up last winter, for example, had a strong fire going when found, but had completely neglected to build any sort of shelter, or even to erect a windbreak. Naturally, these men were cold and uncomfortable. If they had put as much effort into building a shelter as they had into building a blazing fire in the wind, they would have discovered that a single candle in the shelter would have netted them much more comfort than ten logs burning in the wind. The wrong kind of a fire--one that doesn't meet your needs--can be more detrimental than helpful.



A Windbreak is Essential.

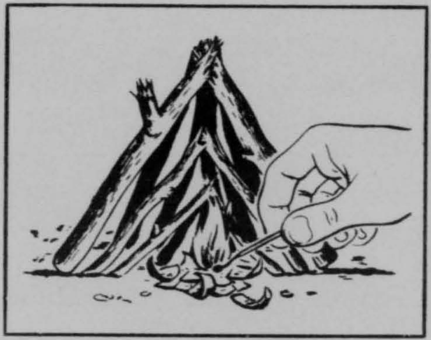
STARTING THE FIRE

Making a proper fire begins a while before you light a match. It starts with protecting yourself and the fire-to-be from wind. In wooded areas, the standing timber or brush usually makes a good enough natural shelter; but in open timber or low brush country erect some kind of barrier, if the wind is blowing, to break that wind, using materials and methods of construction similar to those you used in building your sleeping shelter.

A row of snow blocks, the shelter of a pressure ridge, or a scooped-out side of a snow drift will work well on the ice pack. A circular wall of brush, cut and stuck in the snow or ground, will work well in willow country. A ring of evergreen boughs is fine in timber. Make this wall about four feet high and, except for an entrance way, circle your fire area with the wall in windy weather. The extra warmth you will get from even a small fire with a wind break will more than repay you for your efforts in constructing the wall.

The next step in fire-making is gathering necessary materials to start and sustain a fire. These materials can be divided into two classes--fire starting and fire sustaining. The airplane will help you out with the first type, if not both. There are gasoline, oil, rubber, cloth, dry wood, paper, celluloid, and many other man-made products which make better kindling than whittled chips of trees.

Good kindling includes anything that burns easily, especially lightweight materials that ignite directly from a match and furnish heat enough to fire the larger pieces of wood, coal, or fat that constitute the principal fuel. Tufts of dry grass, birch bark, sedges, pine needles, the pulpy interibrs of many plants in the marshland, and the dry lichen that covers the twigs of black spruce and tamarack meet these requirements.

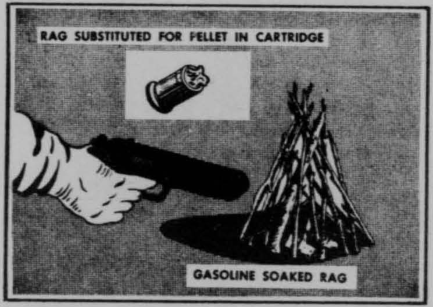


Cross-Section of Fire.

If you have animal fat (blubber) available, you can improve the igniting qualities of any of these types of kindling considerably by laying the fat between the kindling and squeezing. This forces the oil out of the fat and causes it to be absorbed.

Your fire is something that must grow from a match to burning logs; so use your kindling at the base of logs or other heavy fuel. Place some material on the ground and lay a few smaller sticks over it. Then distribute more kindling toward the center of those small sticks and continue building up the pile until it's about a foot high. On the center of this pile, lay the ends of four or five logs, letting the logs themselves stretch out from the center.

If you must build a fire on the snow, lay a base for it of logs, cowling, or other materials, to prevent the fire from melting a hole in the snow, falling into it, and going


RAG SUBSTITUTED FOR PELLET IN CARTRIDGE
GASOLINE SOAKED RAG

Starting Fire with Cartridge.

out. On high land, when the forest litter is dry, make a clearing for your fire; otherwise you may start a fire that will be hard to put out. In any case, always put your fire out completely before leaving a camp site.

In lighting a fire, strike the match and hold it so that any breeze will blow the flame into the fuel--not out of it. Handle any other flame-producing device similarly. If you're short of matches and have any paper or oil-soaked cloth, use one match to light the paper or cloth and use the paper or cloth to light the kindling of the fire. When you strike this first match, you'll really be thankful you've taken the time to build the windbreak around the fire area; and as you see the flames leap up through the tinder and small sticks to the larger sticks and finally consume the ends of the logs, you'll appreciate the reflected heat and lack of wind as you cook and dry clothes around this fire.

Starting a fire without a match is difficult under the most ideal circumstances and is really tough under low temperature, high wind conditions. Start worrying about this problem before take-off and provide yourself with an ample supply of matches in waterproof containers on your person. Don't depend on the next fellow; bring your own.

However, if you're stuck with a pocketful of wet matches (or have no matches at all) the flint and steel in your emergency kit will prove extremely valuable. This flint and steel will produce a spark, but only a small one, which you must build into a fire. In warmer weather, you can get sparks from a battery instead of the flint, but, at low temperatures, the battery will not produce a spark sufficient for fire-starting.

A spark will do you no good at all if you strike it in the wind in an attempt to light a soggy piece of wood. Plan your fire-starting carefully, therefore, and use your most volatile kindling material. Gasoline serves this purpose very well. Oil that is not congealed can also prove helpful.

Where game is scarce and ammunition is plentiful, it may be wise to remove the gunpowder from a cartridge or shotgun shell and put this at the base of your fire, using the flint spark to ignite it. If you are without flint, or if it is too cold to obtain sufficient sparks from a battery, your next best bet as a fire starter is a magnifying glass or any bent glass or plexiglass which maybe utilized as a magnifying glass. However, even where it is visible, the Arctic sun is weak through the winter months. It will take much patience to hold the magnifying glass in a position that will focus a spot on gunpowder long enough to get results. And if you don't protect your kindling against the slightest draft when using the sun's rays as a fire starter, even patience won't help you.

You can also use gunpowder and

cartridges to start a fire without the aid of the sun or a spark. Build a properly sheltered pile of kindling and wood and put the powder from a shell or shot at the base of the stack. Then hold a powderless and bulletless shell or cartridge in a pair of pliers close to the powder at your base of your fire and strike the outside of the shell primer with a sharp metal object. Another alternate, if you have a side arm, is to dump the gunpowder of several shells at the base of the fire in the usual manner, replace the shot or bullet from a shell with a piece of paper or cloth to hold the powder in position, and load this cartridge into the chamber. Then aim the gun at the powder at the base of the fire, holding the end of the muzzle at least an inch away from the powder, and pull the trigger.

If you have a tin can gasoline stove (described later), try removing the bullet or shot from a cartridge or shell. Then even if you have a long-barrelled gun, hold the gun barrel inside the tin can stove (but not under the sand or gasoline), and fire the piece into the stove.

A pyrotechnic pistol fired into the base of a well built pile of kindling, sticks, gasoline, or oil, is another way to get a fire started.

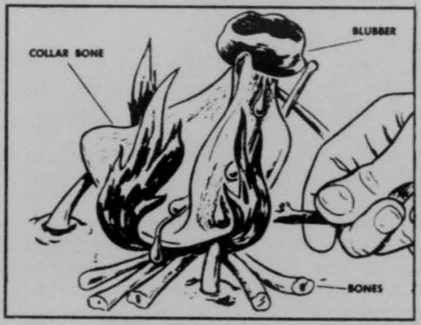
FUEL

Fuel is available in many parts of the Far North. In some places there are outcroppings of coal at the surface of the ground and sometimes lumps of coal are washed up on the beaches. This coal is commonly of the soft variety which produces a black smoke and an odor like asphalt.

In the tundra you will find some clumps of low growing willows and birches which can be split up into fine pieces and burned green. Birch is quite oily and if split fine will burn even when wet. In addition to standing timber there are some limited sources of dead wood. Sometimes you can find driftwood in the slack waters of river mouths and along the seashore where it has been cast up by storms. Driftwood is a great traveler and can be found on almost every shore of Alaska.

Most sub-polar lands are timbered. Hence, fuel in these regions is usually wood. The driest wood is in dead standing trees. Frozen green timber appears dry but is relatively heavy and has a hard ringing sound when struck with an ax. Frozen dead wood, on the other hand, has a dead dry rattling sound when struck. In living trees the branches above snow level are the driest. Places from which the bark has fallen are drier than those covered with bark or lichens.

Make every effort to keep a fire going at all times, even if it's a small one that must be built up as needed. If you are down in an area where there's plenty of wood and you have a crew with you, it's a good idea to spend the efforts of one



Blubber Fire.

person in gathering wood to keep a central fire burning. Under these conditions it's more successful to take turns sleeping than to pile your fire up with logs and all sleep at once. However, if you are alone, put a couple of logs on the fire and sleep for short periods of time, but keep a little fire going if at all possible. It will serve as a good signal and will also save your precious supply of matches.

Remember, though, no matter how plentiful wood is,it still costs you energy to drag it to the fire area. Don't throw more logs on the fire than you need at any one time. Lay them around the inside of your windbreak and sit on a few of them. Try to gather them through the light of the day and bring them as close to your fire area as possible so that you won't have to stumble through the darkness looking for wood when night comes.

GASOLINE STOVES

While you'll find an abundance of driftwood along most of the Alaskan coastline and throughout the northern Canadian shores, and while most of the inland areas of the polar region provide standing and fallen timber for fuel, there are still the great frozen sea areas which are barren so far as wood is concerned. The lack of wood does not mean that you cannot have a fire if you stay with your plane for the same type of material which makes kindling can also sustain fires.

The simplest and best fuel from an airplane is gasoline. But if you plan on burning gasoline, remember that you must use some other material as a wick—you can't just light a pot full of gasoline. You can make wicks of any material that will absorb gasoline. Parachute webbing, for example, makes a good wick. Roll it into a ball and place it in the bottom of any type of receptacle or open-top can with part of this wick sticking out above the gasoline. Another good way of burning gasoline is in a tin can stove. Just punch holes in the side of the tin can, cut the top of the can at intervals, and bend the sections down, as shown in the illustration.

Fill the bottom of the can with two or three inches of sand, then pour gasoline into the bottom of the can so that the level of gasoline does not rise above that of the sand. To use this gasoline stove, simply light it and leave it burning until all the gasoline is gone, then refill it. This kind of stove beats the wick type in that the sand never burns out, while a wick will be consumed.

Reading about a tin can stove, which is a really fine little device for cooking and heating, is not going to help you a bit if you are down on the ice pack with just gasoline and tin cans. There are certainly no sandy beaches there. However, if you plan your emergency equipment properly, you'll find room somewhere in your airplane for a few empty tin cans and a couple of pounds of sand, because this simple little stove will work for a long period of time. It does not tip over rapidly, and can therefore be used in small interiors. It has no mechanical parts to get out of order, and requires no cleaning. In addition, it will burn any type of aircraft fuel.

FIRES OF ANIMAL FATS

If you are in any danger of running short of food,don't use as fuel anything that can be eaten. You get more heat value from food that you eat (raw, if necessary) than from food that you burn. Similarly, clothing that you wear on your back is the source of greater continued warmth than the same clothing used as fuel. However, if you have plenty to eat you may use animal fat as fuel. Eskimos burn seal blubber with seal bones as the wick. They make a little pyramidal pile of them. They then saturate a small rag with oil from a small piece of blubber, light the rag, place it inside the bone pile, and lay the blubber carefully on top of the pile. The heat rends the oil from the piece of blubber and the oil drips onto the now-heated bones and ignites.

You can make a better blubber stove from a tin can about the size of a one-pound coffee can with the cover removed. Punch it full of holes--small holes not over one-fourth inch in diameter are best. Punch the sides and the bottom. Then build the wick from seal bones, a piece of canvas, dry tundra moss, or a piece of sealskin with the hair-side up. Impregnate the wick with the oil, light it, and place the perforated coffee can over the flame. Lay the blubber on top of the can. The oil dripping from the blubber into the heated air inside the can will burn far hotter than it does when the blubber is placed directly on the wick without the can. The smell is somewhat akin to that which rises from the Chicago stockyards on a hot July day, but you can be sure that if you are ever reduced by necessity to burning blubber, the cheery flame will certainly neutralize the odor.

GUNS AND AMMUNITION

Take very good care of your guns and ammunition. They may be your only means of securing food. Even though you haven't fired a shot, clean the inside of the barrel of your rifle daily by drawing a piece of dry cloth through it several times. To do this, attach the weight in your fishing kit to a short section of the line and attach a piece of cloth to the other end of the line. Then drop the weight through the barrel and pull the cloth through.

In rough country, handle your gun carefully to protect the front sight from being jarred out of alignment through striking on rocks or against brush.

A shotgun works fairly well even with dirty barrels and no sights at all--but at least keep the breech mechanism clean and dry. In very cold weather, don't oil the gun. Lubricate with graphite, if available. If oil gums up the firing pin, even the best gun may fail to function at 30 below. To keep the gun from "sweating," don't bring it into the warmth.

If you have an over-and-under gun, be particularly careful with the "thumb selector" by means of which you can select either the rifle (selector in up position) or the shotgun (selector in down position). This mechanism comes loose easily, and if it falls out or gets stuck, only one barrel of the gun will fire. If you're out of ammunition for that particular barrel, the gun will be useless.

Keep your ammunition clean and dry. Before using cartridges from a freshly opened box, rub the grease off them with cloth, leaves, or tree bark and save the material you rub with for fire-making. In rainy weather, carry paper shells in an inside pocket. If you have to swim a stream with your clothes on, throw your ammunition across, then cross over yourself.

NEW ADMINISTRATIVE UNITS IN YUGOSLAVIA

A new administrative system for Yugoslavia was ordered by the Praesidium of the National Assembly of the Federative Peoples Republic of Yugoslavia on March 25, 1949. The action was subsequently confirmed by the National Assembly during the three-day session of May 26-28. The six Peoples Republics which make up the Federative Peoples Republic of Yugoslavia were directed to establish smaller administrative units, called oblasts, within their borders. Each newly created oblast was then to be responsible directly to the central government at Belgrade (Beograd), not to the parent Republic.

In conformity with the decree of the Praesidium twenty-one oblasts have been created. Five have been formed within the Peoples Republic of Serbia (Srbija), in addition to the previously functioning Autonomous Province of the Vojvodina and Autonomous Oblast of Kosovo-Metohija; six in the Peoples Republic of Croatia (Hrvatska); four in the Peoples Republic of Bosnia and Herzegovina (Bosna i Hercegovina); and three each in the Peoples Republics of Slovenia (Slovenija) and Macedonia (Makedonija). Because of its small area and population, the Peoples Republic of Montenegro (Crna Gora) is not subdivided.

The following are the new oblasts:

Banja Luka
Beograd
Bitolj
Mostar
Nis
Osijek
Rijeka

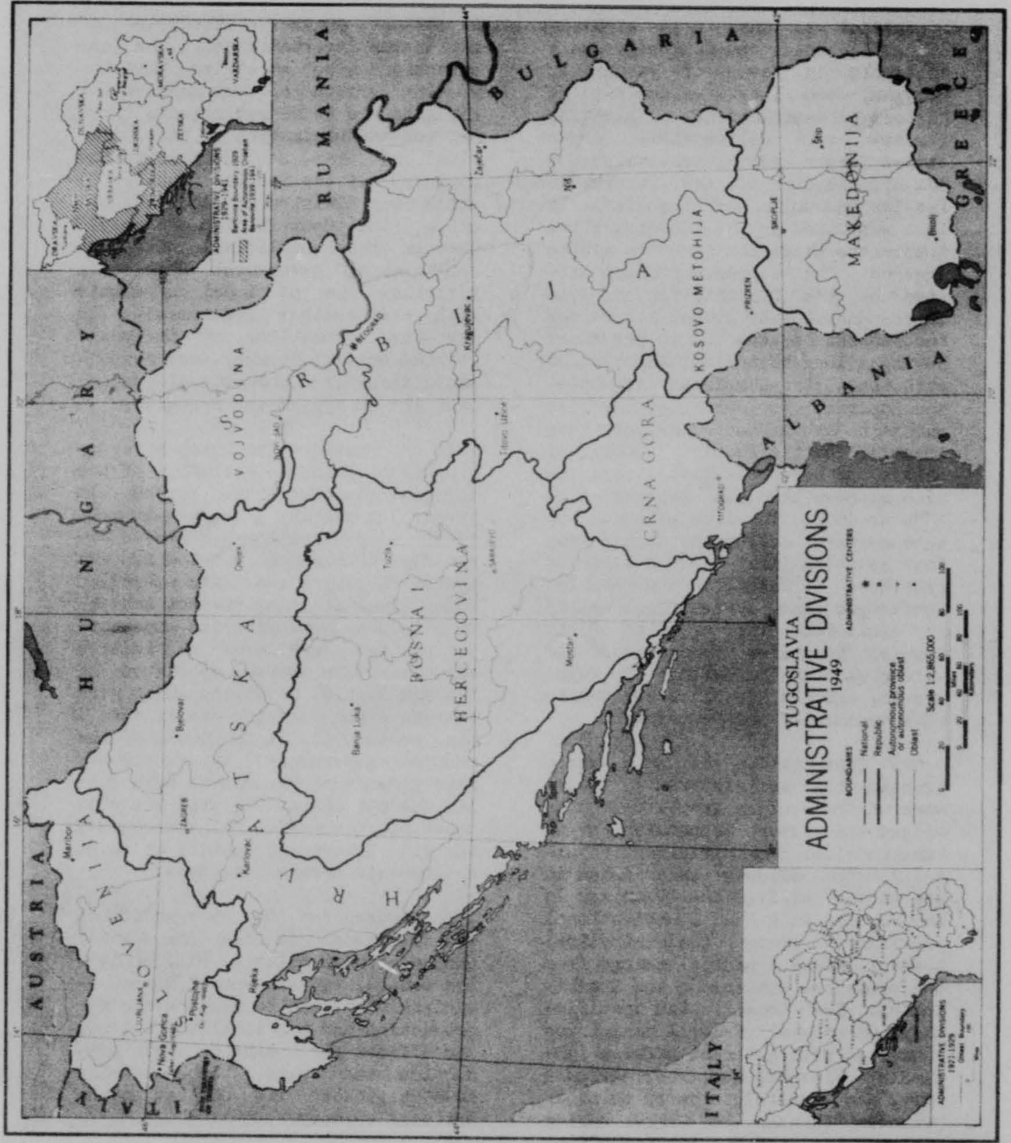
Bjelovar
Gorica
Karlovac
Sarajevo
Skoplje
Split
Stip

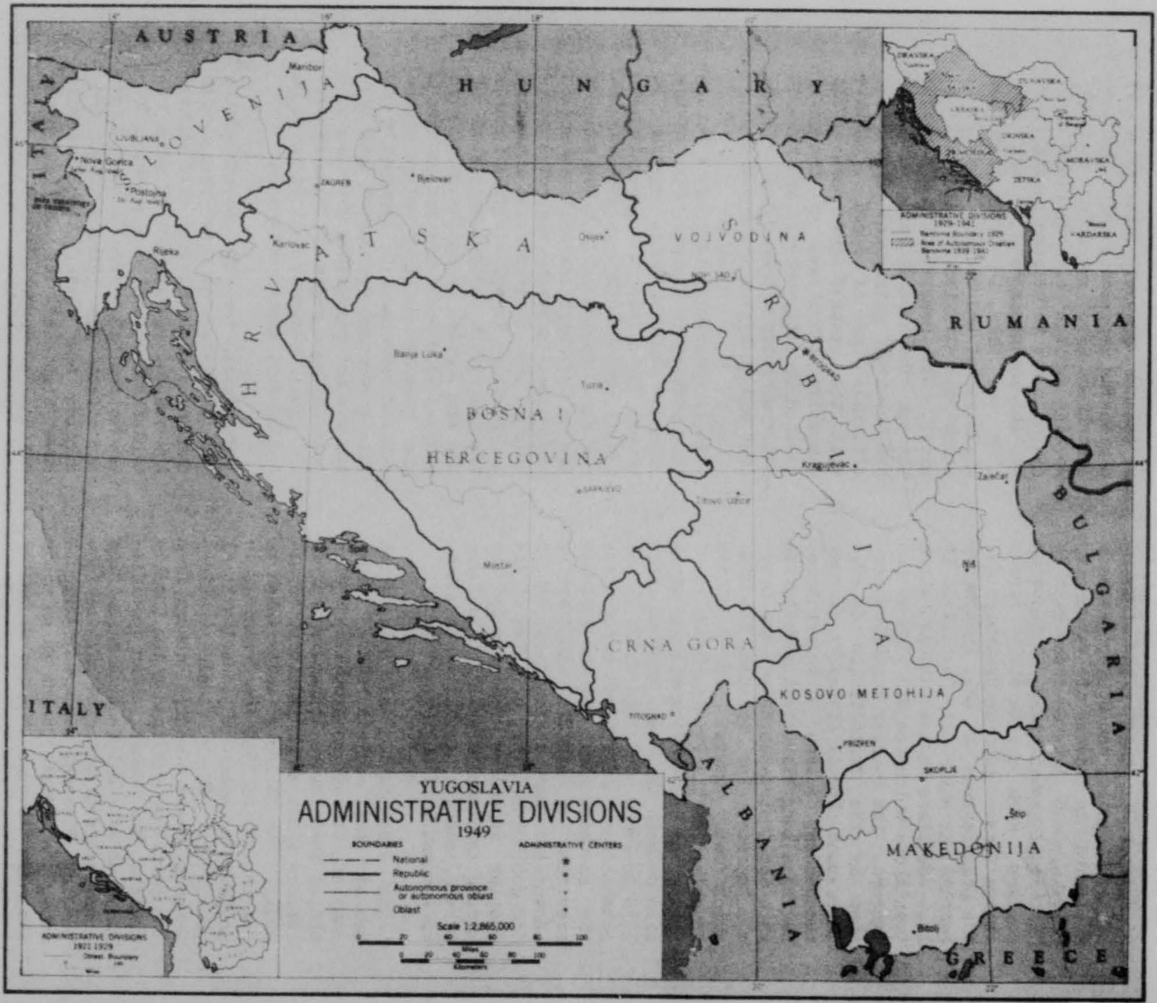
Kragujevac
Ljubljana
Maribor
TitovoUzice
Tuzla
Zagreb
Zajecar

The revised map, #11322 included in this article, locates the oblasts within the Republics. The cities of Ljubljana, Zagreb, Sarajevo, Beograd, and Skoplje are not included within oblasts, but are administered independently.

The new organization resembles the system that prevailed from 1921 to 1929. At that time, Yugoslavia was divided into 33 oblasts, which were the largest administrative units in the country. Under the new organization, there are but 21 oblasts. The difference in number is chiefly because the Vojvodina and Kosmet were not separate administrative units during the earlier period, but were divided among a number of oblasts. In other areas, the oblasts of the two periods correspond closely in size and number. Then as now, Slovenia (without Istria) was divided into two oblasts and Macedonia into three, but the boundaries differed slightly in detail. Large segments of the old boundaries, however, correspond closely to those established in 1949, particularly where the oblast boundaries are also boundaries of the Republics.

In 1929 the thirty-three oblasts were replaced by nine banovinas and the prefecture of Beograd. By the change the new Beograd administration hoped to eliminate sectional consciousness and separatism and to remedy the inefficiency of the oblast system. The Banovina was designed to be a large economic unit with considerable independence. The plan was never wholly carried out because of continuing direction from the central government. The old


YUGOSLAVIA
ADMINISTRATIVE DIVISIONS
1949
BOUNDARIES
National
Republic
Autonomous province or autonomous oblast
Oblast
ADMINISTRATIVE CENTERS
Scale 1:2,865,000
Miles
Kilometers
AUSTRIA
HUNGARY
RUMANIA
BULGARIA
GREECE
ALBANIA
ITALY
SLOVENIJA
HRVATSKA
BOSNA I HERCEGOVINA
SRBIJA
VOJVODINA
CRNA GORA
KOSOVO METOHIJA
MAKEDONIJA
Ljubljana
Maribor
Rijeka
Karlovac
Zagreb
Bjelovar
Osijek
Banja Luka
Tuzla
Sarajevo
Mostar
Beograd
Kragujevac
Zaječar
Niš
Titograd
Prizren
Skoplje
Bitolj
ADMINISTRATIVE DIVISIONS 1929-1941
ADMINISTRATIVE DIVISIONS 1921-1929


AUSTRIA
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Maribor
LJUBLJANA
Nova Gorica
Postojna
Rijeka
HRVATSKA
ZAGREB
Bjelovar
Karlovac
Osijek
VOJVODINA
RUMANIA
SRBIJA
BEOGRAD
Banja Luka
Tuzla
BOSNA I HERCEGOVINA
SARAJEVO
Mostar
Kragujevac
Titovo Užice
Zaječar
Niš
BULGARIA
CRNA GORA
TITOGRAD
KOSOVO METOHIJA
PRIZREN
ALBANIA
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MAKEDONIJA
Bitolj
GREECE
ADMINISTRATIVE DIVISIONS 1929-1941
ADMINISTRATIVE DIVISIONS 1921-1929
YUGOSLAVIA
ADMINISTRATIVE DIVISIONS
1949
BOUNDARIES
ADMINISTRATIVE CENTERS
National
Republic
Autonomous province or autonomous oblast
Oblast
Scale 1:2,865,000
Miles
Kilometers

RESTRICTED

historical province names of Macedonia, Slovenia, and Montenegro were abolished in favor of Vardarska, Dravska, and Setska—names with no historical associations. Banovina borders were deliberately drawn across former administrative units. The organization of the Federative Peoples Republic of Yugoslavia in 1946 was based on the administrative traditions which the Banovina system ignored. The Peoples Republics created by the Constitution of 1946 correspond closely either to former independent states or to provinces having a long historical association with the Austro-Hungarian and Ottoman Empires. For example, the line which today marked the northern frontier of the Peoples Republic of Bosnia and Hercegovina was the division between the two empires from 1739 to 1878. The line which is the southeastern Slovenian border was the southern limit of the Austrian provinces of Carniola and Styria. Montenegro was a political entity for centuries. The creation of the Peoples Republics recognized the strong sectional feelings in Yugoslavia, and the Republics were granted a measure of self-government.

The Constitution of 1946, which created the administrative framework of the Peoples Republics, authorized the future establishment of various minor civil divisions. Physically, the oblasts established in the spring of 1949 are organized in accordance with the constitutional provision. Their administration, however, marks a radical change from the procedure outlined by the Constitution. The Constitution specifically directs all federal ministries concerned with internal affairs (including Finance, Commerce, Agriculture, and Forests) to carry on their business through the corresponding ministries of the Peoples Republics. The federal ministries are permitted to conduct directly enterprises of nationwide importance only. The Constitution also specifies that the working groups of any minor civil division are to be subordinate first to the administration of that division and then to the appropriate ministry of the Peoples Republic in which the division is located. In short, the Constitution channels through the Republic all contact of the central government with local officials and of local officials with the central government. The executive committees of the newly created oblasts, however, are responsible directly to the central government and so bypass the Republic.

It is possible to trace a recurring problem in the evolution of the Yugoslav administrative system. In prewar Yugoslavia, a many-unit centrally responsible system proved unwieldly. Subsequently, the Banovina system whereby a few units exercised wide local autonomy was not acceptable to the authoritarian monarchy. In postwar Yugoslavia the initial administrative setup consisted of the six Peoples Republics which were charged with carrying out in detail the broadly outlined plans of the central government. Apparently the Tito government found that this system was not compatible with the purposes of the regime. In March 1949 the Tito Government decided to adopt a many-unit system once more.

The reason for the reorganization was suggested in the press which announced that oblasts will relieve the central government of minor administration, and be responsible for production and trade. If the oblasts can effectively direct both production and trade, the state will have tightened its control on the national economy.

Map Research Bulletin--Sep 49 Rest

AIR FORCE LETTER)
NO. 205-25)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 30 MARCH 1949

SECURITY

Disclosure of Classified Information to Reserve Forces Personnel

(Effective until 30 September 1950 unless sooner rescinded or superseded.)

	Paragraph
Purpose	1
Scope	2
Policy	3
Investigation and Clearance	4
Residents of Foreign Countries and Foreign Nationals	5
Requirements	6

1. Purpose. To provide uniformity, this Letter outlines the policy of the Air Force with respect to the dissemination of classified military information to Reserve Forces personnel.

2. Scope. This Letter applies to the Air Force Reserve and the Air National Guard, and in addition, its provisions will be followed in connection with activities concerning the Air Reserve Officers' Training Corps and the Senior Division of the Civil Air Patrol. This Letter does not apply, however, to personnel on extended active duty.

3. Policy. In compliance with the provisions of AFR 205-1 regarding security of military information, Reserve Forces personnel may be entrusted with classified information as follows:

a. RESTRICTED information may be disseminated for official military purposes to any Reserve Forces personnel.

b. Except as authorized in c below, information classified no higher than CONFIDENTIAL may be disclosed to Reserve Forces personnel not on active duty who are actively participating in official training activities, provided that possession of the information is essential to the training course or program.

c. SECRET information may be disclosed to Reserve Forces personnel on active duty for training purposes and personnel not on active duty who have a mobilization assignment, provided that possession of the information is necessary in the performance of official assigned duties.

d. TOP SECRET material will not be used for training purposes in connection with Reserve Forces training programs. As authorized by paragraph 7, AFR 205-1, 14 March 1949, however, individuals serving on short periods of active duty whose assignments require it may be given access to the TOP SECRET information essential for the performance of their assigned duties.

e. Documents containing information classified higher than RESTRICTED will not be disseminated for retention by individuals. Such documents will be stored in military files only.

f. Reserve Forces personnel not on active duty who receive classified information will be informed that the information affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation or transmission to an unauthorized person is prohibited.

g. Upon termination of active duty training, personnel will be briefed on the necessity for maintaining security of their professional knowledge while on inactive status.

4. Investigation and Clearance. Commanders concerned are responsible for requesting personnel security investigations and clearing personnel referred to in this Letter whenever required or necessary in accordance with separate Regulations.

5. Residents of Foreign Countries and Foreign Nationals. The provisions of AFL 182-4 and 8f, AFR 205-1, 14 March 1949, will be observed regarding dissemination of military information to persons residing in foreign countries, or to foreign nationals as defined in paragraph 2i, AFR 205-1.

6. Requirements. Although it is the desire of the Air Force to make available to Reserve Forces personnel such classified information as is required for training purposes within established training programs and courses, it is of primary concern that no breach of security will result from this policy. Commanders concerned will review continuously all classified material required by or of direct value to Reserve Forces activities, and whenever appropriate, will initiate down-grading action thereon in accordance with paragraph 27, AFR 205-1, 14 March 1949.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

- - - - - -

*This Letter supersedes AFL 205-25 (formerly 46-7), 31 March 1948.
This Letter has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.

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1. Communism
2. Arctic Regions
3. Germany -- Politics and Government

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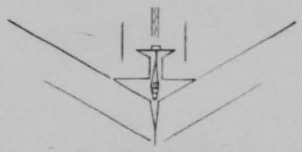

This "Review" is published for three reasons:
1. To provide timely data regarding new techniques, practices and general information whereby intelligence personnel can maintain proficiency.
2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

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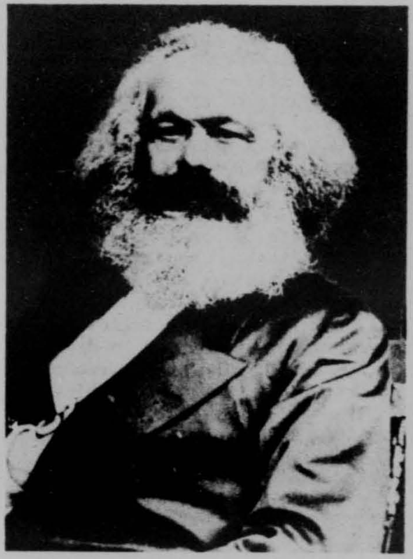
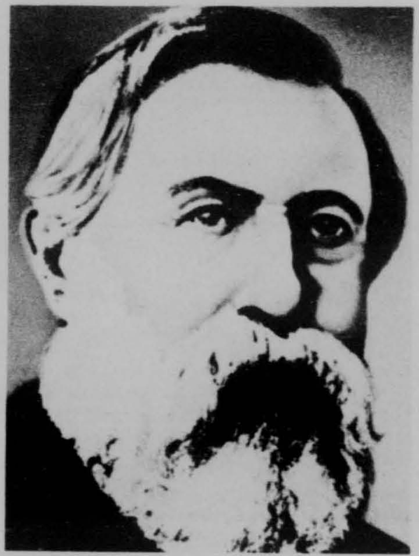
COMMUNISM IN THEORY AND PRACTICE

An Adaptation of an Article by Colonel Edward Barber

THE RED FLAME BURNS MORE FIERCELY AS COMMUNISTS CONTINUE TO USE PLAN DRAWN UP IN 1848 BY KARL MARX AND FRIEDRICH ENGELS



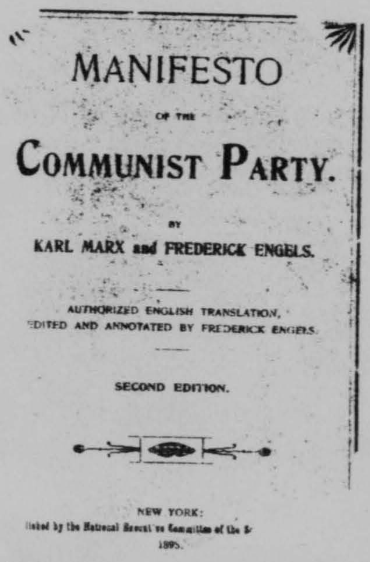
KARL MARX (1818-83). The hirsute, frustrated German philosopher who combined with Engels to write the Communist Manifesto.



FRIEDRICH ENGELS (1820-95). The dilettante son of a wealthy manufacturer, Engels was obsessed with Communism.

"A specter is haunting Europe." This announcement was made 100 years ago by the Communist League in the Manifesto written by Karl Marx and Friedrich Engels. That specter--the specter of Communism--still haunts Europe. Indeed, it now haunts the entire world. Today, we know that the ensuing 100 years, though they have not brought the fulfillment of Communist prognostications, have brought a time when Communism cannot be disregarded.

We in the United States cannot turn our backs to Communist aims as we have in the past. If we and the Communists are working at cross-purposes in the same world, it is well to examine where and how our purposes



MANIFESTO

OF THE

COMMUNIST PARTY.

BY

KARL MARX and FREDERICK ENGELS.

AUTHORIZED ENGLISH TRANSLATION,
EDITED AND ANNOTATED BY FREDERICK ENGELS.

SECOND EDITION.

NEW YORK:
Issued by the National Executive Committee of the S
1898.

U.S. EDITION. This is the 1898 edition produced, like succeeding editions, by the Socialist Labor Party. First imported English version appeared here in 1872.

cross theirs. When these purposes meet and cross, we should look to see whether it is theirs or ours which is frustrated. If it is ours, we must decide what is to be done.

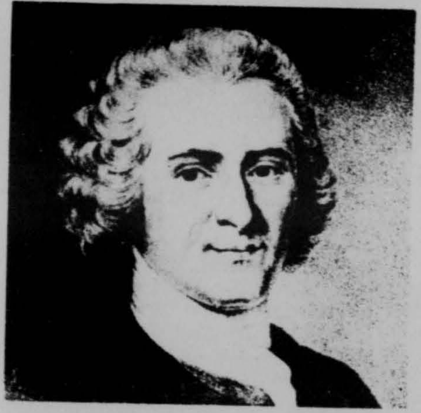
Obviously, the first step in the analysis of this problem should be to determine clearly just what our purposes are. Then we must proceed to a judgement of what the aims of the Communists are. However, to stay within the scope of this article, it will be necessary to proceed at once to an examination of Communism, assuming for the moment that we have a clear understanding of our own resolves as a nation.

There is ample evidence in officially documented form to afford a thorough study of Communist practices, but these practices defy analysis unless one has a lucid comprehension of the Communist theory.

1848: MARX, ENGELS, AND THE MANIFESTO

Foremost of the fundamental documents on Communism is the Manifesto of the Communist Party, by Karl Marx and Friedrich Engels, published in Germany in 1848. It was compounded as the platform of the "Communist League," a secret society prior to 1848, which is believed to have originated as a workingmen's association.

The Manifesto begins with the statement that "The history of all hitherto existing society is the history of class struggles." This sets the tone of what follows, as a theorem in mathematics is followed by its proof. The casual reader of the Manifesto would be inclined to



JEAN JACQUES ROUSSEAU (1712-78). This French writer exerted unwitting influence on the Manifesto authors.

pass lightly on, and eventually conclude that a pretty strong case had been built up to support the opening statement. However, any mature, intelligent reader with an inquiring mind would stop in the very beginning and ask these questions:

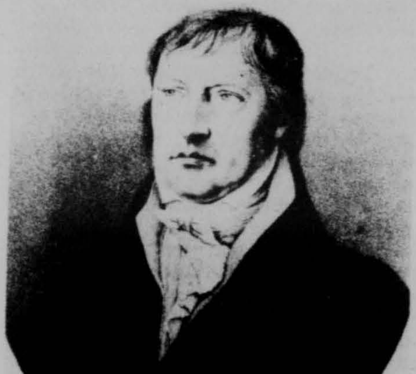
1. Is this statement true and based on factual material?

2. Is my knowledge of history sufficient to accept or reject this statement?

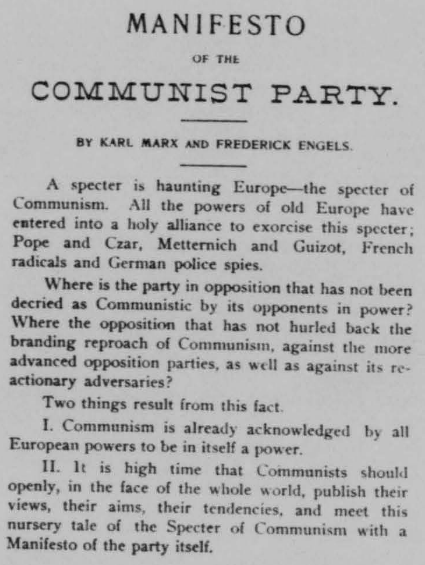
3. Why was this statement made in 1848 by Marx and Engels?

4. Can a cause-effect relationship be established to explain in part what led to such a conclusion?

Answers to these questions inevitably lead to a better understanding of the Manifesto, as well as to an exposure of its inherent contradictions and its fallacies in logical and moral aspects.



GEORGE HEGEL (1770-1831). A German philosopher whose Hegelianisms affected Marx and Engels.



MANIFESTO

OF THE

COMMUNIST PARTY.

BY KARL MARX AND FREDERICK ENGELS.

A specter is haunting Europe—the specter of Communism. All the powers of old Europe have entered into a holy alliance to exorcise this specter; Pope and Czar, Metternich and Guizot, French radicals and German police spies.

Where is the party in opposition that has not been decried as Communistic by its opponents in power? Where the opposition that has not hurled back the branding reproach of Communism, against the more advanced opposition parties, as well as against its reactionary adversaries?

Two things result from this fact.

I. Communism is already acknowledged by all European powers to be in itself a power.

II. It is high time that Communists should openly, in the face of the whole world, publish their views, their aims, their tendencies, and meet this nursery tale of the Specter of Communism with a Manifesto of the party itself.

SPECTER'S HERALD. First page of the 1898 edition. The book ended "Proletarians have nothing to lose but chains! Working men of all countries, unite."

Karl Marx was born in 1818, Friedrich Engels in 1820. For 100 years before their birth, the world had been witnessing some very significant changes in its political and social life. The Industrial Age had begun in Great Britain--James Watt invented the steam engine in 1769. The American Revolution had taken place. The French Revolution had begun with the capture of the Bastille on 14 July 1789, marking the end of the era of feudalism, and inaugurating a long, bloody, chaotic period in European history.

Napoleon had had his abortive fling and had been banished for the second time. Education had begun to move out of the monasteries which had long held a monopoly, but was still open only to a select few who could afford it. Printing, although begun in Germany early in the 15th Century, was still in its infancy, requiring laborious hand methods.

MARX, ENGELS GOT THEIR IDEAS FROM ROUSSEAU, HEGEL

Unquestionably,the Eighteenth Century was a turbulent,dynamic period. It was fraught with uncertainties and broken traditions. It was a period that encouraged confused thinking. In this century lived Jean Jacques Rousseau (1712-78), the Frenchman whose works will be remembered mainly for inspiring the Romantic era in French literature.

Rousseau's mature life was that of a vagabond ne'er-do-well, happily flitting from one mistress to another, never seeming able to earn his own way, and occasionally giving vent in his writings to his restlessness of spirit. His journeys into the field of philosophy are remembered chiefly for their eloquence of presentation rather than their logic and reasoning. However,his "Du Contrat Social" formed much of the basis for the Declaration of the Rights of Man and of the Citizen, which was drafted by the irate French citizenry after the fall of the Bastille.

Rousseau advanced the theory that man was perfect by nature, and whatever imperfections existed were due to the economic system.

In this era also lived George Wilhelm Hegel (1770-1831), born in Stuttgart, Germany, of well-to-do parents. Hegel's entire life was that of a scholar of cloistered, academic existence. Exceptionally well-educated and majoring in theology, he achieved great fame as a philosopher. His logic was the first to rival the logic of Aristotle, who was the apostle of the theory of demonstrative reasoning. Hegel's philosophy, known as "Idealism," interprets all material existence as the manifestation of an ideal.

The doctrine of materialism is antagonistic to all religious systems. It rejects the belief in a future life, it advocates fullest use of opportunities of the present life without regard to the possibility of any other, and argues that the ultimate reality in the universe is matter.

Rousseau and Hegel strongly influenced Marx and Engels, who were educated in Germany when Hegelianism was at its peak. In Hegelian dialectics they found a motivating force for the previous philosophies of materialism, to which Rousseau had made contributions.

THE LIVES AND TIMES OF MARX AND ENGELS

Marx and Engels were exceptionally well educated for their times. Marx' father was a respectable Jewish lawyer, and Engel's father was a wealthy manufacturer. After receiving his degree as doctor of philosophy at the age of 23, Marx seems to have been unable to adjust himself to the life of the times. The evidence indicates he became a frustrated intellectual, unable to make his own way, dependent on his friends for financial assistance. As is often the case, it would appear that his failure as an individual caused him to reject individualism; that his loss of faith in himself as a man caused him to pin his faith on some remote mass of men, possibly as a substitute for his discarded God.

Unlike Marx, Engels appears to have been wealthy enough throughout his life to indulge his fancies and test his philosophies. The income which permitted this indulgence was derived from a system which he did his utmost to destroy.

When the Manifesto was published, Marx was immediately exiled from Germany as a traitor to the government. He took refuge in England, where he stayed until his death in 1883. Engels was somewhat more fortunate. He escaped the wrath of the government since he was managing one of his father's mills in England at the time.

It is certainly significant that both of these men were given asylum in a country whose philosophy of government granted individual freedom of expression that could not be found elsewhere in Europe at that time.

Thus we see that the Manifesto was not solely the product of Marx and Engels. It was a product of the turbulent times of the eighteenth and nineteenth centuries: of Rousseau, a ne'er-do-well; Hegel, a cloistered scholar;Marx, a frustrated intellectual; and Engels, a wealthy dilettante.

In the Manifesto we may see the influence of confused, unobjective thinking resulting from (1) a turbulent historical environment, (2) a rejection of Christian concepts, and (3) rejection of the idea of the dignity of man as an individual. With this understanding, then, it is not surprising to discover that the Manifesto is a harsh, shrill diatribe against the existing economic system aimed at proving its opening statement that "The history of all hitherto existing society is the history of class struggles."

Also, it is not startling to discover that the central theme of the Manifesto is revolution--the overthrow of the existing order by violence and the raising of the working class to the position of ruling class.

HOW TO CONDUCT A REVOLUTION

The actual statement of concrete demands in the Manifesto occupies less than 3 percent of the 15,000-word text. These demands are quoted herewith verbatim:

"We have seen above that the first step in the revolution by the working class is to raise the proletariat to the position of ruling class, to win the battle of democracy.

"The proletariat will use its political supremacy to wrest, by degrees, all capital from the bourgeois, to centralize all instruments of production in the hands of the State, i.e., of the proletariat organized as the ruling class; and to increase the total of productive forces as rapidly as possible.

"Of course, in the beginning, this cannot be effected except by means of despotic inroads on the rights of property, and on the conditions of bourgeois production: by means of measures, therefore, which appear economically insufficient and untenable, but which, in the course of the movement, outstrip themselves, necessitate further inroads upon the old social order, and are unavoidable as a means of entirely revolutionizing the mode of production.

"These measures will of course be different in different countries.

"Nevertheless in the most advanced countries the following will be pretty generally applicable:

NICOLAY LENIN (1870-1924). The No. 1 man in the Red Revolution and first president of the U.S.S.R., this iron disciplinarian worked himself to death.

1. Abolition of property in land and application of all rents of land to public purposes.

2. A heavy progressive or graduated income tax.

3. Abolition of all right of inheritance.

4. Confiscation of the property of all emigrants and rebels.

5. Centralization of credit in the hands of the State, by means of a national bank with State capital and an exclusive monopoly.

6. Centralization of the means of a communication and transport in the hands of the State.

7. Extension of factories and instruments of production owned by the State; the bringing into cultivation of waste lands; and the improvement of the soil generally, in accordance with a common plan.

8. Equal liability of all to labor. Establishment of industrial armies, especially for agriculture.

9. Combination of agriculture with manufacturing industries; gradual abolition of the distinction between town and country, by a more equitable distribution of population over the country.

10. Free education for all children in public schools. Abolition of children's factory labor in its present form. Combination of education with industrial production, etc., etc."

It should be noted that many of these demands have long since been satisfied in nations outside the Soviet sphere, and without the influence of Communistic pressure. This leaves the principal remaining purpose of Communism as the violent and revolutionary elevation of the working class to that of ruling class.

MANIFESTO BECAME THE BIBLE FOR SOCIALISTS, COMMUNISTS

After the Manifesto was published in Germany in 1848, it was translated into many languages, and in time became the bible for Socialist and Communist movements throughout the world. The First International (1866-74) accepted Marx' program and prosecuted it vigorously, but met with more defeats than victories. It was the memory of those defeats that influenced the Second International (1882-1930) to pursue the more moderate course of seeking to gain its ends through constitutional rather than revolutionary means.

The revolutionary concepts of Marxism were revived by Nicolay Lenin, Leon Trotsky, and Josef Stalin. It was Lenin who introduced iron discipline within the Communist Party--discipline which demands blind loyalty and obedience. It was he who brought to the fore the differences between the Bolsheviks (majority) and the Mensheviks (minority), with the subsequent elimination of the Mensheviks.

Communism's development in Russia during the past 30 years is better known than Communism's early beginnings. Therefore at this point it is best to have a look at Communism in practice, keeping in mind the Communist theory that:

1. The history of all hitherto existing society is the theory of class struggles;

2. The immediate goal is world revolution by violent means to place the working class in the position of the ruling class.

Here it ought to be pointed out in letters 10 feet high that in the few instances in history where revolution has prevailed, seldom has the working class been elevated to the position of ruling class. More often, power has been seized by a group of shrewd, clever opportunists who represented themselves as "workers" and used power for their own advantage.

THIRTY YEARS OF THE SAME TACTICS IN THE UNITED STATES OF AMERICA

The pattern of Communist activity in the United States is so clear-cut that it has all the aspects of a shrewdly conceived and centrally directed campaign, which, of course, it is!

We look upon Communist activity as a threat which has only lately arrived in our midst. Actually, Communists have been boring away with gusto for a long time.

Some amazing revelations are contained in the Report of the Joint Legislative Committee Investigating Seditious Activities, filed on 24 April 1920 in the Senate of the State of New York. This report refers to the period during and immediately following World War I. We were concerned then over the lack of national unity displayed during the war, and were somewhat more fearful of the spread of Socialism than of Communism.

The 1920 report dwelt at length on Socialist activities and tactics. Nevertheless, if we were to go through

LEON TROTSKY (1877-1940). The top-flight organizer who believed in immediate revolution, fled Russia, found asylum in Mexico, was murdered there.

the report, and alter "Socialism" and "Socialist Party" to "Communism" and "Communist Party" we would find the report giving a reasonably accurate picture of conditions in the United States in 1949. Of course, we would have to add a brief account of the "boring-from-within" tactics, developed since 1920, used in institutions of public information and communication.

THE RED FLAME BURNS MORE FIERCELY

The main difference between 1920 and 1950 is that today we are up against a militant minority whose immediate goal is to seize power, by force if necessary. Thus, it would gain a position from which it can dictate the complete destruction of our way of life.

The Marxian doctrine announced in the Manifesto has exerted an enormous influence on the Socialist and Communist movements throughout the world. Many organizations have come into prominence as advocates of this doctrine. Most of these groups have masqueraded as political parties, Socialists, Communists, anarchists, syndicalists, laborites, etc., throughout the world.

All these organizations have the same objective--overthrow of what they are pleased to call the "Capitalistic System." Each group differs only in the means and methods it advocates to accomplish its aims. Strongest of all are the Communists--mainly because of their complete control and domination of the USSR. They are the principal threat to the peoples of the Western Hemisphere.

Patterns of Communist aggression have become clearly discernable through the years. The primary targets have always been the labor unions of a nation. By infiltration methods, Communists gain membership in unions, and then proceed to undermine the workers' confidence in their leaders. Under the guise of improving economic conditions for the workers, they endeavor to maneuver themselves into control positions of the unions. Next, they make increasingly exorbitant demands of employers. They threaten strikes and civic disorder to the point of creating conditions that make impossible the conduct of business on a free-enterprise basis. Then the State is supposed to step in and take control.

Next targets of equal importance have been institutions of education and information, then the police and security forces, and finally, the government itself.

Since gaining complete control of the USSR, the Communists have exerted economic, political, and military pressure on other nations in which "boring-from-within" tactics have not achieved the desired results.

By threats of military force, either actual or implied, Communists in the USSR seek to cause other nations to maintain security forces so large as to be a severe strain and drain upon economy and national morale. In some cases, Communists support covertly armed rebellions to further their objectives.

In pursuing their aims, Communists openly espouse whatever causes seem popular with the masses at the moment, capitalizing wherever appropriate upon whatever flagrant differences may exist between rich and poor. They seek to gain positions of power and control which eventually lead to dictatorship and complete suppression of opposition. Basically, the issue can be drawn between Communism and those forms of society which are founded upon the dignity of man as an individual; between revolution and evolution; between dictatorial leaders of an authoritarian police state and the leaders of peoples under a doctrine of freedom of choice;between atheism and religion.

Unquestionably, our purposes as a people and as a nation are in conflict with those of Communism. It is of little moment to dwell on the rightness or wrongness of a theory of philosophy when we are confronted with the urgent necessity of dealing with Communism in a practical way. It is no exaggeration to say that this problem is so momentous that we shall need to call upon all the powers of wisdom, logic, reasoning and clear objective thinking to arrive at a solution—for our future course as a nation, even our survival as a nation, hangs in the balance.

Air Intel Digest Feb 50 Uncl

JOSEF STALIN (1879-). Born Josef Vissarionovich Vzhugashvili, Uncle Joe grew up with Communism, became a Bolshevik, saw the Czar of Russia fall, saw himself become more powerful than any Czar.

COMMUNIST OBJECTIVES

1. Hatred of God and of all religion (a real Communist has to be an atheist).
2. Destruction of private property and inheritance.
3. Absolute social and racial equality (excepting Commissars, officers and specialists, etc.): promotion of class hatred.
4. Revolutionary propaganda to stir up Communist and radical activities in order to cause strikes, riots, sabotage, bloodshed and civil war.
5. Destruction of all forms of representative or democratic governments, including civil liberties such as freedom of speech, of the press and of the radio.
6. The ultimate and final objective is by means of world revolution to establish the dictatorship of the so-called proletariat under the Red flag into one world union of Soviet Socialist Republics with the capital at Moscow.

—U S House Committee Report

NORTH TO EVERYWHERE

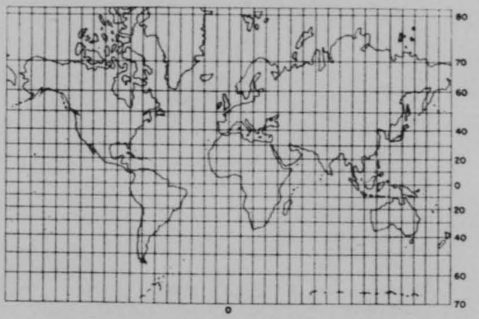
From an Original Article by Lt. Col. William R. Prince,
Instructor, Command and General Staff School

Forty years have elapsed since the Wright brothers made their historic flight at Kittyhawk. In those days, distances were great and the world was 25,000 miles around. To a farmer in Kansas, China was on the other side of the world and therefore must be 12,000 miles away.

Since that historic moment when the simple flying machine of the Wright brothers barely lifted itself above the sand dunes of the North Carolina coastline, developments have been such as to necessitate a complete re-orientation in our concept of world geography. We have been thinking so long in terms of east and west crossings of oceans and continents by ships, roads, and rail that it would take some time to accept what we have learned in the past few years--that the world is round in all directions.

Before long-range, pressurized stratoliners made their appearance, our idea of travel was as though the world were flat. The distance from Washington, D. C. to Moscow was 6,000 miles, from New York City to Tokyo 7,500 miles. Roads, railroads, and sea routes encircling the globe followed generally along parallels of latitude, or around its girth. They could not penetrate and cross over the formidable, frozen top and bottom sides of the world. The poles of the earth were the preserves of a handful of intrepid adventurers.

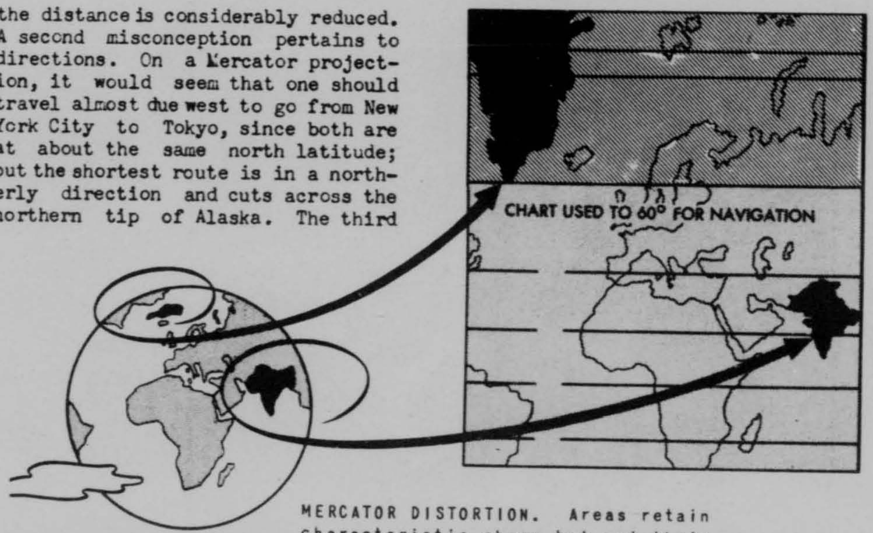
MERCATOR PROJECTION



MERCATOR PROJECTION. It is constructed by projecting the meridians and parallels onto the surface of a cylinder tangent to the earth at the equator.

The world was treated as a cylinder, the ends of which represented the north and south poles. We split this cylinder up one side, opened it out, and laid it flat. For millions of persons, this type of projection onto a flat surface is probably the most common geographic representation of the world. It has led to at least three widespread misconceptions.

One of these misconceptions pertains to distances. The distance between Washington and Tokyo laid off on a Mercator chart is about 7,500 miles, but if a string is stretched between these two points on a globe the distance is considerably reduced. A second misconception pertains to directions. On a Mercator projection, it would seem that one should travel almost due west to go from New York City to Tokyo, since both are at about the same north latitude; but the shortest route is in a northerly direction and cuts across the northern tip of Alaska. The third and probably greatest misconception pertains to distortion in size which occurs when we make a cylindrical projection of a sphere. On the Mercator projection, Greenland appears to be three times the size of Australia. Actually, it is but a third as large. A Mercator projection neglects the poles of the earth because the latitude of each pole, on such a projection, would equal infinity.



MERCATOR DISTORTION. Areas retain characteristic shape but not their proportionate size.

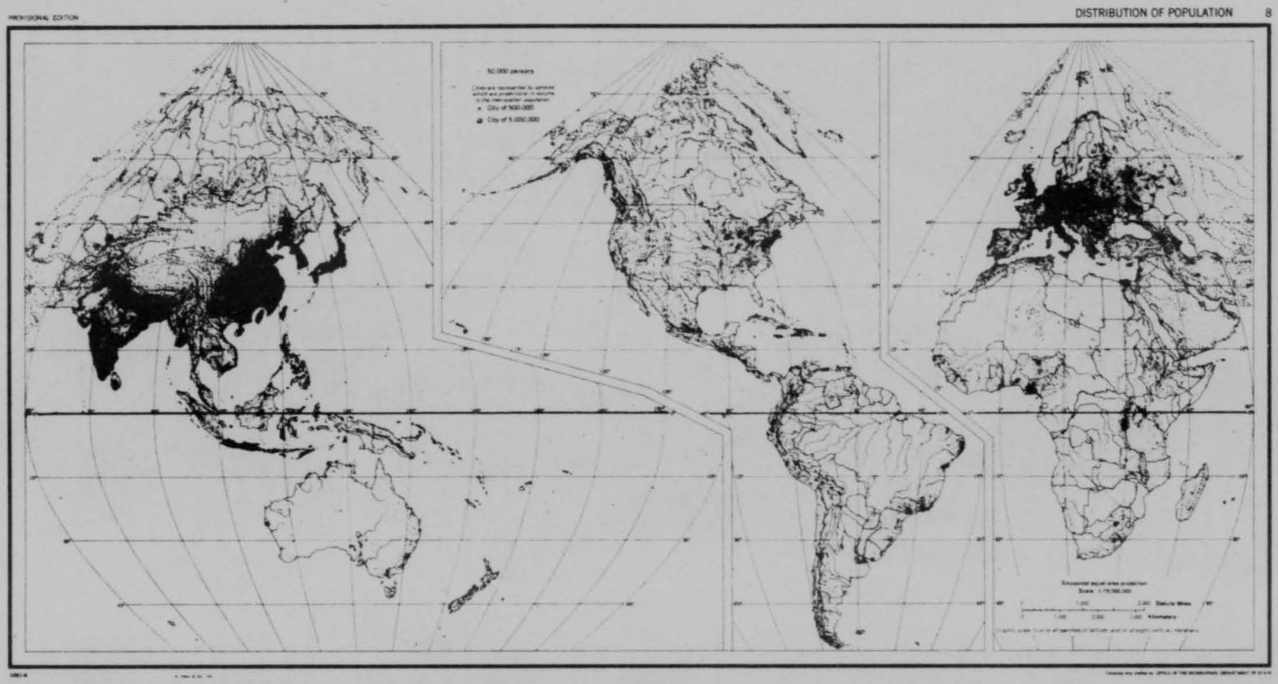
AIR AGE CHANGES

With the advent of the Air Age, the already recognized principle that a great circle is the shortest path between two points on the globe came into the realm of wide practical application. Air routes between two such points in opposite hemispheres, while seldom passing over the North Pole, nevertheless cut circles that fall well within the Arctic regions.

Why is the Antarctic excluded? Why should the same conditions not hold for the south polar regions as well? An inspection of a world globe will help supply the answer.

Approximately 70 percent of all the land area of the world lies north of the equator. Of the 30 percent in the southern hemisphere, a third is the vast, isolated, largely unexplored and uninhabited Antarctic Continent, and therefore only 20 percent of the inhabited land area of the world is south of the equator. Those land masses within the northern hemisphere include all of North America, Europe, Asia, two-thirds of Africa, and one-sixth of South America. Sixty percent of all the water area of the world is south of the equator. Figuratively speaking, then, the north half of the world is land and the south half is water.

The population distribution is even more radical and further accen-


PROVISIONAL EDITION
DISTRIBUTION OF POPULATION 8
50,000 persons
City of 500,000
City of 5,000,000
Statute Miles
Kilometers

The blacked in areas illustrate that 90% of the world population is north of the equator. Note also that the vastly greater land mass (70%) is also in the northern hemisphere. Sixty percent of the water is south of the equator and 30% of the southern hemisphere is the largely unexplored and uninhabited Antarctica tuates this half land, half water concept. Ninety percent of the world's peoples are gathered within the northern hemisphere. Of the cities in which they live, 90 percent of all those having a population of 100,000 or over are north of the equator. By air, the capitals of all the great powers are closer to the Arctic Circle than they are to the equator. Mexico City and Chungking are both well within the northern hemisphere.

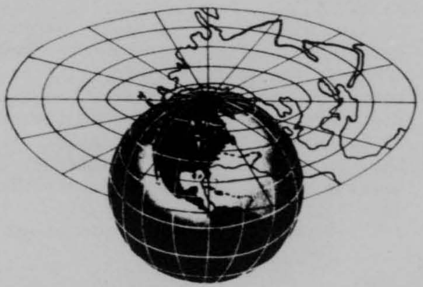
A climatological factor also favors the Arctic over the Antarctic. In general, the weather and climatic conditions over the Arctic are much less severe than those experienced on the Antarctic Continent.

These are the reasons why the aerial highways between the new and the old world will cut across the Arctic. Greeley's famous advice may well be revised to a modern phrase: "Go north, young man, go north!"

POLAR PROJECTION

Considering the world from an infinite distance directly above the geographic North Pole, we see that the pole is approximately at the center of the land masses of the world. A projection of the world, centered on the geographic North Pole, will supplant, in time, the more common Mercator chart as the familiar geographic face of the earth. The fulllimplication of a polar-centered world is not yet wholly appreciated. It will not be until commercial air transportation is fully developed.

The first thing that strikes one as he looks at a polar-centered map is that he is looking down into the center of an elongated body of water almost completely surrounded by land.



POLAR PROJECTION. Centered on the geographic North Pole, this type projection will in time supplant the mercator chart.

It has much the same general aspect as the Mediterranean Sea. Could this be the Arctic Ocean? It does look like an ocean on a Mercator map. Viewed in true proportion, as on a globe, it has more the appearance of a sea--the Mediterranean of the north, in the middle of all the land masses of the world and separating Eurasia from North America.

Little known yesterday, this sea is becoming a most important body of water. It is the only natural body of water which physically separates the two great land masses, Eurasia-Africa, and North America-South America--this by only the 50-mile width of Bering Strait. How many people realize that one may travel from the southern tip of South America to the southern tip of Africa, pass through five continents, and hardly see water?

THE ARCTIC OCEAN

Since the Arctic Ocean is destined to grow in importance in world strategy, travel, and trade, it would be of interest to explore it briefly.

The surface covers an area of

1774

about 5,500,000 square miles. This is five times the area of the Mediterranean Sea and one-twelfth the area of the Pacific Ocean. Its expanse is entirely contained within the Arctic Circle and its perimeter is 80 percent bordered by land. If the Arctic Ocean is considered to include all of the waters within the Arctic Circle, its length is close to 3,000 miles and its narrowest width is 1,200 miles.

The Arctic Ocean is neither an area of extremely low temperatures (minimum of -55F) nor of violent storms (55 miles an hour winds are rare). This degree of mildness, compared with the severity of the weather in the sub-Arctic, the Antarctic, and even in the North Temperate Zone, is due to the great body of water whose surface temperature is never lower than about 28F, since salt water will freeze below that temperature. The pack ice on top of this great mass of heated liquid acts as a great stove lid through which the heat underneath must come. As a consequence, the Polar Basin is much warmer than the surrounding sub-Arctic regions.

The main basin of the Arctic Ocean is quite deep. A sounding of 9,000 feet without bottom was taken by Robert E. Peary at the North Pole in 1909. The deepest soundings were recorded by George H. Wilkins in 1927, over 17,000 feet, 550 miles northwest of Point Barrow, Alaska.

PACK ICE

The principal characteristic of the Arctic Ocean is the pack ice which, even towards the end of summer, covers two-thirds of the surface. It has been variously described or imagined as a solid, homogeneous mass or cap, firmly and squarely implanted on the northern "top" of the earth. There is no vast expanse of solid ice or an ice cap as such, even at the North Pole. Admiral Richard E. Byrd gives the following description of the ice at the North Pole as he saw it during his historic flight on 9 May 1926:

"It did not look different from other miles of ice over which we had just passed. There was the same stretch of brilliant white marked by ridges, hummocks, and a few leads [open channels in the ice] recently frozen, showing green against white. From pressure ridges, I knew that the ice there was in constant motion. The ice was composed of large cakes, of fields whose edges, except at the leads, jammed up against each other and were pressed so tightly by wind and ocean currents that ice and snow was forced up to varying heights, depending upon the pressure exerted. Cakes were glistening white with hummocks. Here and there on most of them, and on some drifts caused by strong winds, I knew the surface was more uneven than it looked from the plane. Floes were of many shapes and sizes, and pressure ridges ran willy-nilly, apparently without rhyme or reason."

When the large floes break up during the summer, they remain separate until autumn. As winter approaches, low temperatures begin to cement the floes together. Then, under the stress of wind, currents, collision with adjacent floes, and differential stress, leads form, exposing open water. In the winter, the open water in the leads freezes rapidly, cementing separate floes together and forming smooth, even surfaces. This process, together with the sluggish motion of the floes, makes it possible to travel over the ice with comparative safety during the winter, afoot or by sled. It was across such ice that Peary made his

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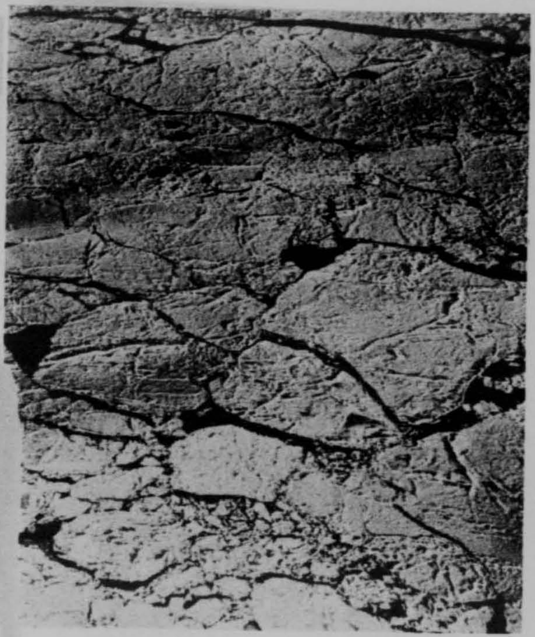
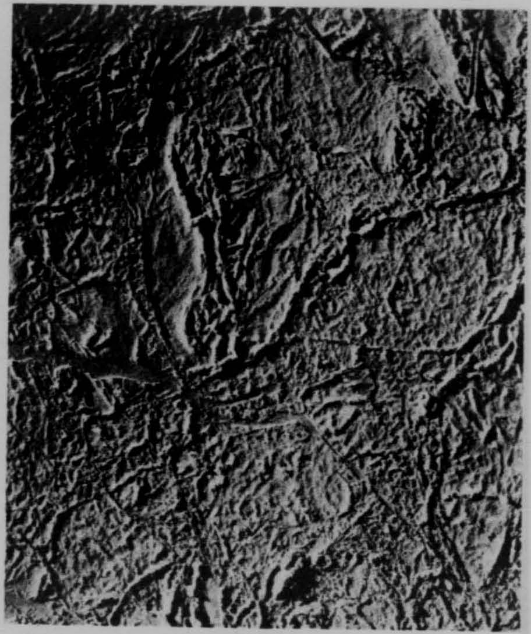
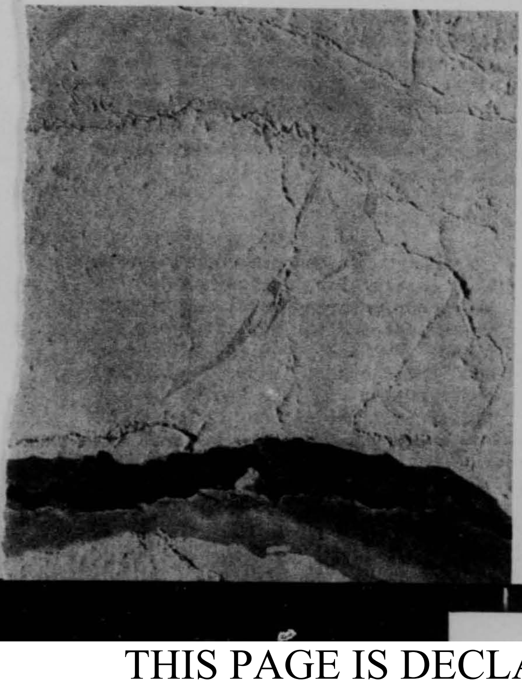


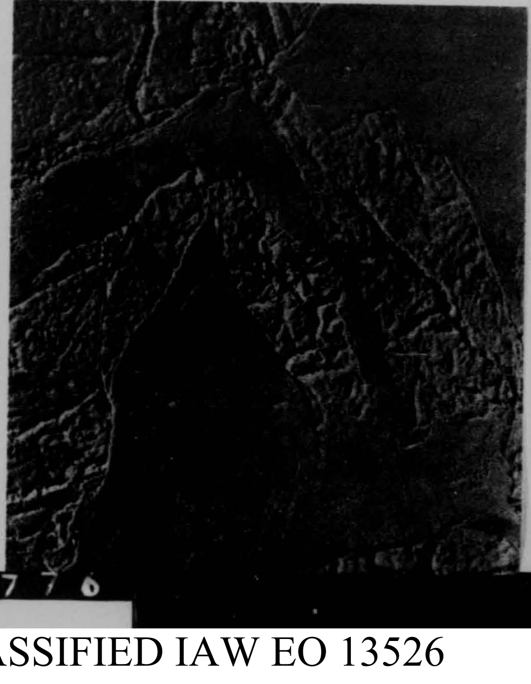
PACK ICE. The lanes of water are typical during summer thaw; in winter they are frozen solid.



PRESSURE RIDGES. Wind and ocean currents jam floes together causing ridges 20 to 30 feet high.



LEADS. Open channel in the ice is called a "lead." Note the lead in background which has frozen over.



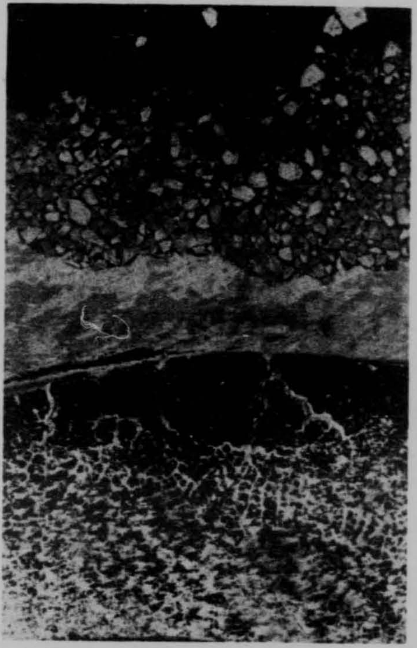
WINTER FREEZE. The open water has frozen, cementing the separate floes into a solid surface.

trip to the North Pole in 1909 from the north end of Ellesmere Island, a distance of 450 miles.

There has been much speculation as to the thickness of the pack ice. Estimations anywhere from 20 to 200 feet may be gained from reading some articles. The 20-foot ice is an exception, and 200-foot ice is never there except where ice is piled up against beaches and is jumbled up in great masses. The latter, however, is not to be pictured as characteristic of the entire sea. There is more substantial evidence of the average thickness of the pack ice of two famous drifts reported by ships: the Norwegian ship Fram (1893-1896), captained by Dr. Fridtjof Nansen; and a Soviet ice-breaker Sedov (1937-1940). Data compiled by the personnel of these two ships during the drifts indicates that in the 40-year period intervening between the two drifts the thickness of the pack ice had decreased by about 3 feet. The Fram recorded the normal ice depth as 10 feet, whereas the Sedov recorded a depth of 7 feet.

The ice of the Arctic Ocean is of two kinds: that type already described, which is constantly moving and has a natural drift in a clockwise direction toward an outflow between Greenland and Spitsbergen; and fast ice which is immobile and solidly anchored to the coasts. In the summer, the pack ice averages from 5 to 15 miles off shore and much of the fast ice disappears. Thus a relatively open water passage (shore lead) is provided for ships. However, due to the vagaries of the drifting ice floes, it is seldom that such passages can be navigated without the assistance of aerial ice reconnaissance and ice-breakers.

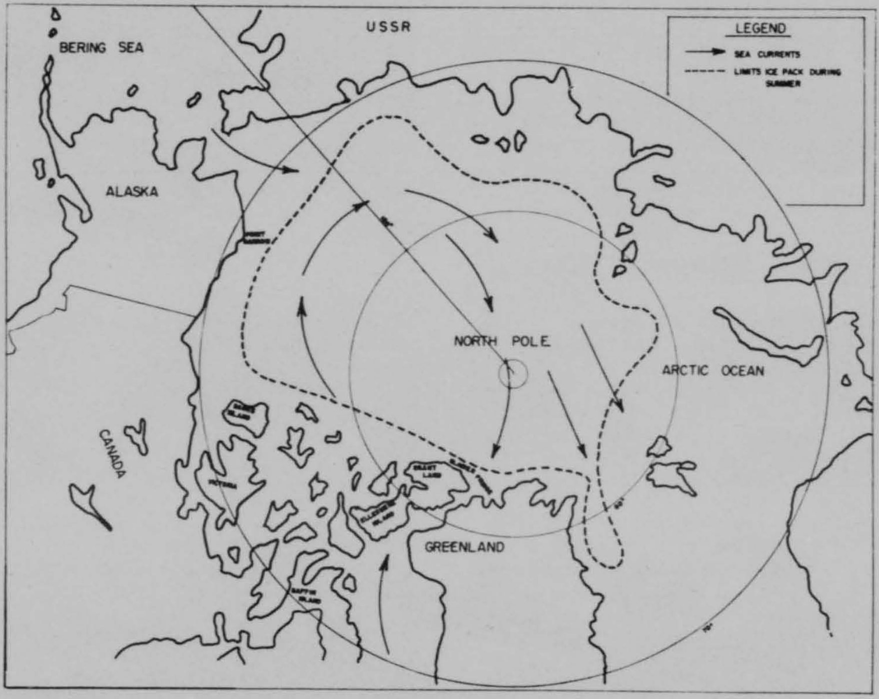
During the winter, the pack ice and the fast ice generally come together. Where the motion of the pack ice is rapid, as after a heavy gale when its speed may be 2 or more miles an hour, there is severe grinding of the pack along the edge of the land ice. The rending and crashing of the floes at such times is deafening.



TWO TYPES OF ICE. This illustrates the solid or "shore" ice, and the broken, moving, "drift" ice.

ARCTIC HISTORY

Although man has probably lived in the Arctic for as long as 500,000 years, our recorded knowledge of life there dates from relatively recent times. Pytheas, a Greek astronomer and philosopher, made the initial contribution in the fourth century B.C., when, after sailing 6 days north



MOTION OF DRIFT. The arrows show how the floes move clockwise to the outflow.

from Scotland, he found an island called Thule (Iceland). Proceeding north an additional day, he encountered much ice "through which the ship could not sail and which would not support man." Pytheas' brother philosophers gave him scant satisfaction in his contentions. They held to the then current belief that the frigid zone where Pytheas had claimed to have been would not support life. After Pytheas, there is little information on the Arctic until the colonization of Iceland by the Norsemen in the ninth century A.D. In 983, using Iceland as a base, Eric the Red colonized Greenland, and 17 years later, during a voyage from Norway to Greenland, he apparently missed sighting the island and is presumed to have made a landing on the coast of Labrador.

Following this discovery of America, there is another gap of several hundred years in the history of further Arctic exploration. It was not until 1576, with the first of three expeditions conducted by Sir Martin Frobisher, that Europeans again took an interest in the Arctic. Gradually, the value of the fur trade in the north and the desire to navigate a northwest passage to the

Orient increased the number of expeditions and added to the knowledge of the Arctic. The great goal of being the first to reach the geographic North Pole resulted in a keen international competition and placed much emphasis on Arctic travel and exploration. The whaling industry brought many people to the Arctic, where numbers of them settled permanently after the industry declined. With the advent of the airplane, exploration and colonization of the Arctic lands received further impetus. A Russian, Lieutenant Nagurski, first successfully flew an airplane within the Arctic regions in 1916. Admiral Byrd made his famous flight over the North Pole 10 years later. Since that time, the USSR, Canada, and the United States have been in the forefront in carrying out many experimental and enterprising flights in, around, and across the Arctic. With the development of multi-engined, high-speed aircraft, Arctic flight is becoming commonplace.

FLYING CONDITIONS

It is a mistaken idea that flying conditions grow progressively worse the farther north one moves from the equator. Conditions do increase in severity from the equator until latitudes where annual mean temperatures around the freezing point are reached. In such localities are found dense fog, heavy, sticky snow, and freezing rain, all of which interfere with visibility and the aerodynamics of a plane. This area occurs within the North Temperate Zone and conditions result from constant variations in temperature. North of this zone and within the Arctic, however, flying conditions through the whole year are less difficult.

The stratosphere is above all weather, and therefore stratospheric flight over the Arctic will be similar to that over the equator, with one exception. The floor of the stratosphere decreases in altitude as one progresses north or south from the equator and continues to decrease until over the poles. Thus, while the stratosphere in northern North America may be entered at 20,000 feet, over the geographic North Pole it may be gained at 15,000 feet.

Besides our growing awareness of the short cuts offered by air travel across the Arctic, we are learning that the high-altitude flying weather in this region is equal to or better than that of any other locality in the world. Before full use can be made of these dual advantages of distance and weather, advance operation bases, strings of radar and loran stations across the Arctic, and weather stations are needed for flight control and for safety.

The comparative safety of air travel over the Arctic Ocean, in contrast to other great bodies of water, is high-lighted by Vilhjalmur Stefansson in his discussion of the fate of an attempted transpolar flight by Russian aviator Levanevsky in 1937. Stefansson wrote:

> "Levanevsky was assumed to have made a forced landing on the polar sea. Therefore, we consider the various oceans, how they compare for the safety of forced landings. Most flyers who have come down on liquid seas far from land and beyond sight of a vessel have been lost. All have been lost who made forced descents beyond the sight of rescuers in a gale.
>
> "Before the Levanevsky flight, there had been perhaps a dozen forced landings on the frozen sea. Some

EMERGENCY LANDINGS. Smooth surfaces of off shore ice packs provide emergency landing fields.

were in good weather, some in falling snow, some in blizzards, and one in a combination of a gale and the darkness of night. All these had been safe descents--no lives had been lost and there had been only minor injuries to planes. The flyers were always saved in one of three ways: they made repairs and flew again; they were rescued, by plane or ship; or they abandoned their plane and walked ashore.

"Take specifically for the North Atlantic the entire period from its first crossing by the United States Navy airplanes in 1919 to the beginning of survey flights by Pan American Airways and Imperial Airways in 1937. During this period, atleast 19 ocean descents were made in all weather from calm to gale. Nine planes were lost. The people saved were mostly those who had specially good luck, as coming down in fairly good weather either within sight of a ship or after being able to communicate to a nearby ship through radio an approximate position of their descent.

"During the same period, more than 90,000 miles were flown over the polar sea. There were at least 56 voluntary and forced descents in all weathers from calm to gale (not all Soviet figures are available). No lives were lost from any of these descents."

The importance of the Arctic to air travel is obvious. Less obvious is the importance of the polar sea as a navigable body of water.

SUBMARINES

The problems involved in traversing the Arctic Ocean beneath the polar ice pack with a submarine are serious but not insurmountable. The first experiment of this type,made in 1931 by George H. (Sir Hubert) Wilkins in an attempt to reach the North Pole, ended in failure. The submarine Nautilus, formerly the USS O-12, was obsolete; despite extensive alterations and modifications designed to cope with expected conditions, she was no match for the ice. Time, 14 September 1931, describes the plight of the Nautilus at the conclusion of her venture in these words:

"They rammed their ice-borer, which was to give them escape if they were gripped under the ice, against an ice chunk and smashed it. Ice crushed the runners atop the Nautilus, which were to enable her to slide against the underside of ice fields. She sprang two leaks, became miserably dank within. The propeller edges became saw-toothed and bent, grinding against small ice."

The position of the Nautilus at the conclusion of this experiment was north of Spitsbergen and about 400 miles from the North Pole. Despite her severe mauling, she had submerged and navigated beneath the Arctic ice pack.

The modern submarine, with high submerged speed and capabilities of long submersion and great diving depth (nearly 1,000 feet in the experimental dive made by the French with one of the type XXI German submarines) could cross the Arctic Ocean at its narrowest width in less than 48 hours.

A new and more sensitive sonar gear would keep such a submarine constantly aware of its position in relation to the ice ceiling and ice tongues extending down into its path. Such gear would also locate areas of open water in the ice pack, into which a submarine could surface. Submarines in the Arctic in peacetime would be useful as weather stations, radar picket vessels, and loran and aircraft beacon stations. Their strategic importance in war is obvious.

The fact that the shortest airline and water distances between the major land masses of the northern hemisphere are across the Arctic is alone sufficient to give strategic importance to the area in future global war. Strategically, Alaska, Greenland, and the Islands of the Canadian Archipelago are the first line of North American continental defense. Development of these areas in peacetime will enhance their value in war.

DEVELOPMENT

Great changes are taking place in the general methods of Arctic exploration and development. Side by side with private enterprise, governments have already begun to open up and exploit the northern lands which belong to them. The search for uranium, oil, and iron ore, as well as for natural waterways along the northern shores of North America and Asia, are speeding this work. These vast areas, woefully lacking in overland travel facilities, have been knitted more closely together by air services which connect their remote communities. The Arctic is destined to play a leading role in the coming age of long range aviation. Most of the great commercial air routes of the world will have to cross the Arctic at one place or another. Air travel will lead to modern airports with all facilities for the comfort and convenience of the traveller. Eventually, the heretofore forbidding polar ice will serve the needs of civilization, by providing emergency landing fields and by supporting portable directional finding stations and light beacons which will chart unerring courses over the Arctic Ocean.

The ultimate passage to the Orient is aerial. The short cut from New York to Tokyo is via Hudson Bay, the Barren Lands of the Northwest Territories, and Alaska. The shortest distance from Chicago to Calcutta is straight north. In short, travel tomorrow will be North to Everywhere!

Mil Review CGSC Rest

The following redesignations are furnished for your information:
F-94B redesignated F-97
F-86D redesignated F-95

THE BOOK SHELF

RECOMMENDED READING FOR YOUR OFF DUTY HOURS

TITLE: Rumania Under The Soviet Yoke

AUTHOR: Reuben H. Harkham

PUBLISHER: Meador Publishing Company,
Boston

This book, by a journalist with many years experience in the Balkans, describes what happened to Rumania when it was taken over by a communist minority. There is a review of the background of the Rumanian nation and people and a detailed account of the tangled events in the country during World War II. The major portion of the book, however, deals with events around March 1945, when the Rumanian government was handed over to four communists. Only 5 years before, the communist party had numbered only 1,000 in a country of 20 million inhabitants. The book records the religious persecution suppression of minorities, subjugation of Rumanian nationality, and terror that had been Rumania's experience through 1948.

TITLE: The United States in World
Affairs, 1947-1948

AUTHOR: John C. Campbell

PUBLISHER: Harper & Brothers, N.Y.

Recent world events as they have affected the United States form the substance of this volume. The second of two volumes prepared by the Council on Foreign Relations since the end of World War II, the present book covers the period from the spring of 1947 to the spring of 1948. Here the reader will find much on the widening breach with Russia and the crisis that has developed in the United Nations. Among other subjects, the author covers the Truman Doctrine and the Marshall Plan, Germany, Japan and Korea, and Asia. One chapter deals with inter-American affairs.

TITLE: Western Union. A study of
the Trend Toward European
Unity.

AUTHOR: Andrew and Frances Boyd

PUBLISHER: Public Affairs Press,
Washington, D. C.

In view of the many recent steps that have tended to draw the nations of Western Europe closer together, this book is quite timely. The two British authors give a survey of the condition in which Europe finds itself after World War II, and they sketch the various early attempts to unify Europe. One chapter deals with recent developments such as the Marshall Plan, economic union, defense measures, and the various influences of the United Nations on Europe. The book covers events into 1948, and it thus stops short of the creation of the Council of Europe on 28 January 1949.

THIS PAGE IS UNCLASSIFIED

SECURITY QUIZ

The Key
to
Security
DISCRETION
CONAC

SAFEGUARD MILITARY INFORMATION

Paragraph 4b, AFR 205-1, squarely places on the individual the responsibility for safeguarding classified military information. Thus it is not a case of letting the other fellow worry about it, but a case of each of us being security conscious at all times. The overworked adage still hold true--"a chain is only as strong as its weakest link."

What is your strength in this chain? Here is a test of your knowledge of security matters. References shown after each question apply to paragraphs in AFR 205-1. Are the statements true or false? Jot your answers on a piece of scratch paper so as not to spoil the test for the next man.

After you have taken the test check your answers on page 44, taking two points for each correct answer. Are you a good security risk?

1. Security is the protected condition of classified matter which prevents unauthorized persons from obtaining information of direct or indirect military value. (Par. 2-r.)
2. Military information is ALL information under the control and jurisdiction of the Department of the Air Force or of primary interest to it. (Par. 2-1.)
3. In transacting official business, any type of restricted message may be read verbatim over the telephone to a person authorized to receive such information. (Par. 6-b.)
4. Downgrading is the lowering of classification of classified matter, including canceling the classification when appropriate. (Par. 2-h.)
5. The discussion of classified military information, either public or private, with or in the presence or hearing of any person not authorized to have knowledge thereof, is strictly forbidden. (Par. 6-a(1).)
6. When classified military information is discussed with persons who are subject to military law or employed within the National Military Establishment, they will be informed of its classification. (Par. 6-a(3).)
7. Top Secret, Secret, and Confidential information will not be discussed over the telephone. (Par. 6-b.)
8. When the notation "Paraphrase not required" appears on a restricted message, information included in the message may be discussed over the telephone. (Par. 6-b.)
9. Matter may be classified Top Secret or Secret only by specially designated persons. (Par. 5.)
10. Service magazines, journals, and newspapers will not contain classified military information. (Par. 6-e.
11. Classified information may be included in personal correspondence. (Par. 6-c.)
12. Classified documents which have been rescinded or superseded will be afforded the protection required for their category until destroyed. (Par. 6-h.)
13. Officers are entitled solely by virtue of their grade to knowledge or possession of classified matter. (Par. 7.)
14. Classified matter will be reproduced only when necessary to satisfy military or other official governmental requirements. (Par. 11.)
15. Upon change of duty assignment or separation from the Military Service, each individual will return to the source from which received or to his commanding officer or otherwise properly account for or transfer all Top Secret, Secret, and Confidential documents and all Restricted registered documents issued to him. (Par. 12-a.)
16. Top Secret and Registered matter may be stored in steel file cabinets secured by a steel bar provided the padlock is of a three-combination dial type. (Par. 13-a.)
17. Material classified Restricted and not registered will be stored in a secure manner as determined by the commanding officer of the installation where stored. (Par. 13-c.)
18. Safe combinations and combination padlocks used to lock containers holding Top Secret, Secret, Confidential, and registered Restricted material will be changed at intervals not exceeding six (6) months. (Par. 13-e.)

19. All persons holding or otherwise having custody of classified matter will make a daily inspection to insure that such material is properly stored. (Par. 13-g.)
20. The storage space containing registered cryptomaterial will be kept locked with the full combination when not under the direct supervision of cleared personnel. (Par. 13-h(3).)
21. TOP SECRET, SECRET, and ALL Registered Documents, when destruction is authorized or directed, will be burned by the custodian in same manner as required for nonregistered Restricted documents. (Par. 14.)
22. Carbon sheets, stencils, and stenographic notes containing classified matter, will be given the same classification and safeguarded in the same manner as the material produced from them when awaiting action to be destroyed. (Par. 14-f.)
23. Any person who may have knowledge of the loss or subjection to compromise of classified matter will promptly report such facts to his immediate superior. (Par. 15.)
24. Information and material, the unauthorized disclosure of which would endanger National Security, cause injury to the interest or prestige of the Nation, will be classified as Top Secret. (Par. 20.)
25. Information and material, the security of which is paramount and the unauthorized disclosure of which would cause grave damage to the Nation, will be classified as Secret. (Par. 21.)
26. Information and material, the unauthorized disclosure of which would be prejudicial to the interests or prestige of the Nation, will be classified as Confidential. (Par. 22.)
27. Information and material, the unauthorized disclosure of which would be of advantage to a foreign nation or would cause unwarranted injury to an individual, will be classified as Restricted. (Par. 23.)
28. Each document or other item, including extracts from classified documents except messages, will be graded according to its own content and not necessarily according to its relationship to another document or item. (Par. 25.)
29. The grading of a file or group of physically connected documents will be that of the highest classified document therein. (Par. 25-c.)
30. Only the authority making the original classification or the authority that has succeeded or assumed the functions of the original authority which no longer exists or higher authority in the same chain of command, may cancel the classification of a document or article of materiel. (Par. 27.)
31. Previously cryptographed messages may be downgraded to Restricted without paraphrasing by the proper authority when the subject matter permits. (Par. 27-c(3).)
32. It is the responsibility of all authorities to review continuously all classified matter of current interest in their possession, and to downgrade, or initiate action to downgrade, as soon as conditions permit. (Par. 27-c(1).)
33. Classified books or pamphlets, the pages of which are permanently and securely fastened together, need not be plainly and conspicuously marked or stamped Top Secret, Secret, Confidential, or Restricted at the top and bottom of each page. (Par. 28-a(1).)
34. Classified correspondence not permanently and securely fastened together will be marked or stamped, not typéd, with the appropriate classification at the top and bottom of each page. (Par. 28-a(2).)
35. All Top Secret and Secret matter will show the authority for the classification, the initials of the classifying officer, and the date the classification is affixed. (Par. 28-c.)
36. Downgraded documents will be marked or stamped with the new appropriate classification in the same manner as originally classified documents. (Par. 28-d.)
37. When a document has been downgraded, bulk files or supplies thereof need not be marked immediately with the new classification. (Par. 28-d(3).)
38. Commanders of headquarters who initiate, receive, or process Top Secret material will establish and maintain a system for the control and secure handling of such material within their headquarters. (Par. 29-a.)
39. Top Secret Control officers will open the inner envelope of Top Secret correspondence before delivery to an individual addressed by name. (Par. 29-b(7).)
40. It is mandatory that transmission and custody of Top Secret matter, except within a headquarters, be covered by a receipt system. (Par. 29-b(4).)
41. Commanders will maintain a list of all persons within a headquarters who have access to a Top Secret document or to whom Top Secret information is disclosed. (Par. 29-b(1).)
42. In emergencies, Top Secret matter will be transmitted by mail channels. (Par. 29-b(8).)
43. Top Secret correspondence may be transmitted by registered mail within the continental limits of the United States. (Par. 29-b(8).)
44. Accompanied State Department diplomatic pouch will be used exclusively for transmission of Top Secret matter through or within a neutral country. (Par. 29-d(2)(b).)
45. Within a headquarters, transmission between major headquarters offices of Secret material will in all cases be covered by a receipt system. (Par. 30-a.)
46. Only the addressee or his duly designated representative will open inner covers or envelopes marked Secret. (Par. 30-b(2)(a).)
47. Secret matter will be prepared in the same manner for transmission as all Top Secret matter. (Par. 30-b(3).)
48. Nonregistered Confidential matter will be handled and transmitted in the same manner as prescribed for Restricted matter. (Par. 31-a.)
49. Confidential Registered matter will be handled and transmitted in the same manner as prescribed for Top Secret matter. (Par. 31-d.)
50. Restricted Registered matter will be handled and transmitted in the same manner as prescribed for Secret matter. (Par. 32-c.)

Sentinels of
UNITED STATES FOREIGN POLICY

An Adaptation of an Article by
Major John D. Reid

The coming of age of Air Power and its resultant importance to our national security dictate that the United States Air Force continually review its basic planning and precepts in the light of changing domestic and international situations. The Air Force must periodically inventory its ideas and ideals, discarding those which have withered and become useless. It must understand its major responsibilities for the national welfare. It must adopt and pursue definite and proclaimed policies which relate to its peacetime role.

On the surface this problem has an easy solution: the Air Force must attain and maintain a state of readiness for war. This is a bona fide mission, yet the simplicity of its statement may obscure an equally important responsibility of the nation's air arm--that U.S. Air Power will exert a marked influence on the attainment of a stable and durable world peace.

Actually the Air Force has already underwritten, perhaps unwittingly, its aspirations to participate in the forging of world peace. "Air Power is Peace Power" is prominently displayed on recruiting posters. It is broadcast on the radio and spread in the press. As a public relations slogan to stimulate enlistments, this claim is undoubtedly intended to serve a purpose. But the thought occurs that we may have coined a phrase which portends events of far deeper significance. "Air Power is Peace Power" can conceivably be a belief, rather than a short-range recruiting slogan. There are definite indications that U.S. Air Power is destined to bulwark our peace aims and to buttress our foreign policy in search of world peace. The successful application of Air Power to the Berlin crisis shows that U.S. foreign policy even now has a new bodyguard.

In all likelihood this proposed association of Air Power and foreign policy needs little clarification for the student of world power politics. On the other hand there is little evidence of any widespread belief that the Air Force is more than an inert force in the absence of war. Basically this stems from a lack of what constitutes peace. Certainly the complacency of the amity-loving nations in the interval between the two World Wars did not achieve a true peace. Nor can the tremulous aftermath of World War II be appraised as a tranquil era. This nation is commencing to realize that the absence of a shooting war, in itself, does not presage concord. Postwar events have demonstrated that peace is every bit as dynamic as war.

U.S. foreign policy is our official long-range plan for international relations. It is basically oriented toward the goal of peace. In an address at Washington in 1938, Cordell Hull, then Secretary of State, proclaimed that "The primary objectives of our foreign policy are the maintenance of the peace of our country, and the promotion of the economic, the social, and the moral welfare of our people." Events since then have proved that no proclamation of foreign policy will stand a reasonable chance of fulfillment unless backed by sufficient national power to give authority to the assertions of that policy. We cannot therefore lightly dismiss the U.S. power position in peace calculations, nor by the same token can the Air Force ignore its responsibilities in support of that position. Ex-Justice Roberts is reported to have said that the law of nations "is the law of tooth and claw." This is not a dainty summation of international politics, but in the absence of aggressive peace measures it has always proved tragically exact. We must, therefore, understand the urgency of wedding our foreign policy to a power guardian. General Marshall's final report to the Secretary of War phrased this thought as follows: "We must, if we are to realize the hope we may now dare have for lasting peace, enforce our will for peace with strength." But if U.S. Air Power is required to support U. S. foreign policy in a crusade for peace, the formalized concept of the Air Force mission as that of maintaining combat readiness must be closely examined to insure direct support of the peace campaigns.

In pursuance of this concept of important corollary of the over-all problems presents itself. This problem concerns the proper deployment of U.S. Air Power. As a force for the attainment of peace the Air Force must consider its dispositions from a standpoint other than that of operational deployment. Thus the important issue of strategic air bases arises. The duality of Air Force responsibility, in other words, requires a study of the political deployment of the nation's Air Power.

The prospect of acquiring and

maintaining strategic air bases cannot have widespread appeal, either to the nation's taxpayers or the airmen who must man them. Major Alexander P. de Seversky, in his treatment of victory achieved through the application of Air Power, scoffs at air bases as a future requirement, maintaining that future increases in aircraft range will make them unnecessary. It takes little imagination to visualize that elimination of these bases would relieve the Air Force of grueling logistics and security measures for their continued use. Indeed one can elaborate and, with the mathematical devices of the aircraft designers, prove that the globe-circling aircraft of the future is nearing reality. If, however, the concept of Air Power as a dynamic peace power is valid, the political value of strategically located bases and their effect on foreign policy cannot be ignored. Enthusiasts of long-range aircraft who foresee that Air Power can be applied from national confines cannot be entirely refuted, nor is that the primary purpose of this article. Rather, laying aside the operational capabilities of bases in war, we shall limit the discussion to assessment of the value of strategic air bases to the successful accomplishment of U. S. foreign policy aims.

Any treatment of strategic air bases evokes immediate speculations on possible locations. The embroilment of power instruments in geopolitical actions is expressed by Nicholas J. Spykman in "America's Strategy in World Politics:" "Power is effective in inverse ratio to the distance from its source." His statement may be modified to the effect that useful power must also be in proximity to the sovereignty or area against which it is applied. At any rate, we must carefully weigh the prospects of enhancing or diminishing the power/source ratio by the acquisition of foreign bases.

Admittedly any plan on the part of the United States to lease, buy, or otherwise acquire strategic air bases is fraught with both domestic and worldwide implications. Yet the political advantages which these bases might present to a firm, well-defined national foreign policy deserves careful scrutiny. To forecast these advantages, a brief insight into a historical precedent may be of value.

In the period which followed the Napoleonic Wars, Great Britain embarked on a remarkable program of overseas expansion. This program seems to have been impelled by three forces. The first was a desire for national economic betterment; the second, a formula for maritime dominance which could guarantee the success of her economic enterprises; and the third, an astute foreign policy closely attuned to the limitations and capabilities of sea power. To represent this program as foreordained or preplanned in all its details is to indulge in fantasy. On the contrary the formula which ultimately spelled British world prominence was a combination of sagacity and good fortune. Nevertheless Britain's ascendency in the economic, naval, and diplomatic fields deserves close attention for the value which may be derived in prophesying a course of action for the United States. In particular a valuable lesson can be gleaned from certain matters pertaining to the alliance of British foreign policy and naval bases.

Long before formal treatises appeared on the subject, the British had sensed the importance of geopolitics and were obtaining strategic vantage points about the world upon which to pivot or concentrate their superior naval power. Dr. George T.

Renner, author of "Geography in the Air Age," stresses the importance to the world a century and more ago of "ocean-basin geography," this in a time when maritime power connoted a secure power position for a nation possessing strong naval forces. The concept of ocean-basin geography inspired Britain to obtain local control of vital areas which served as stoppers or bottlenecks on the high seas. At the peak of her power Great Britain controlled Singapore, Capetown, Hong Kong, Gibraltar--in fact, all the major bottlenecks except the Panama Canal. These focal points, when converted into naval bases, guaranteed economic development of the adjacent areas and reminded neighboring governments that British policies could be ignored only at the risk of forceful measures.

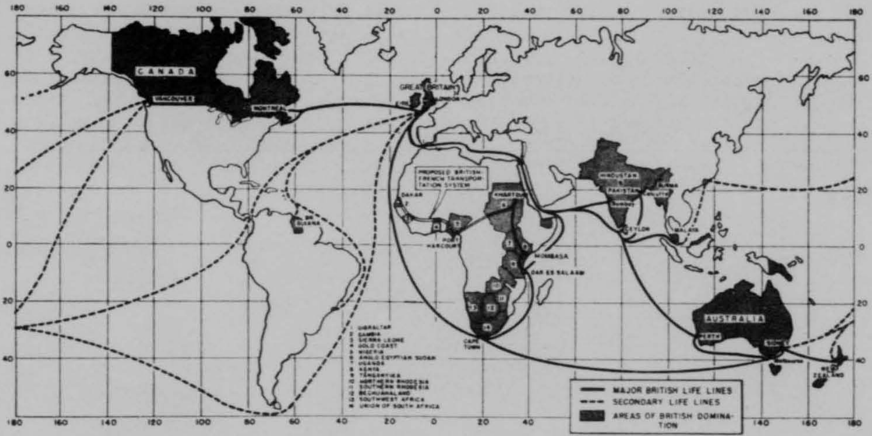
There are certain aspects of this period of Britain's history which should be noted. In the first place she strove to improve her relative power position through the employment of a firm foreign policy. In addition she utilized a display of naval bases, not only for their potential value to her fleet but also as visible reminders, in the absence of that fleet, that her proclamations were to be reckoned with. For those who may resent such power moves, another statement by Mr. Spykman is apropos: "In a world of international anarchy, foreign policy must aim above all at the improvement or at least the preservation of the relative power position of the state."

Finally, and this is most important, it must be noted that the British strategy of bottleneck bases belies the impression that her ultimate aim was a world balance of power. She subscribed to a balance of power only as it pertained to the affairs of continental Europe. This was occasioned by an awkward geopolitical situation. In effect Great Britain could not in the nature of things pit her sea power directly against the resurgent land armies of Europe. Britain's worldwide aim was a "margin of power." Spykman notes that a nation must attain a balance of power which affords freedom of action. In a sense this was true of the British policy, since she enjoyed a freedom of action resulting from the delicate power balance in Europe which willed her a margin of power elsewhere in the world. In short the realistic British foreign policy, while cognizant of the balance-of-power policy as unsuitable to real world stability, was forced by the physical dispositions of Europe's power states to make the best of a bad geographical bargain, to be content with forces in precarious balance on the Continent; and to promote a preponderance in the other world areas.

It is fully realized that this historic era of British foreign policy backed by strategic naval deployment, while remarkably foresighted, was not created in the hope of attaining world peace. Britain was primarily concerned with her economic development. Nevertheless her role as a world stabilizer is profoundly significant, if we are to plan for the proper utilization of our Air Power in support of a rejuvenated and statesman like U.S. foreign policy. Historians have termed the era of Great Britain's world leadership "the Pax Britannica." The stability of those times is a goal more likely to be wished for than achieved in the near future, but it is a worthy aim for our country, which has succeeded to the position of leadership previously held by Great Britain.

This historic example of astute foreign policy, coupled with a display of power at scattered vantage

THE BRITISH COMMONWEALTH - EMPIRE


CANADA
VANCOUVER
MONTREAL
GREAT BRITAIN
LONDON
BR. GUIANA
PROPOSED BRITISH-FRENCH TRANSPORTATION SYSTEM
DAKAR
PORT HARCOURT
KHARTOUM
MOMBASA
DAR ES SALAAM
CAPE TOWN
HINDUSTAN & PAKISTAN
BURMA
BOMBAY
CEYLON
MALAYA
AUSTRALIA
PERTH
SYDNEY
NEW ZEALAND
1 GIBRALTAR
2 GAMBIA
3 SIERRA LEONE
4 GOLD COAST
5 NIGERIA
6 ANGLO EGYPTIAN SUDAN
7 UGANDA
8 KENYA
9 TANGANYIKA
10 NORTHERN RHODESIA
11 SOUTHERN RHODESIA
12 BECHUANALAND
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14 UNION OF SOUTH AFRICA
MAJOR BRITISH LIFE LINES
SECONDARY LIFE LINES
AREAS OF BRITISH DOMINATION

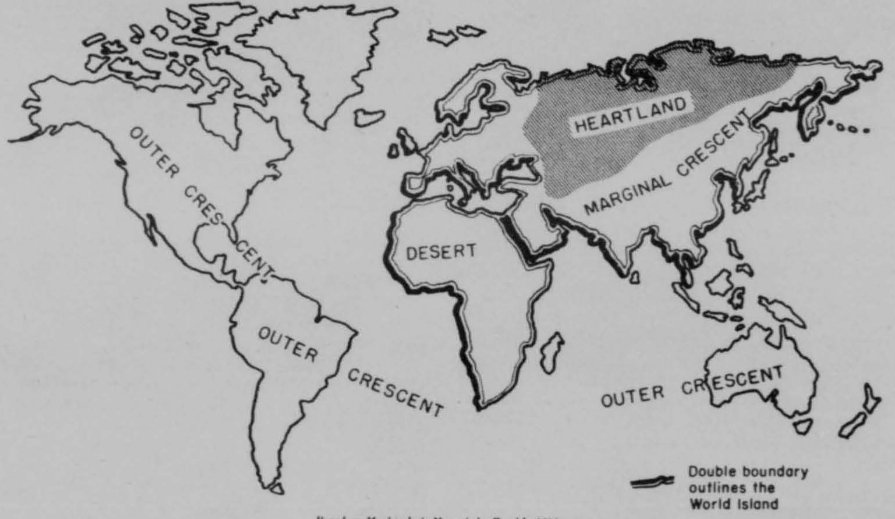
points, has set a recognizable pattern for the United States. In certain respects our moral position in promoting a similar alliance of air bases and foreign policy is undoubtedly more secure. For example, the United States could not reasonably be accused of the economic ruthlessness of which British expansion was accused. In place of economic betterment our position adheres to the basic aim of preventing wars which may become so destructive as to render it impossible to distinguish the victors from the vanquished in every aspect save perhaps the official proclamation of surrender. The basis of our foreign policy is a desire for world peace. The deployment of our Air Power is important for its influence in the attainment of that desire.

The sound geopolitics of British naval bases in the dominant period of sea power logically brings forth the question of the geopolitical implications of strategic air bases. It can be reasoned that any answer to this question must be predicated on at least the rudiments of geopolitics in the air age. A point of departure, then, is the kinship of Air Power and geopolitics.

One of the earliest proponents of geopolitics, Sir Halford MacKinder, compiled a memorable thesis to forecast the tribulations which would confront the British Empire in the twentieth century. MacKinder foresaw that nineteenth century maritime power could be topped by land power, which would become more mobile as railroads and modern transportation developed. He held that the key to world dominance would some day be lodged in eastern Europe and that enlargement of the eastern European power position could lead to control of the land mass of Europe, Asia, and Africa--the "Heartland." Events have never completely confirmed his beliefs, but it is certain that his theories influenced German political thought and military planning prior to the last war. Although the Nazi strikes into Africa and eastern Europe were only transient, it was increasingly clear in the dark hours of those conflicts that consolidation and exploitation of the positions then held would inevitably reduce the Western Hemisphere, Australia, and other isolated land areas to impotent segments of the earth's surface.

MacKinder, however, did not include Air Power in his calculations; indeed, current geopolitical thinking has thus far tended to skirt the air factor. The Reverend Edmund A. Walsh, a prominent geopolitician, asserts that Air Power modified but does not cancel out the heartland theory. This position is taken by another authority, Burnet Hershey, who declares that, "Russia, (the present dominator of the heartland) from every point of view, has the strongest air position in the world today." His remarks were not specifically propounded in consideration either of military strategy or foreign policy matters, since they dealt primarily with the commercial aspects of international aviation. Nevertheless the eastern European area lies strategically athwart air routes almost as prominently as it dominates large land areas and sensitive land routes.

Bearing in mind, therefore, that the United States is not geographically the most favored nation for the application of Air Power and recalling that Britain's strategy against the European land mass featured an encirclement with world bases upon which to pivot or concentrate her mobile naval strength, it becomes clear that a similar strategy for the U.S. may be geopolitically desirable if not absolutely necessary. We must assess the wisdom of undermining our less favorable aerogeographical position by a withdrawal to the bases within the national and territorial boundaries, since thereafter, we should have to rely upon publicizing technological advances in aircraft range and performance to compensate for less effective deployment. This course of action, it appears, would relegate our Air Power to the status of a war



Based on Mackinder's Map of the World (1904)

weapon. It would display that we did not intend to use this important instrument of power in direct support of peace by the prevention, rather than the winning of any possible future war.

A deployment of Air Power for geopolitical advantages, it must be recognized, is in itself only the means to an end. It would be foolhardy to deploy in such wanton fashion as to leave a nation's air arm without cohesion and warmaking capability. The problem, as stated previously, is to deploy in such a manner as to lend political stamina to peace aims of our foreign policy. This need not entail dangerous dispersion. On the contrary, if hostilities should occur, it is conceivable that at least some of the bases held would be tenable and of operational value.

The role of foreign policy is not difficult to understand. Foreign policy expresses the collective will and desires of the nation in matters pertaining to other nations. Mr. Joseph Jones, Associate Editor of Fortune and former State Department officer, has declared that foreign affairs "are American affairs in which we admit that foreign countries have a legitimate interest; and they are affairs of foreign countries in which we claim to have a legitimate interest." A familiar promulgation of U.S. foreign policy is the Monroe Doctrine, the capstone of U.S. foreign affairs for almost a century. Its phraseology tacitly admitted that other nations had a legitimate interest in American affairs by virtue of their New World colonies. Conversely the Monroe Doctrine recognized the legitimate interests of the United States in forbidding further New World colonization.

Serious accusations have been leveled against modern U.S. foreign policy. Walter Lippmann holds that our Twentieth Century foreign policy has largely been insolvent. Many claim that all too frequently it has been compounded of wordly principles and simple expediency, facts which have befuddled not only the U.S. public but also foreign statesmen seeking to align the destinies of their nations with those of this country.

Granting the absence of a clearcut, long-range foreign policy for the future, it is, however, indisputable that this nation's current actions bear ample testimony to at least an unwritten policy of rehabilitating the shattered portions of the globe and of contributing a large portion of our energies toward a durable and honorable peace. The Marshall Plan and our intense participation in the United Nations Organization attest to our desire to stabilize the world. This nation no longer withdraws from world politics whenever the course of events does not measure up to the hoped-for results.

Much in the same manner as deliberate and forthright actions have preceded major foreign policy statements, we have acquired strategic air bases prior to any major documented policies on the subject. The war was the occasion for the air bases we now hold, and these were acquired for operational reasons. Many, however, we have been reluctant to relinquish. Bases in Iceland and Greenland are good examples. A Joint Chiefs of Staff report of 1948 called attention to the northern approaches to the U.S. as critical and suggested that we retain a firm grasp on these two vantage points overlooking our Arctic and Atlantic frontiers. The British have suggested the manning of bases. Viscount Addison, government leader in the House of Commons, stated that the Atlantic Pact might provide "in the near future,a joint working arrangement, particularly affecting air power which could be deployed and developed rapidly in defense of peace." His colleague, Sir Samuel Hoare, four-time British Secretary for Air, urged the organization of necessary bases without delay. It appears that regardless of formal intent we are holding present bases for their value to the peace.

The question may arise as to public support of a strategic air base plan. This nation has previously been divided on the subject of any overseas deployment of its military power in time of peace. Steadfast in the practice of military action only as a means of repelling a nation already on the march, this nation has clung to the belief that it should confine its military power within its national boundaries. That concept appears to be dying fast. Indeed it is questionable if it has ever been more than a sedative to even its stoutest proclaimers. Hanson Baldwin writes in his book "Price of Power:"

> "...the basis of our whole past strategy has been to fight our wars overseas, and the basis of our diplomacy (as applied to strategy) sometimes has been, always should have been, and henceforth must be, to insure the United States positions (bases) in readiness overseas from which our military power could be applied to the enemy, and allies-in-being, so that we would not fight a war alone..."

If U.S. foreign policy is,however, to be aggressive for peace, it is constrained to utilize every means to accomplish the task. It follows that strategic air bases, acquired in pursuance of that mandate, need be regarded not solely as launching sites for U.S. Air Power if a shooting war commences but also as active, forthright weapons for peace. In a discussion of the problem of bases as it pertains to Britain, RAF Group Captain J. G. Davis defined a solution: "Our own aim should be, therefore, to deploy our air forces as to prevent war by the threat of action, rather than to follow our traditional tardy policy of replying to blows already struck." The threat of action by strategically deployed U.S. Air Power is a potentially great force for peace. Its value to our foreign policy cannot be ignored.

More tangible recognition of the

value of relating the mission of Air Power to diplomatic ends might be expressed in numerous ways. Adequate liaison between the Air Force and the Department of State will be increasingly necessary. Expanded instruction in foreign policy in the Air Force service schools would aid immeasurably in identifying and clarifying the possible bearing of Air Power upon international affairs. We can envision standard tours of duty with the State Department for selected Air Force officers. This proposition may violate military traditions of aloofness from political affairs, but it is to be noted that our government has recently entrusted officers of the Department of Defense with diplomatic positions of grave responsibility and sensitivity. The trend has been established by the pressure of international events, and the Air Force, as the prime mover of national peace power, cannot ignore its responsibilities to statesmanship.

Concentration of the Air Force within domestic borders would ignore the effects which more widespread deployment can produce in the political thinking of aggressor nations or nations which may waver between powerful sovereignties. We are not assured of a favorable geopolitical situation as far as our domestic air space is concerned. It is necessary, therefore, not only to exploit our present technological superiority in preparation for war, but also to improve our geopolitical situation for peace. If U.S. Air Power is deployed advantageously to conform to the geographical dictates of the globe and in direct and recognized support of our foreign policy, it can be said that we have correctly applied geopolitics to the air age. The Pax Britannica, which resulted from an application of this principle to an earlier age, will be succeeded by a stable world free from the constant treat of war.

Finally the continuous interplay of foreign policy and strategically deployed Air Power must not be deprecated by the trustees of either element. Neither the makers of foreign policy nor Air Force planners can afford to proceed unilaterally toward desired ends. Group Captain Davis, in his treatment of the problem as it affects the British Empire, notes that "the defense of the British Empire and Commonwealth is, as it always has been, as much a political and diplomatic matter as a military." The truth of this assertion applied to the United States must not be denied. The Air Force must regard diplomacy as a partner of defense and a strategic ally in the peace offensive. Our Government, conversely, must utilize the mobility and the capabilities of deployment of the Air Force for attainment of its stated international objectives.

Walter Lippman has called U.S. foreign policy the "Shield of the Republic." A shield is a parrying weapon; in this sense our foreign policy may be thought of as an international safeguard by means of diplomatic maneuver. A shield is generally supplemented by a thrusting weapon, and in this respect our national power--land, sea, air, and industrial--must be integrated as that thrusting weapon for use in the diplomatic arena. U.S. Air Power, strategically deployed, can spearhead our composite of national power. It can ensure that U. S. foreign policy is recognized and respected throughout the world. In this manner the Air Force can logically substantiate its claim that "Air Power Is Peace Power."

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AUQ Rev--Fall 1949--Vol III No 2

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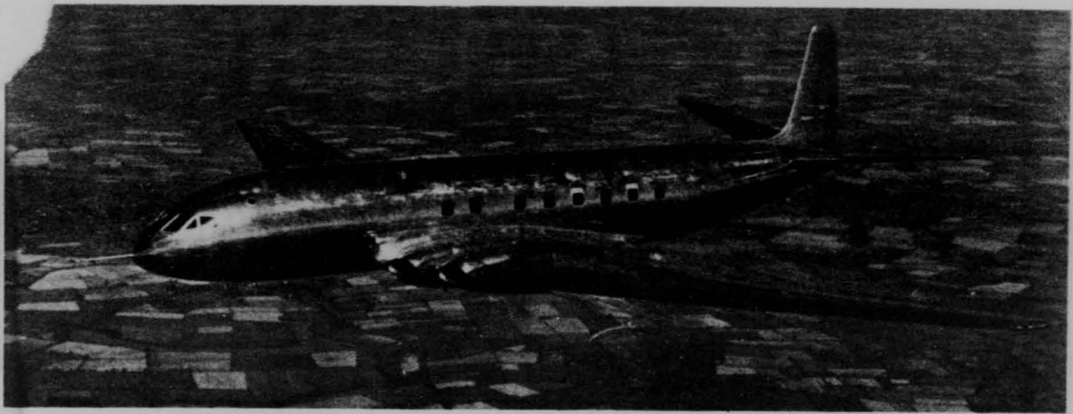
Two New Stars,

IN THE JET SKIES



FLIGHT TEST. Here the Comet soars over Hertfordshire, England, in one of its test flights.

The world's first passenger liner basically designed for jet power, the British de Havilland "Comet" became airborne on 29 July 1949, to be followed less than a month later by the maiden flight of Canada's jet-propelled transport, the C-102 "Jetliner."

THE "COMET"

Four de Havilland Ghost III engines provide power for the Comet. These engines each produce 5,000 pounds static thrust for take-off, at 10,250 rpm. This long-range, high-speed aircraft is a 36-seater, with a payload capacity of 11,000 pounds. Cruising speed is estimated to be about 435 knots at 40,000 feet. The Comet's wing span is 115 feet, its length 93 feet. The wing is swept back at an angle of 20° on the quarter chord line.

The prototype Comet has split flaps fitted over the inboard section of the wing and plain flaps at the outboard portion. For deceleration, air brakes are also incorporated into the wing; this device also provides a method of altitude regulation during stacking and holding operations.

The Comet's engines are located between the main spars in the wing root. At the point of the undersurface of the wing where the engines protrude, hinged panels are fitted which open to give mechanics full access to the power plant. Panels are also fitted on the top side of the wing for further servicing. Steel fireproof bulkheads separate the engines, and individual

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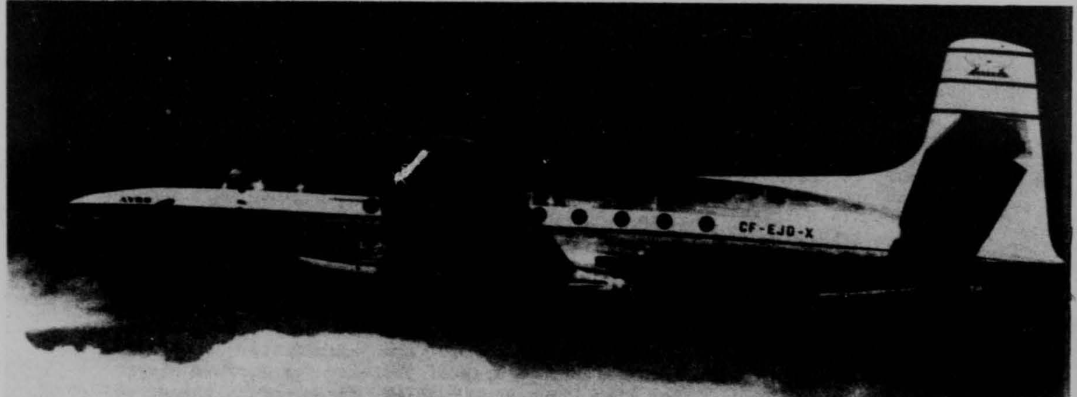
TAKE-OFF. The Canadian Avro "Jetliner" quickly followed the British Comet into the air.

AIRBORNE AVRO. Note that Canada's jet transport does not have swept back wings.



FINAL ONCE OVER. Technicians and spectators crowd the ramp where the Comet waits for its first hop.

fire extinguishing systems are provided for each section.

Provisions for de-icing equipment have been made for the air-intake, leading edges of the wing, and the horizontal and vertical stabilizers. To provide insulation, the windshields are laminated. In addition, hot air for de-misting is supplied internally in the windshield.

The main struts of the prototype Comet's tricycle landing gear are fitted with a single wheel; the nose assembly has twin wheels. Two separate hydraulic power systems are used to retract and lower the landing gear with a hand pump provided for emergency lowering. The nose wheel can be steered from the cockpit by a handwheel located next to the pilot. Twin disc wheel brakes are hydraulically operated with a duplicated operating system.

A maximum differential pressure of 8.25 pounds per square inch in the cabin pressurization system gives a maximum cabin altitude of 8,000 feet when the aircraft is flying at 40,000 feet. Compressors of each of the four main engines provide fresh air for the cabin. This fresh air supply, before entering the fuselage, goes through coolers and,when necessary, through a refrigerator. Temperature control on the coolers is automatic. However, the refrigerator can be switched in and out manually. Cabin heat is supplied by air compressed in the main engines. Humidifiers are also provided for the cabin.

The de Havilland Company recently announced that the Canadian Pacific Airlines has ordered two Comets.

THE "JETLINER"

The C-102, or "Jetliner," is Canada's bid in the jet transport field. A.V. Roe, Canada, Limited--"AVRO"--is the manufacturer. The Jetliner, powered by four Rolls-Royce "Derwent 5" turbojets, is estimated to have a maximum cruising speed of 370 knots at 30,000 feet.

Air Int Digest

Feb 50 Uncl.

POLAR GUIDE

This is the tenth of a series of articles on Arctic Indoctrination

Chapter 18--Land Survival (continued)

FOOD

You can satisfy both your hunger and the basic requirements of a healthful diet over a prolonged period--but it takes planning, ingenuity and effort. Emergency rations from plane and kits, plus possible snacks from your pockets and flight bag, are immediate sources of survival food. It is possible, of course, that a rescue plane will find you in a few days and drop additional rations. However, you can't count on "manna from heaven," and you'll be wiser to assume that your supplies must last several weeks. Stretch them. Be scientific about it. Make a list of the food on hand,and plan your meals so that available rations will cover a two-week minimum. Then set a daily quota for each man. Every few days take inventory and adjust allowances according to the remaining stock. Be sure to place your food in caches to protect it from rain,ground moisture, and animals. Whenever it is possible to watch it, however, leave some of it out and shoot the animals that come to steal it. A small food investment of this sort may net you a much larger food supply in return.

No matter how large your supply of emergency rations, however, you will need to supplement your rations with food secured by hunting and fishing. Leave a man in camp at all times ready to signal when a plane comes over, while the rest of the group splits up and searches for food. One can be detailed as fisherman; others as hunters--to be in the field as much of the time as practicable. At first, travel only short distances from your camp. Later, as you learn to know your neighborhood, increase the distance and search out the potentialities around you. There might be a trapper's trail half a mile away. When you go on a hunting trip, be careful to blaze a trail back to camp; in open country, set up piles of rocks or wands. If you are caught in a sudden blizzard and become confused, hole up in the snow and wait out the storm. Trying to continue may result in your being permanently lost.

HUNTING

Since your food supply depends to a great extent on your prowess as a hunter, it is well to develop your ability to hunt and your knowledge of animal habits before you are forced to depend upon that knowledge and ability to provide you with food. Therefore, whenever you get the opportunity,study first-hand the characteristics and traits of Arctic animals. You will find hunting, fishing, camping, skiing, and snowshoeing about your base one of the best ways of getting back to nature and finding out what it is doing in the polar regions these days.

You will discover that, with a few exceptions, three types of hunting are available to you, whether you are ten miles from your base or on the coastline north of the Arctic Circle. These three types are big game, small game, and flying game hunting. Learn the traits and feeding habits, the tracks, and the den or nest-making characteristics of the animals in your locale. You may need this information.

BIG GAME

Most carnivorous big animals are much better hunters than the average man. In fact, hunting, killing, and eating other animals is their main occupation. Nature has provided them with senses and equipment to do a good job of hunting, and since they devote their lives to it, you will find this type of animal shrewd and difficult to take with the firearms normally provided in survival kits. In fact, it's not at all strange for a man, while hunting, to come across bear tracks, which,if followed, will circle about and join his own tracks. The reason for this is simple. The bear is also hunting, and the man with the rifle becomes the hunted as well as the hunter. However, there's one thing in your favor--that the bear will track and study the actions of this strange prey for quite a while before becoming aggressive. Like all hunting animals, he follows the rule of knowing his prey and attacking at the most opportune time.

Take a tip from these animals, especially when hunting big game. Try to place yourself in the best position in relation to the game before shooting. Approach animals quietly and upwind if you expect to get close enough to use your .22-caliber rifle. Stay behind all the cover you can find and approach as close as possible to your dinner-to-be before leveling off at a vital zone and squeezing the trigger. Take your time. That animal may have been feeding right where he is for the last hour or so. In fact, he may never have been more than ten miles away from the spot on which he is standing. Just don't scare him, and you will usually have ample time to approach, take a steady aim, and squeeze off a single shot which will do the trick.

This method of big game hunting requires patience and lots of it. The foremost urge on the part of a man who is hunting for food is to shoot at the first big animal he sees, whether it's running, walking, out of range, or almost concealed by heavy brush. The odds are great against killing with a .22 rifle under these conditions. These shots will not only waste precious ammunition, but will also alert all animals in the vicinity.

You can kill big game with the .22 caliber survival rifle, but you must get well within range and place your shot in a vital spot. Pumping four or five wild shots into the body of an animal is not the way to do it. One shot which severs the spinal column, cuts an artery of the heart, or penetrates the brain is the best. With a powerful, high-velocity, big-game rifle it is possible to hit big game in a great variety of places which will prove crippling enough to allow you to approach for a second killing shot. But the .22 rifle will not break hip joints or shoulder blades, nor will it usually fracture skulls or disembowel the animal. Your first shot must kill; if it doesn't,it will probably be the last shot you'll get at that animal.

In big game hunting it is wise to consider defensive as well as offensive tactics. In the event a wounded animal charges and your only weapon is the .22-caliber rifle .410-gauge shotgun combination, try to get in a good shot with the .22 caliber barrel first. If this fails, wait until the last possible moment before firing the .410 barrel. This shotgun blast, if fired in the face of an animal at point blank range, will stop or blind him. You can have confidence in its doing this at eight to ten feet; but if you fire it while the animal is twenty to thirty feet away, the shotgun pellets will merely penetrate his skin and further infuriate him. Above all, in this type of action you must discipline yourself to wait until you know what your shot will accomplish instead of firing your shot to find out.

SMALL GAME

Since the .22 rifle can be used to cripple as well as kill small game, the target area when shooting small game covers a large percentage of the body. A bullet which breaks the shoulder blades of a fox is almost as effective as one which kills the animal instantly. A rabbit hit in the hind quarter with the charge of a .410 shotgun is not going to go very far. For these reasons you can take more liberties in shooting small game than big game. You don't have to come as close to your small game. Using the .410 shotgun barrel of your survival piece, you can get a good percentage of running small game.

Since most small animals build themselves shelters (or use natural shelters) and tend to stay in a locality for a considerable length of time, you can survey the entire area around you when snow is on the ground and determine from the tracks in the snow where most of the small game is to be found. Using these tracks, you can find the animals' dens or discover their paths to water holes, and you can sit in a sheltered spot and get good shots at the animals as they enter or leave their dens or as they run along the beaten path to the water hole. You can also capitalize on the old adage that curiosity killed the cat by sitting quietly around your fire area in the darkness watching for the eyes of small animals to appear. Another trick you can use is to place a decoy or bait in view of your shelter and sit there until the animals approach. You can use the entrails of the last animal you got as bait, or the skin of the last animal, stuffed with snow, as a decoy.

FLYING GAME

While here in the States it is not considered sportsmanlike to shoot quail or pheasant on the ground, make a practice, under survival conditions, of approaching birds on the ground or of attracting birds to the ground in your vicinity instead of trying to shoot them in the air. If you spot birds on the ground but out of range, carefully keep some cover between yourself and the birds until you are within range. And if you have good cover and kill a bird with your first shot, stay under cover for a while to see whether the other birds will come back and land in the same area. Frequently, they will take off and circle, then come in and land right where they were when you first saw them. However, if you run out in the open to retrieve the first bird you shot, it's very likely that the rest will not return to that area.

As in small animal hunting, it's often easier to attract the birds to the hunter than to tramp over four or five miles of snow looking for birds. You can determine what kind of food the birds are eating from watching the birds in your area or from the gullet of a bird you have killed. Try to get some of this food, scatter it out on the ground or snow in front of you, and establish yourself in a sheltered position to await the birds.

PROGRESS REPORT ON GERMANY

Adapted from a speech by John J. McCloy,
U.S. High Commissioner for Germany

JOHN J. McCLOY. The U.S. High Commissioner of Germany arrives in Berlin to assume his duties.

The people of the United States have a heavy stake in our policy in Germany, where, over the past 10 years, they have expended an enormous amount of human and material treasure. For that reason, it is important that they should be constantly and fully informed of the state of their investment in Germany and of the progress of their policy.

CURRENT DEVELOPMENTS

In analyzing what is going on in Germany we must remember that current developments are only superficially the result of what has been happening in the last 6 months. They are the outgrowth of what has and has not been done in Germany since 1945. More importantly, they result from causes and conditions that are deep-rooted in the German character and in German and European history.

With this in mind, consider for a moment what we have undertaken to accomplish since 1945 in Germany. It is not only to undo the 12-year rule of Hitler, a rule which probably represented the most profound indoctrination effort ever inflicted on a country. We have been, and we are trying to encourage the Germans to do some things perhaps even more difficult--the removal, for example, of those instincts of the German people and their leaders toward authoritarianism and aggression which mark a much longer period of German history than Hitler's twelve years.

FORCES AND ATTITUDES AT WORK

Now, what are the good and bad in the German picture--how much progress have we made toward our goal? Let us start with the darker side of the picture:

NATIONALISM

1. There is nationalism in Ger-

NUREMBERG. The Palace of Justice (left) was the scene of many war trials At right, German civilians listen intently during the Democratic denazification trials.

many. There is a nationalist fringe on the extreme right which is more active than it has been. There is a Communist fringe that plays the Soviet game, and there is the persistent tendency of both these fringes to work together.

DENAZIFICATION

2. There are persons in important, though not top, governmental jobs who held similar positions under the Nazi regime. A number of undesirable persons have found their way back into leading positions in the business life of the country. This does not include thousands of former Nazis who were school teachers, mail carriers, tax officials, etc., under the Weimar Republic who became party members under Hitler and are now back at the old stand. These people have gone through a denazification process which may well leave much to be desired--and they have been reinstated after paying their penalties or after having been acquitted. The denazification process predated my assumption of office in Germany, and I do not feel called upon to defend it. But I do feel that our denazification program was by far the most sweeping attempt made in Germany to deal with this difficult problem. I believe the time has come to permit these so-called little Nazis to demonstrate their loyalty to the new Germany and judge them on that basis rather than on their past weaknesses and misdeeds. They cannot and should not be excluded forever from normal life in the community. Obviously this does not refer to major Nazi offenders who are still paying and should continue to pay for their unspeakable crimes.

TRADITIONALISM

3. Traditionalism still largely influences German thinking. There is a considerable resistance to reform, ranging from passive opposition in some cases to outright obstruction. There is, for example, in many quarters reluctance to adopt civil service reforms and resistance to major school reforms.

INERTIA

4. A majority of Germans are gripped by political and social inertia. Many Germans continue to divorce themselves from the interest and responsibility necessary to the functioning of democratic government. There is an exasperating willingness to leave responsibility and direction to others. German political leaders are prone to take advantage of this apathy.

POSITIVE FORCES

Such are the various nationalist

and traditionalist forces and attitudes in Germany. I have deliberately placed the negative forces first in my account. I firmly believe, however, that positive forces are at work which are stronger than the negative. Here are my reasons:

FREE-ELECTED GOVERNMENT

1. In Western Germany, there is today a free-elected Government and parliament. This government is new; it has much to learn--how could it be otherwise after the Hitler years? But, whether its trend is a little left of center or a little right of center, it is headed in a democratic direction.

REPRESENTATION

2. This German parliament is made up,in large part, of representatives who resisted Hitler, men who were in concentration camps, men associated with the Weimar Republic which Hitler liquidated, labor representatives,and other liberal-minded citizens.

PRO-DEMOCRATIC LEADERS

3. In the Laender, which correspond roughly to our states, the officials for the most part,were originally selected by American Military Government for positions of authority because of their anti-Nazi and pro-democratic records. These leaders have since been confirmed in free elections by the German people.

VIGOR OF PRESS

4. Another cause for considerable satisfaction is the growing vigor of the German press. Though there are weaknesses in it, the press which we helped start after Hitler's collapse has demonstrated an instinct to catch political abuses, to expose them, and to help develop public opinion. It has demonstrated a growing sense of public responsibility.

LIBERAL LEGISLATION

5. The Laender Parliaments have passed an impressive total of liberal and progressive pieces of legislation that show a strong and voluntary tendency to draw away from Hitlerian concepts.

There are other factors. Despite their apathy, the German people prefer representative government as opposed to dictatorship of either the Nazi or Communist type. A vast majority of Germans are deeply opposed to militarism and war. The German people want no more military adventures.Moreover, in economic matters, the Germans indicate that they prefer a liberalized economy over a planned system.

The Germans in general are receptive to plans for consolidating Europe, and they are willing to give up elements of real sovereignty to achieve this end. Today, the idea of Western European consolidation represents to the average German, and particularly to the youth, the best hope for the future.

GERMAN YOUTH ADMINISTRATION. This program, set up by the Americans, is playing an important role in teaching young people the Democratic way of life.

There are in Germany many individuals and many small groups of people who are working faithfully and intelligently to break authoritarian habits. They include editors and teachers, politicians and trade union leaders, students and youth leaders. They have the idealism and energy, the goal and the hope.

INFLAMMATORY ELEMENTS

Let me now strike a balance. There are evil and nationalist embers in Germany, and embers are always dangerous. They are particularly dangerous when inflammatory material is nearby. Such material exists, if nowhere else, in the vast number of German refugees from the East, in the unemployed, and in the homeless youth. There have been nationalist incidents, and there will be new incidents and situations that will be both deplorable and alarming. But no one could contend, as the Socialist Mayor Reuter put it to me the other day in Berlin, that all the evils of Hitler's 12-year rule can be removed in 5.

In other words, there is danger, but if there were no danger in Germany we would not be there. Germany constitutes danger within itself and even more fearful danger if allied with, or subordinated to, the interests of the Soviet Union. And, as I have said, the Communists and Rightist extremists in Germany seem prepared to get together with the totalitarianism of the Soviet, should a good opportunity present itself.

GERMAN AGGRESSIVENESS

In this connection let me state the following:

There has been talk that we have given up power too soon and that we do not have the means to cope with a serious revival of German aggressive attitudes. I understand this apprehension. Naturally, we are not without information about extremists trends. Furthermore, we have ample powers to deal with any dangerous nationalist revival. Our powers are both positive and negative; positive in the specific authority to intervene if a serious threat to our objectives develops; and negative in our right to deny concessions from the existing status if liberal tendencies do not develop. If necessary, I would not hesitate to apply these remedies, swiftly and firmly.

FRITZ REUTER. The Lord Mayor of Berlin, recognized by the U.S. Forces, addresses a demonstration in the German Capital.

But I contend that some of the alarming incidents you may read about are not representative of present German conditions or of German attitudes as a whole. Every day, there are many unreported evidences of courage, of determination, of the will to prevail over the past. In them, there is great potential for good, and I feel that these elements and forces will prevail, if they continue to have our encouragement and support.

CHIEF OBJECTIVES OF OUR GERMAN POLICY

In conclusion, here is what I view as the things of chief importance in connection with our German policy:

It is our Government's policy to seek a unification of all occupation zones of Germany on a democratic and federal basis, and we shall assist all efforts of the Federal Republic of Germany toward that end. We will, likewise, do everything in our power to prevent a unification of Germany under Soviet or Communist domination.

We must continue to be alert and uncompromising on true security issues.

We must continue to insist on the equitable treatment of Hitler's victims and their heirs.

We must help the Germans solve as rapidly as possible the critical social and economic problems of Germany--serious problems which the rise in production figures tends to conceal. We must encourage the establishment of a free economy. At the same time, we must take measures to prohibit Germany from joining any international cartel.

We should maintain, as far as lies within our power, a unified policy with respect to Germany among the three occupying powers of the West--Britain, France, and the United States.

We should bend every effort to encourage Germany to take, if need be, the first steps to bring about a true partnership of Western Europe and induce the other Western European powers to accept this principle for themselves and for Germany. I feel convinced that this concept of Western European unity and partnership is the desire and will of the common people of Europe, and it should not be denied them.

We should continue to press and encourage the German governments and people to adopt liberal, progressive measures throughout Germany, whether or not these measures are within our powers to dictate.

We must encourage and stimulate every effort to give the youth of Germany justified hope in the future. Here, I think, is our greatest challenge and hope. We Americans are peculiarly fitted to help the Germans toward the goal of democratization. It is my intention and that of my staff in Germany to reinvigorate our whole program in this field. We shall use all our power and resources--and they are large--to help the schools and universities, the trade unions and churches, the press and radio; in other words, all those institutions which are the bulwarks of freedom. Here, we Americans in Germany are taking, as we should, the lead. And in the year ahead, it is my hope that we shall make real progress in this field.

I know there will be setbacks, and you must be prepared for them. But I have tried to give you the reasons why I have hope that the Germany of tomorrow will not be the Germany of yesterday.

We face a hard task in Germany. But if we remain firm and united against any backsliding, if we continue at the same time to encourage the best Germans, we have good reason for hope. Within Germany itself, I firmly believe, there exist spiritual resources from which can emerge a peaceful, democratic state, prepared to take its place as a true member of the Western world.

Dept of State Bul Feb 50 Uncl

COVER PHOTOS

The Navy's first turboprop patrol plane, the XP5Y-1, designed and built by Consolidated Vultee, has completed her successful maiden taxi run. It is expected to take to the air after additional taxi tests.

The XP5Y-1's Allison T-40 engines, swinging contra-rotating propellers, develop a total of 22,000 shaft horsepower. A speed of 345 knots is expected.

The rakishly designed plane features a high length-beam ratio hull which reduces flight drag while improving water landing characteristics. The sleek lines result from extensive hydrodynamic research.

Radar equipment is carried in the plastic nose section while the bulge at the tip of the vertical fin houses the antenna. Located on either side of the bow are the radar-operated remote turret installations.

The plane carries powerful armament including cannon, rocket projectiles, and medium-range guided missiles. The craft will actually be a Navy cruiser with wings.

Turbine-propeller planes have never been flight-tested in the U.S. to any appreciable extent and it is expected that flights of this new plane will provide considerable engineering data. Aircraft engineers expect that these turbine propeller engines will provide the transitional step from piston engines to long-range pure jets.

WORDS OF WISDOM

"The Second World War proved that modern wars are fought on the industrial production lines as much as they are in the theaters of combat action. Even the largest aviation research and development program is of little value to national security unless it is supported by an aircraft industry capable of meeting the tremendous demands for air weapons that active hostilities rapidly impose. The attack on Pearl Harbor in 1941 thrust the United States into conflict with powerful nations equipped to wage total war at a time when there existed only the skeleton of an American defense industry. We were able to achieve victory under these circumstances only because of the time and distance that separated us from our enemies."

—General Spaatz

SECURITY QUIZ ANSWERS

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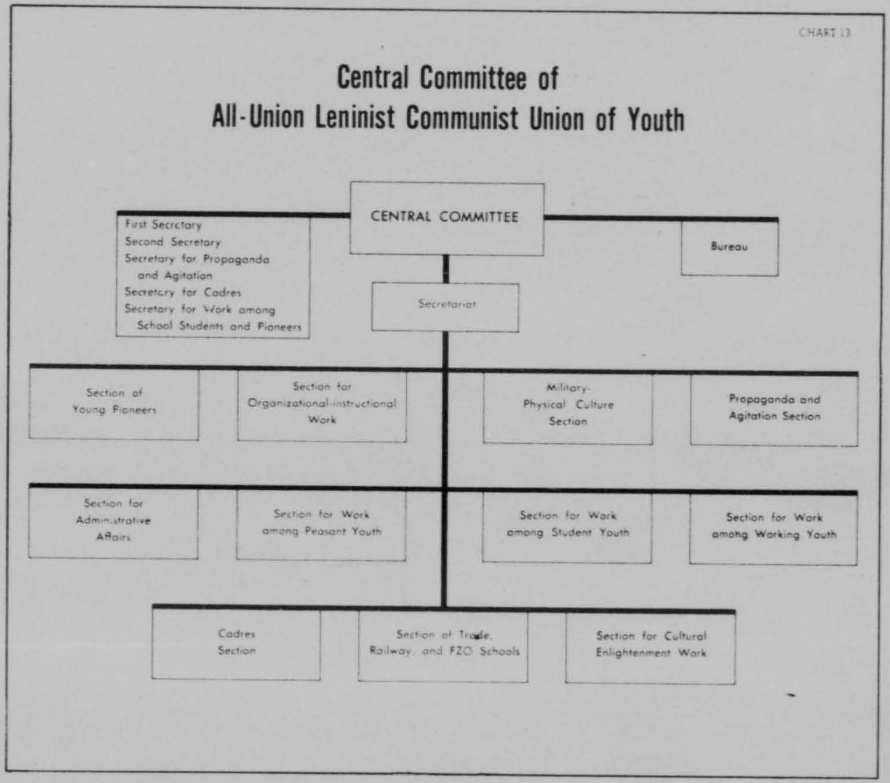
CHART 13


Central Committee of
All-Union Leninist Communist Union of Youth
CENTRAL COMMITTEE
First Secretary
Second Secretary
Secretary for Propaganda and Agitation
Secretary for Cadres
Secretary for Work among School Students and Pioneers
Bureau
Secretariat
Section of Young Pioneers
Section for Organizational-instructional Work
Military-Physical Culture Section
Propaganda and Agitation Section
Section for Administrative Affairs
Section for Work among Peasant Youth
Section for Work among Student Youth
Section for Work among Working Youth
Cadres Section
Section of Trade, Railway, and FZO Schools
Section for Cultural Enlightenment Work

This is the thirteenth of fourteen charts on USSR organization of Government and Communist Party.

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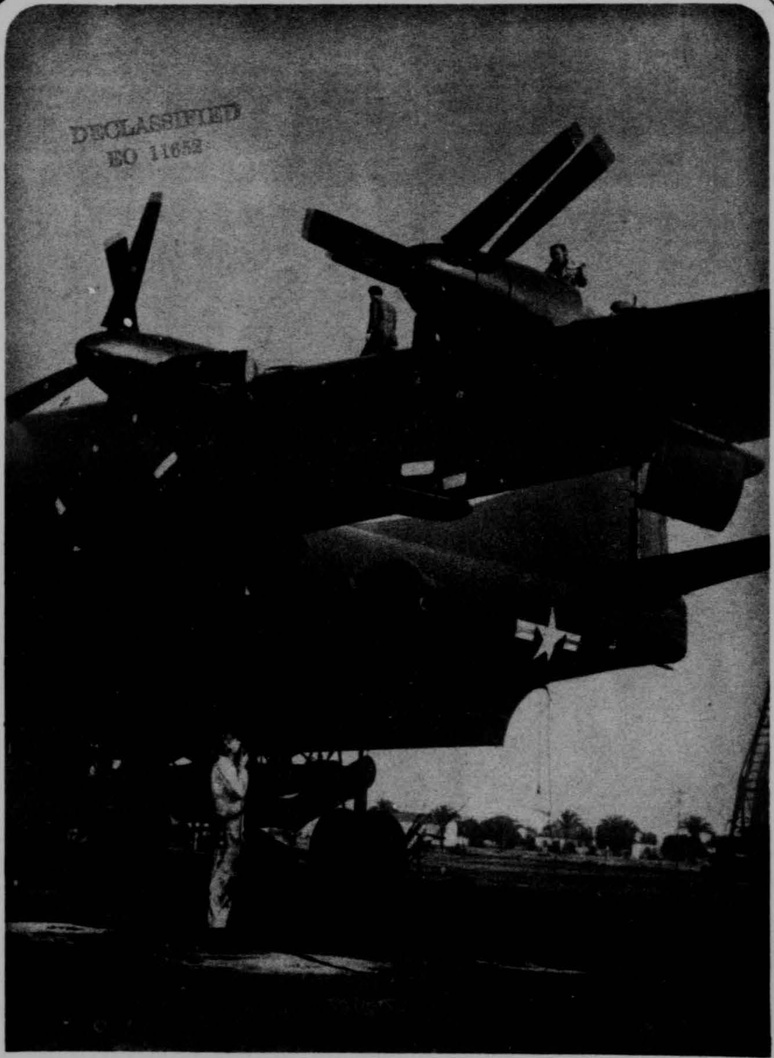

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Navy's XP5Y-1 page 44

CONTINENTAL AIR COMMAND [redacted]

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AIR INTELLIGENCE Review

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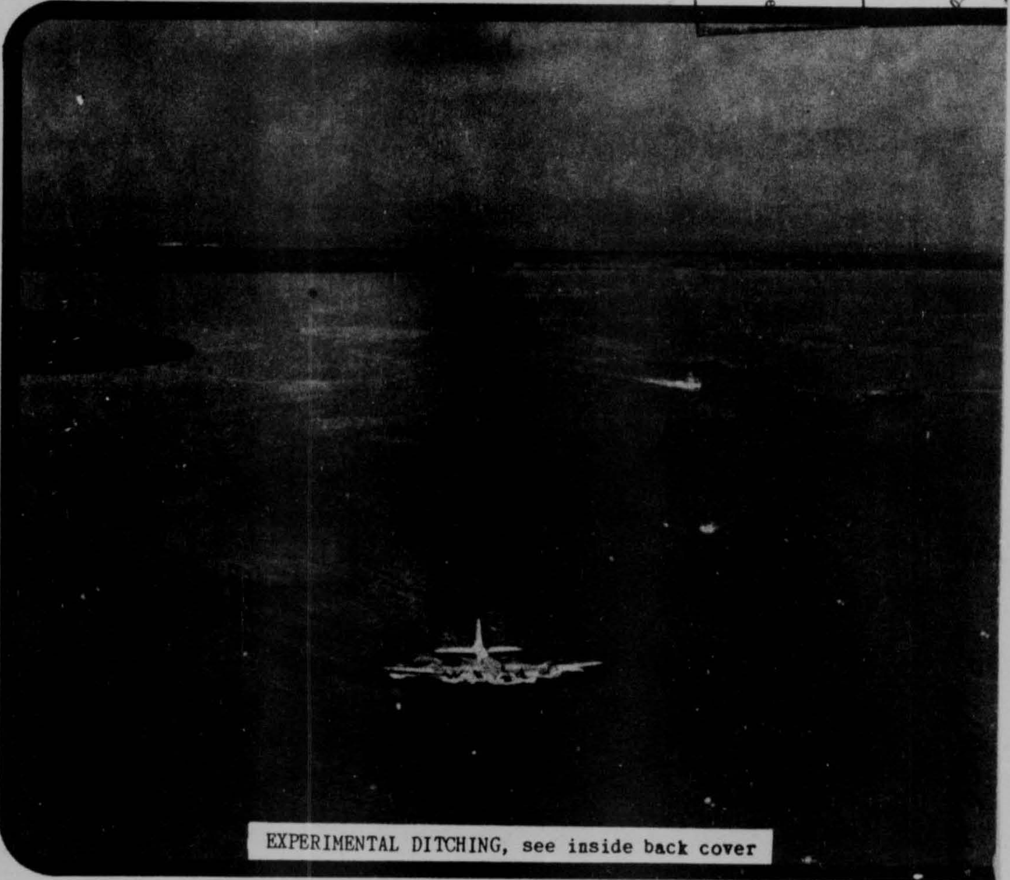

EXPERIMENTAL DITCHING, see inside back cover

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.Published Twice Monthly
..For The Air Reserve Forces
...By The Directorate Of Intelligence
CONTINENTAL AIR COMMAND

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2. Propaganda "
3 Russian Polar Defenses (Title)
4 Arctic Regions (Kd)
5. Russia - War Potential
6. Russia's Bomb, what it means to us
7. Atomic Warfare - Defense
8. Knerr, Hugh J.

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A Int Sch			2
Alaskan Comd			2
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CairC	2	MATS,AD	40
TAC	1	MATS,PD	12
AU	4	AACS	6
APG	2	CWW	1
1A	4	SAC	106
2A	2	AMC	69
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4A	2	FEAF	90
5A	2	AAC	30
6A	2	ATRC	40
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NGB	2	WADF	5
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AIR INTELLIGENCE Review

This "Review" is published for three reasons:
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2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

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2. Original articles of a noncontrovessial but informative nature.

Material submitted must include sources utilized and the authors name, rank and present military affiliation. Mail stories to: The Editor, "Air Intelligence Review," ConAC, Mitchel Air Force Base, New York.

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FRONT LINE MEMO ON FAR EAST

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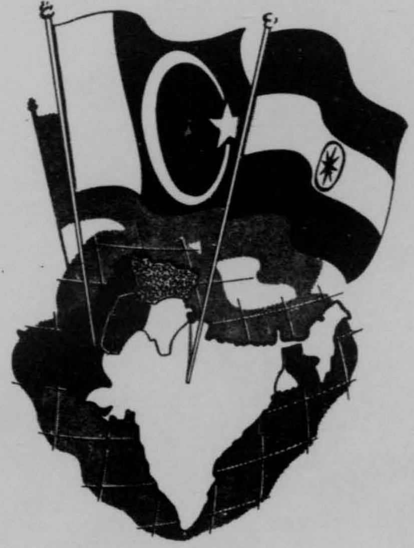

INDIA AND PAKISTAN. Trouble over Kashmir keeps these two countries on the verge of open hostilities.

There is trouble brewing in the Asian countries surrounding Communist China. To realize what is happening among the 700 million people who live east of Afghanistan and outside China, it is necessary to examine surveys made by Americans in a dozen countries, thousands of miles apart.

In Indo-China, Burma, Korea, and Malaya, it is clear that combat is taking place, even though one does not see the actual fighting. Jeep loads of soldiers escort officials. Road blocks, barbed wire barricades, and other accoutrements of war are apparent.

Elsewhere in the area military action, or the prospect of it, is holding up economic recovery. Countries such as Pakistan, India, and Indonesia are spending sizable sums on arms and soldiers. Between Pakistan and India the atmosphere is really tense. India has a tremendous population, hungry for food and lacking sufficient farmland. Pakistan has a half million tons of food spoiling in warehouses because of its trade war with India. Incidents between Moslems and Hindus in East Bengal are magnified into crises. Should actual hostilities break out between India and Pakistan, a major conflagration would develop with Afghanistan and Communist China probably joining the fray.

There are, however, some bright spots in the picture. Some countries (chiefly Korea, Indo-China, Thailand, Pakistan, and the Philippines) have food surpluses. Others have commodities for export as the minerals, jute, and cotton in Malaya, Indonesia, and Pakistan.

In the terms of the progress of democracy, there are fresh and encouraging signs in Japan. Democratic leaders in many new governments show good will, good intentions, and enthusiasm. The British have set up good local governments in Malaya, especially at Singapore; and, despite

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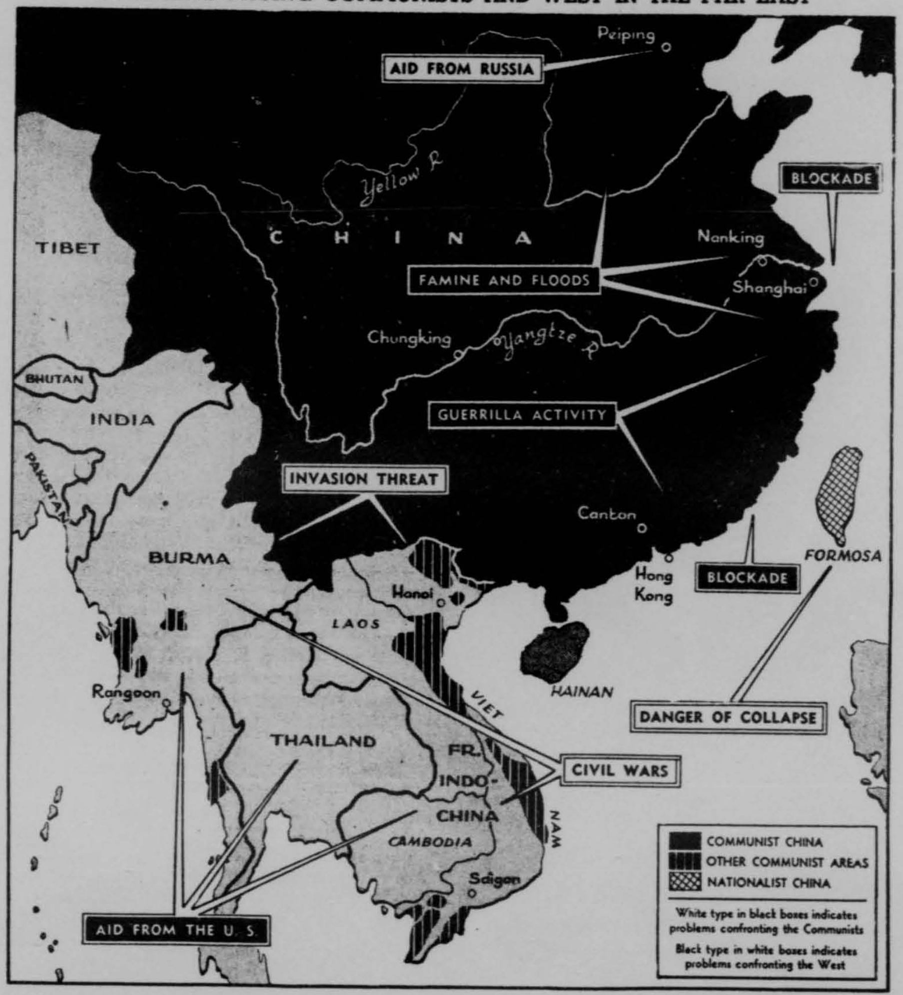
PROBLEMS FACING COMMUNISTS AND WEST IN THE FAR EAST



AID FROM RUSSIA
Peiping
Yellow R
BLOCKADE
TIBET
C H I N A
Nanking
Shanghai
FAMINE AND FLOODS
Chungking
Yangtze R
BHUTAN
INDIA
GUERRILLA ACTIVITY
PAKISTAN
INVASION THREAT
Canton
BURMA
Hong Kong
BLOCKADE
FORMOSA
Hanoi
LAOS
HAINAN
Rangoon
VIET
DANGER OF COLLAPSE
THAILAND
FR. INDO-CHINA
CIVIL WARS
NAM
CAMBODIA
Saigon
AID FROM THE U. S.
COMMUNIST CHINA
OTHER COMMUNIST AREAS
NATIONALIST CHINA
White type in black boxes indicates problems confronting the Communists
Black type in white boxes indicates problems confronting the West

some remnants of Colonialism, the British rule in Hong Kong is helpful to the democratic cause. India and Pakistan each have a good supply of trained personnel while Thailand has developed capable people of its own.

Even in Indo-China things are a bit brighter than they have been painted. Bao Dai, the Annamite Emperor brought back by the French, really drove a hard bargain with them. Bao himself is a surprise to many Americans whom he had originally impressed as a playboy. Actually, he is a competent man intelligently conversant with his country's economic and political problems. He is an ardent Annamite nationalist determined to make his country an independent unit within the French Union, like a country within the British Commonwealth. Further, he has gathered around him good men who are gaining much support from people who were formerly fence straddlers.

On the minus side, however, one cannot escape the fact that the governments in many of these countries are pretty weak. Some of them are not living up to the idea of democracy. Others simply lack the trained personnel to do a good job. The world can't expect to see real democracy in many of these countries for a long time.

Many of these countries have traditional tendencies toward dictatorship that break out when the leaders come up against revolts and run into trouble with their neighbors. The Indian Government, for example, uses pretty high-handed methods to subdue its local Communists.

In many places, what one finds are native officials, with little or no training, up against situations that would baffle even trained personnel. Korea faces the threat of inflation, with the Communists of Northern Korea putting constant pressure on the Southern half of the country. Pakistan is in serious economic and financial difficulties.

The introduction of native personnel into business management is difficult. American oilmen in Indonesia,for example, want to put Indonesians into management, but it's hard to find trained or able men. This is true in Burma as well.

Band-wagon psychology is going to have a lot to do with the way things go in Asia. Many Asians are not swayed so much by ideologies as by their idea of which side in a given conflict is going to win. Communists everywhere are trying to give the impression that their ship is riding an irresistible wave of the future. They are warning the Asians to get aboard before it's too late.

The Siamese are an example. They are confident that they can preserve their country by their wits. You get the impression that the Siamese are more like the willow than the oak. They bend with the prevailing winds. They bent to the Japanese and then to us. Thailand probably wouldn't stand long if Indo-China and Burma went to the Communists. Americans, however, are popular in Thailand, and most Siamese appear to be betting on the U.S. side. The country is rich and produces more than a million tons of rice for export. It has land laws similar to the old homestead laws of the U.S. Midwest and there is no tenant-land-owner problem. But despite this, Thailand can't be considered much of a bulwark against Communism.

Chinese communities in many of the countries of Southeast Asia are a real source of danger for democracy.

There are about three million Chinese in Thailand, two million in Indonesia, and there are large Chinese communities in Malaya, Burma, the Philippines, and other countries. These Chinese centers are fertile ground for the Chinese Communists. The Communists use the Nazi technique of reprisals against families living in China and pressure through business contacts. Such methods are paying off for Moscow and for Peiping.

Many of these Chinese are wealthy and influential. They are businessmen, bankers, newspaper publishers, and the like. In Thailand, the majority of the dock workers are Chinese and could tie up most of the shipping in the ports. Even the wealthy Chinese feel pretty hopeless about Communism; they are inclined to look to China no matter who is running things there. Some of the biggest Chinese-owned newspapers have switched to the Communists. Wealthy Chinese are buying Chinese Communist "victory bonds," too. In Singapore, the British officials announced that it was contrary to exchange regulations to buy such bonds, and the rich Chinese were delighted to have an excuse not to buy. But such communities are fertile ground for Chinese Communists.

There is a lot of bad feeling between natives and the Chinese communities, some of it traditional, some new. In Malaya, where Chinese guerrillas led by Communists are active,this antagonism is very strong. In Thailand, the Chinese are about the only Communists in the country. Hostility toward the Chinese is deep rooted in Indonesia. Even in the Philippines there are Chinese Communists helping the Huk rebels, although the Huks were active before the Communists came into the picture.

The attitude toward China--Communist China--in most of the neighboring countries is one of fear. Traditional fears are fanned by the Chinese Communists. Peiping radio, for example is telling Indo-Chinese that their country was once a part of the Chinese Empire and that the French are treating Chinese badly. Naturally there is a real fight between the French and Ho Chi Minh's Communist-led forces for the border between Indo-China and Communist China.

The Burmese are worried about actual invasion. There is a disputed area along the Burmese border where the Chinese Communists might move in. The Burmese also are worried about the Peiping announcement that Tibet will be invaded if the Tibetans don't knuckle under to the Chinese Communists. Long ago, Burma used to send gifts to the Chinese Emperor. The British, when they came in, thought this was a form of tribute and continued the gifts as such, placing Burma, like Tibet, in the position of a Chinese dependency. So, when Peiping talks about "liberating" Tibet, Burma fears it may be next.

Most Southeast Asians, when they think of Communism these days, think of Communist China, not Russia. The attitude toward the West and the U.S. in particular is fairly good in most places. Everywhere, however, people are perplexed because Britain has recognized Communist China while the U.S. has not. They think this indicates some sort of split between the U.S. and Britain.

There is,of course, in many places a hang-over from the colonial period when native nationalists concentrated on European powers as the "Enemy

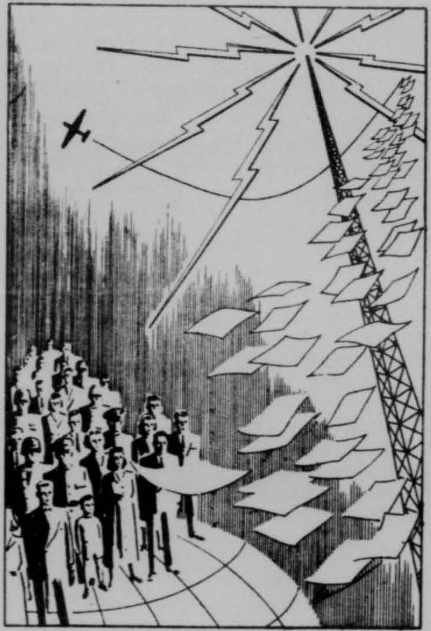
Continued on Page 9

PROPAGANDA:
A CONSCIOUS WEAPON OF DIPLOMACY

Adapted from an article by George V. Allen,
Assistant Secretary for Public Affairs

The American public is largely unaware of an important change which has been taking place during the past 15 years in the conduct of foreign relations. Every major foreign office in the world, including our Department of State, is doing things today which they would have considered startling, if not improper, even 10 years ago.

Until recent years, international relations between peoples were conducted by relatively few officials especially selected to live abroad for the purpose of representing one government to another. These officials were forced by custom and precedent to deal only with an equally limited group of diplomats in the foreign office of the receiving country. Although diplomats were permitted to establish social contacts with the people among whom they lived, they were not expected to deal on political matters with anyone except the foreign office. Although I do not suggest that this restriction, built up through generations of experience, has been totally discarded today, some rather surprising new methods in conducting foreign relations are being developed and one wonders where the trend will lead.



CHANGE FROM TRADITIONAL DIPLOMACY

In January of 1949, relations between the United States and the Soviet Union were in a very poor state. The Western zones of Berlin were under strict blockade, and the United States Air Force, aided by the Royal Air Force, had to fly through the storms of winter to deliver supplies for two million people. At the same time, counter-blockade measures which had been imposed against the Soviet zone of Germany were hurting the Soviets, and on Germany and the rest of Europe the propaganda effect of the generally unexpected strength and success of the airlift was beginning to run steadily against the USSR.

Stalin wanted to get off the hook. He had imposed the blockade in the confident expectation that we would be forced out of Berlin. When he did not succeed by January 1949, he was ready to talk. Under traditional diplomacy, he should have telegraphed his Ambassador in Washington to approach the Department of State, or he might have called to the Kremlin our Ambassador in Moscow, Gen. Bedell Smith, and informed him in the greatest secrecy that he believed the difficulties over Berlin could be solved. Ambassador Smith would have hurried to the American Embassy and drafted an urgent telegram which would have been sent off to Washington in top secret code. The next morning the Secretary of State would have taken it to the White House and laid it before the President.

Neither of the foregoing methods was followed. Instead, Stalin sent a cable to an American newspaper correspondent in Paris, answering certain questions the correspondent had addressed to him and which he found it convenient to answer. Stalin's answers added up to a pretty good indication that his government was ready to begin discussions.

The next morning Stalin's message was in the Department and on President Truman's desk at the White House, but not in the form of a secret diplomatic cable. It was in an eight-column streamer on the front page of every American newspaper and was being proclaimed simultaneously by every radio station and newspaper throughout the world. Secretary Acheson and President Truman got the message all right—at the same moment as everyone else who could read or listen among the two billion inhabitants of the globe.

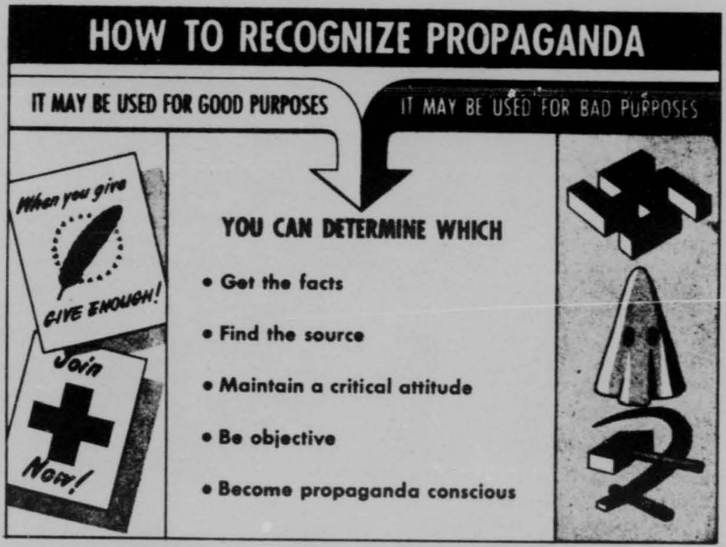
The method Stalin used in conducting his foreign relations in this instance was by no means unprecedented. Woodrow Wilson proposed peace Terms to the German people in 1918 through a speech to Congress, containing the famous 14 points or conditions under which we would end the First World War. He could have proposed to the German Government through Swiss or other neutral diplomatic sources. The Duke of Wellington doubtless addressed messages to Napolean through the press of his day, and Cyrus the Great probably started bazaar rumors for his purposes.

PROPAGANDA METHODS

But, for better or worse, propaganda as a conscious weapon of diplomacy has increased tremendously during recent years. The technical development of mass communications, by which the greater part of mankind can be reached almost simultaneously by press or radio, and the increased numbers of people who can read or understand may prove to have made this new tool as important to diplomacy as the invention of gunpowder was to military science.

We are not particularly concerned here with whether either gunpowder or propaganda have benefited or harmed mankind. It is just this point which is emphasized: that propaganda on an immense scale is here to stay. We Americans must become informed and adept in its use, defensively and offensively, or we may find ourselves as archaic as the belted knight who refused to take gunpowder seriously 500 years ago.

Let us consider another example of the use of propaganda in modern diplomacy. Last year, a highly significant election took place in Italy. The issue was whether communism would continue its march into Western Europe or whether democratic forces could turn the tide. Radio Moscow and all the agents of communism outside and within Italy went to work with presses and loud speak-


HOW TO RECOGNIZE PROPAGANDA
IT MAY BE USED FOR GOOD PURPOSES
IT MAY BE USED FOR BAD PURPOSES
When you give
GIVE ENOUGH!
Join
Now!
YOU CAN DETERMINE WHICH
• Get the facts
• Find the source
• Maintain a critical attitude
• Be objective
• Become propaganda conscious

ers to convince the Italian voters that communism offered the panacea for all their woes.The United States and other democracies did not stand idle.

By press, motion picture, and radio we tried our level best, through open propaganda methods to persuade the Italian voter that democracy, although offering no immediate paradise,was a surer method of progress. The Voice of America transmitted short-wave programs in the Italian language every day,beamed toward the people of Italy, extoling the advantages of democracy. Americans of Italian origin were encouraged to write to their relatives in Italy, counseling them to vote democratic. We arranged for American newsreels, showing the American way of life and American aid to Italy,to be shown in every Italian theater for several weeks prior to election day.

At present, the State Department sends out programs over the Voice of America in 22 languages every day, beamed to almost every corner of the world. It is true that we still write diplomatic notes to foreign governments, but we also try our utmost to reach directly into as many foreign homes as we can all over the globe. We talk directly to foreign peoples as well as to their governments. And every other major power is doing the same thing.

Our information, or propaganda, activity is by no means directed solely at peoples behind the Iron Curtain. The Department now maintains 85 information libraries in the leading capitals and important cities throughout the world. These libraries that contain American books and periodicals are usually not located in our Embassies but in separate buildings on busy streets where they will attract the largest numbers of individual foreigners.

In Mexico City, for example, our famous Benjamin Franklin Library is a conspicuous building on one of the principal thoroughfares. We encourage every Mexican passerby to come in off the street and read what we have to offer. And mind you, the Mexican Government does not ask us to clear with it what we show the Mexican citizen. We are trying hard to reach Mexicans, Englishmen, Iranians, and Hottentots directly, without having to channel our activities through their governments. We are succeeding in this effort to deal more and more directly with the actual public of other nations.

The Mexican Foreign Minister assured me recently that the United States Information Library in Mexico was the finest activity the United States could possibly carry on in his country. This indicates we are not cramming our propaganda down their throats.

We also show American documentary films abroad and sometimes take projectors into the mountain valleys of Central America, Afghanistan, and Ceylon to show movies to anyone who wishes to attend our presentation. We demonstrate democracy in action through scenes of American life.

All this activity is a far cry from a few short years ago when diplomats dealt almost exclusively with foreign offices. Some observers of international affairs, and not alone the gentlemen of the old school, are still shocked by this new activity. Some think the government is in a field that should be left to private industry. Others feel that the direct approach constitutes interference by one country in the internal affairs of another and will come to no good.

POTENTIALS OF DEMOCRATIC APPROACH

After two years of experience in this new method of conducting foreign relations, I have reached a few general conclusions. I am convinced that unless the United States continues to utilize this new method, we shall be left at the post by other countries which are becoming skilled in the use of mass media. New methods in government, like new discoveries in science, can be used for good or ill. Direct radio contact with foreign individuals may be used advantageously to proclaim falsehood as well as truth. But the potentialities of the direct approach are very great in both directions, and we must understand and perfect the techniques to protect and advance our interests. Furthermore, I see no need for the United States to become concerned over a contest in the mass propagation of ideas. We have in democracy the best commodity to sell, and we are ahead of the world in physical facilities and know-how in mass communications. Our chief problem is to find the proper balance between government and private industry in the field.

The direct approach in diplomacy will probably prove, on balance, to be a good development. It is the very opposite to secret diplomacy. If propaganda is deceptive, the glare of world publicity will generally find it out. Lincoln's confidence in the people's wisdom is still apt. Moreover, public debate, openly and honestly conducted, is not interference.

The direct approach, where there is no censorship, is the democratic approach. The Department of State assists friendly foreign governments in presenting their case directly to the American people, and we do not even try to jam unfriendly programs off the air waves.

As Congressman Daniel J. Flood said recently, "If Congress made it illegal for people in this country to listen to foreign broadcasts, 150 million Americans would be listening to them tomorrow, and I'd be one of them." As long as information is free in this country, we need have no fear for our institutions. No dictator ever existed without censorship and no democracy with it. A police state is desperately afraid that its citizens may read and hear directly what foreign governments have to say. Hence the frantic jamming of the Voice of America by the Soviet Union.

I am convinced that eventually, world government of some sort will be accomplished, but it can be brought about only through the assistance of the direct approach to peoples. Propaganda, when based on truth, can be an unequalled force for good.

As Dr. Reinhold Neibuhr points out, the peoples of the world must develop a much greater sense of world community before any form of international political structure strong enough to keep the peace can be developed. To develop a world community, peoples must establish more direct contacts with each other across international boundaries. UNESCO, the United Nations Educational Scientific and Cultural Organization, is making significant progress in this direction.

In the efforts now being made by governments to reach foreign peoples directly, we may be witnessing an important movement toward the establishment of a world community. At any rate, the American Government will do everything it can to hasten the time when peoples speak directly to peoples in a thousand tongues calling for peace.

Dept of State Bulletin
Dec 19, 49 Uncl

CONTINUED FROM PAGE 4

No. 1." But that is fading fast. The Indonesians in power are getting along quite well with the Dutch, particularly the younger Dutch officials. Even Malayan nationalists don't want independence right away because they welcome British protection against a possible attack from China. Anti-Western sentiment in Indo-China, of course, focuses on the French.

On the whole, Southeast Asians in power are very interested in President Truman's Point Four program for U.S. technical assistance in the development of backward areas. They know it won't involve a great deal of money, but they all have a keen admiration for American know-how and want help on such things as irrigation, electrification and transport. India is pretty suspicious of foreign capital, but the trouble is that India's own businessmen are reluctant to risk capital investment in the things India needs most.

Southeast Asia doesn't appear to need military aid on a big scale. In most places it is largely a question of Guerrilla fighting in the jungles or in the mountains, small forces met by somewhat larger forces on the defensive. Propaganda warfare is important, of course. Russia's big Embassy in Bangkok is quite active along these lines, co-operating with Chinese Communists. Americans are active in the war of ideas all through the area.

The impression one receives from all these surveys is that a great deal can be done by applying small amounts of economic, military or technical aid in the right place at the right time.

RUSSIAN POLAR DEFENSES

This article is translated from Feuille D'Avis Neuchatel, a liberal Swiss newspaper, and deals with Soviet developments in the Arctic. It is published for its possible corroborative value.

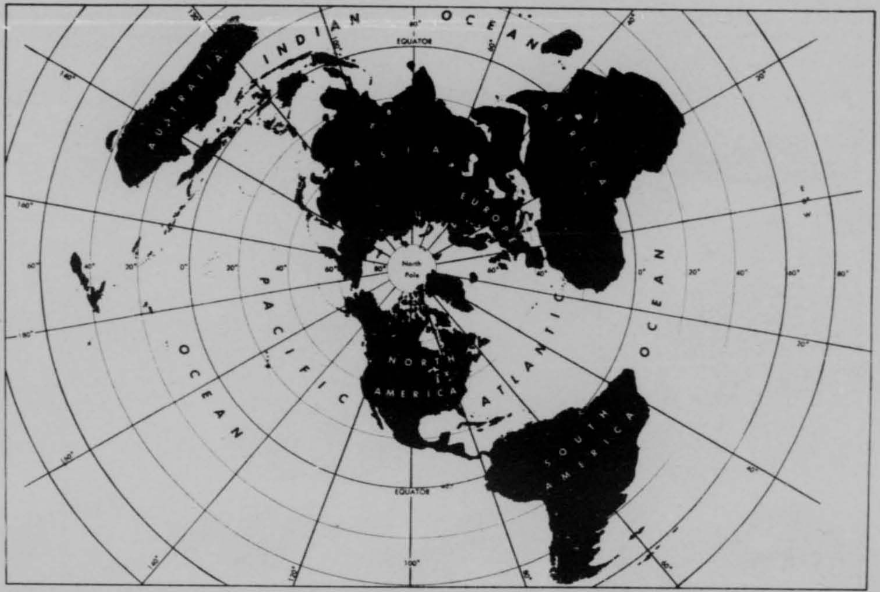
"Will the great plains of northwestern Europe long remain the predestined battlefields where at regular intervals the most promising sons of the old and new worlds are called upon to shed their blood? This may be doubted since the discovery of the atomic bomb, which is forcing the specialists in war to think again. There are many things which go to show the importance attached by both Americans and Russians to the Arctic regions," writes the Institute of American Advanced Studies.

On the strength of these last data of the atomic war, the experts believe that bombs will be launched from one continent against another via the North Pole. It may be mentioned that the greater part of the world's riches are concentrated about 40° and 50° latitude, north, and when it is remembered that these parallels are some 5000 kilometers from the Pole, the interest evinced by the Great Powers in these regions where the most decisive attacks may be launched, will be understood. Thus more and more people in the United States are emphasizing the importance of the Arctic in the defense system of the American Continent.

The Russians have a decided advantage in this battle where the sextant and the compass are the weapons mainly employed. Russia has gone further than any other country in the exploration and exploitation of the Arctic regions. One has only to think of the results obtained by the Glavsevmorput (General Management of the Northern Maritime Route). There has been one meteorological and geological expedition after another during the last few years. The number of Soviet meteorological stations in these regions is estimated at about 300, while Canada has 10, and the USA fewer than that.

The author of a recent report on the naval and air power of the United States concludes with the words: "He who holds the Pole holds the world." The following is a statement by an eye witness, who, after having spent some time at Novaya Zemlia, managed to get back to his (western) country. (Novaya Zemlia is an archipelago at the extreme north of the Urals, whose shores are washed by the Bering and Kara Seas and by the Arctic Ocean.

"From April, 1946, when I left the hospital, Vorkutsk looked like a great military camp near the front line. In the town itself, which is still in the process of construction, 60% of the houses had been requisitioned for the high command and staffs of 16 divisions already concentrated in the region. These divisions were chiefly composed of soldiers from the southern parts of the USSR. The object of the maneuvers seemed to be to try out the methods of warfare in polar conditions at different seasons and to test the ability of the soldiers who came from districts where snow was almost unknown, to defend themselves and live in the Arctic climate. This problem was studied in a great, recently constructed laboratory and military clinic installed in the

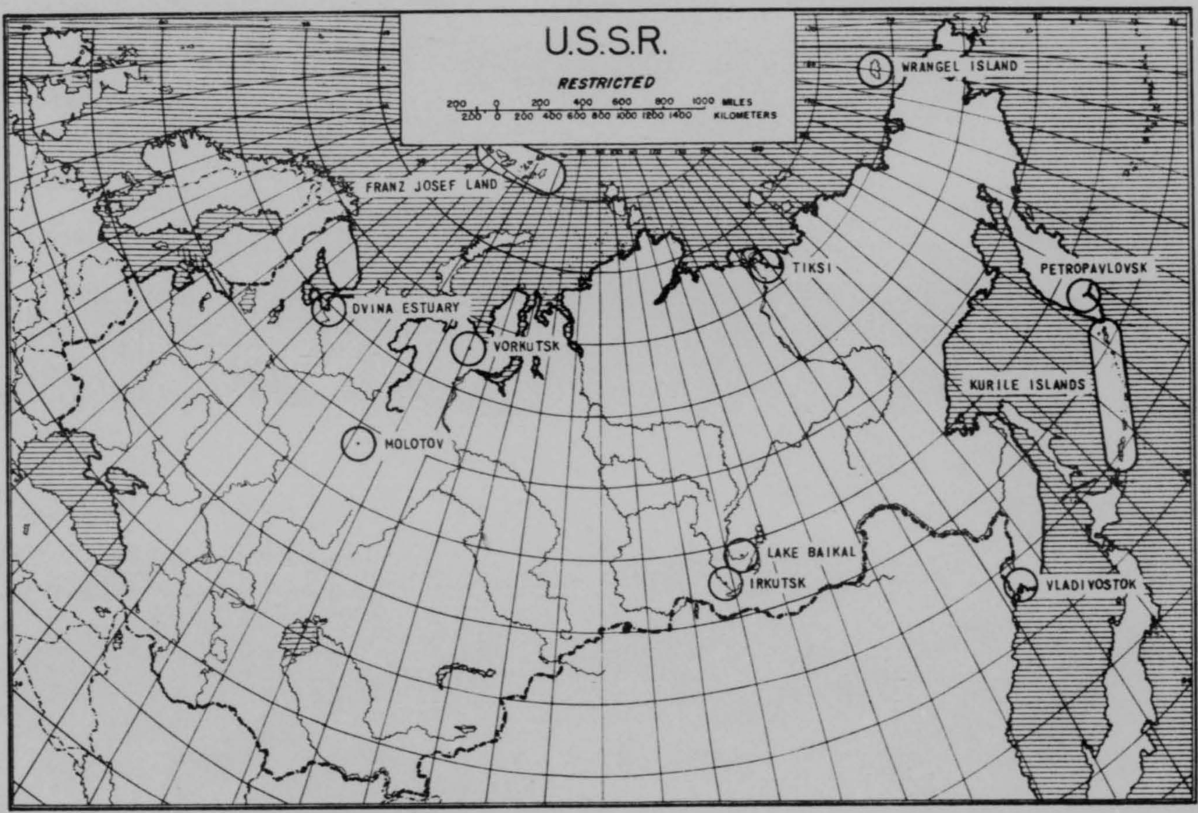


TOP OF THE WORLD. This map shows graphically the vast importance of polar defenses.

hospital of the shipping yards of Vorkutsk. The laboratory was under Professor Andre Prunnikov of the Soviet Army.

Special military equipment arrived with the men by the North Pechora Railway, and included armored vehicles equipped with both wheels and skis, heavy tanks (called "Ninotchka" by the soldiers) made so as to move in deep snow and on ice, and little, rapid tanks. This materiel, which appeared to be very abundant, was usually loaded at the "Coal Station of the First of May," which had more than a dozen cranes, and was then sent across the town to be parked in the suburb called Sed-Yol."

Since this report, other facts have come to light which confirm American anxieties. It is not easy to obtain information concerning the Arctic bases of the USSR, but we have excellent reason to believe that Tiksi, on the estuary of the Lena (400 miles from Nome and 500 miles from Resolute Bay) is the central point of the system of military bases running from Spitzbergen, Franz Josef Land and Dicksen Island to the west, to Wrangel Island, Petropavlovsk, and Vladivostok in the east. A few years ago Tiksi was only a little Eskimo village; today it is a modern city and an air and naval base of the first importance. It was born so recently and so secretly that very few maps show it. Tiksi, which now has a population of just over 100,000, is the heart or, at least, pivot number 1 of the So-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DVINA ESTUARY
VORKUTSK
KURILE ISLANDS
MOLOTOV
LAKE BAIKAL
IRKUTSK
VLADIVOSTOK

RUSSIAN POLAR DEFENSE CENTERS illustrated according to the accompanying article.

viet polar front; Lake Baikal is its supply center; and the Transsiberian Railway the artery which maintains its life. The provisions arrive at Lake Baikal by rail, from where they are sent to their various destinations by the Lena, usually on ice as this river is frozen over ten months in the year. The Russians have built themselves hundreds of airdromes along the Siberian coast and Tiksi can thus maintain contact with Archangel by sea. From Tiksi or one of its many bases Russian aircraft can get to Alaska in a few hours and, by pushing on, could destroy the industrial centers of Canada and the north of the United States.

The region of Lake Baikal is a supply center for other Siberian bases and in particular those of the Chukotsky Peninsula (40 miles from Alaska) from where engines of death of all descriptions can accomplish their murderous tasks in record time. Side by side with the construction of airdromes, that of launching sites for long distance weapons is proceeding rapidly so that the work undertaken with a view to an offensive operation against the United States will be completed by next spring.

Vladivostok, the terminus of the Transsiberian Railway, and the principal port of the USSR on the Pacific, is a supply center for the military bases of Kamchatka and is also an air and naval base of great importance. Most of the Soviet submarine fleet is concentrated there. It may be mentioned that the German experts who constructed the submarine shelters that the Allies were unable to destroy during the war are now working in Siberia.

On the Kamchatka Peninsula, the Soviets have constructed strategical roads leading toward the Okhotsk Sea, on the coasts of which are several military bases. At Petropavlovsk, the port of Avantcha has been dredged and the construction of airdromes and numerous shipping yards has just been completed.

Furthermore, there is reported to be great activity in the Kurile Islands in the matter of construction of air and submarine bases. The old Japanese plant has been altered and enlarged and reinforcements of workers are constantly arriving in the islands. The bases for the fighters and light bombers are on the island of Paramochiri, the dive bombers and sub-killers are on the island of Matzuva, while Etorofu Island has submarine bases and three airdromes.

In the opposite direction—toward Europe—the Soviets have constructed powerful air bases on Franz Josef Land, from where they can, via Greenland, reach the United States directly.

It is also reported that a strategical port has been in process of construction since 1946 at the estuary of the Dvina on the White Sea opposite the Kola Peninsula, the idea being to "double" Murmansk.

In the space of one year, docks have been constructed which can accommodate 30 large vessels and new shipyards have been developed in which warships have been laid down. Two years ago the city called Molotovsk had a population of only 40,000; now it has 100,000, and according to Soviet plans will be three times as large soon. During the last few years there have been military maneuvers on a large scale in the Arctic regions. Those of 1947, were directed by the "Soviet Byrd," Simon Grodichenko, and covered a distance of 2000 kilometers, terminating at Archangel. Far more troops were engaged in these maneuvers than in the equivalent Canadian and American ones. - ID No. 633802 Rest

WHAT RUSSIA'S BOMB MEANS TO US

By Major General Hugh J. Knerr, USAF (Retired)

Reprinted through the courtesy of Nation's Business and General Knerr.

We have accepted the Russian bomb impassively, but we cannot accept it indifferently. For no living free man can escape its burdens. The President will make onerous requests of the next Congress--higher taxes, greater sacrifice of industrial produce, faster arming of Europe, perhaps a new draft, additional inflationary risks--and to consider such measures we should know the realities of the Russian bomb.

REALITY NO. 1: The enigmatic Russian Government, unrestrained by Christian ethics, will very soon--if it strikes without warning--have the power to deal to the West what may be a disastrous blow. Our civilization commits us to the acceptance of any first thrust--to the waging of war only by recovery and counterattack--and no one can now safely predict how rapidly or, indeed, how surely we of the West can recover from an atomic Pearl Harbor.

REALITY NO. 2: If and when the Russians decide to strike, they will not strike at western Europe or the Middle Eastern oil fields; they will strike directly at the great port cities of the United States. Of this we may be certain from our knowledge of Russian preparations and from the nature of atomic warfare. The Russians will never risk a military adventure against a lesser nation which will justify our striking the first atomic blow: they won't make the German mistakes; they will strike directly at America.

REALITY NO. 3: If and when the Russians decide to strike America, their initial effort will not be through the air as is popularly supposed, but by sea. Russia has an immeasurable atomic advantage in the fact that we have six great port cities with enclosed harbors while she has none. All the important Russian cities are far in the interior and must be attacked by air, while we have a Panama Canal and six great cities--Boston, New York, Baltimore, Norfolk, Seattle and San Francisco-whose enclosed harbors make them the world's most perfect atomic targets and the simplest to attack.

Through the air is the difficult, expensive way to assault a nation with atomic weapons. You must accept losses in both airplanes and precious bombs. You cause immense destruction; but when the bomb is exploded in the air the radioactive cloud is not persistent. It dissipates rather quickly. The ideal way to deliver the bombs is by freighter or submarine, exploded underwater in an enclosed harbor. In this manner you risk loss of neither airplanes nor bombs; you husband a limited stockpile; and the radioactive mist, unlike the air cloud, is persistent--it hangs over the target for days. The "poisoned" water compounds the destruction.

There is no necessity for supposi-

WORLD'S MOST PERFECT ATOMIC TARGETS

VULNERABLE. Six of our seaports, vital arteries of commerce and industry, are open to sneak marine attack.

tion as to the effect of atomic underwater explosions in our harbors. In the Bikini lagoon we anchored 76 ships over an area of eight square miles--an area comparable to Boston harbor. We exploded one of our early-type bombs. Of the 76 ships, only nine survived in such condition that they could be decontaminated. Nine ships were sunk by the explosion, and the remaining 58 defied a two-year effort to decontaminate them and, one by one had to be towed to sea and sunk as too "poisoned" even to be reclaimed for scrap iron.

The long-awaited Bikini report shows that steel ships, either war or merchant, are the most vulnerable of all targets to atomic attack. The Russians, of course, know this since they had observers at Bikini.

Three bombs exploded in New York harbor would effectively "kill" the harbor and every ship in it. The destruction, the loss of life would be incalculable, depending on surprise, time of day, and wind direction and velocity. And if similar simultaneous attacks were made on the Canal and the other five harbors, we would be deprived of our six principal ports for much longer than the initial, perhaps the decisive, phase of the war would last--and at a cost to Russia of a score of bombs.

Moreover, the Russians have it within their power to supplement the atomic destruction through the release by fifth columnists of anthrax and other bacteria in the port areas. The Fourth Horseman of Plague would further delay recovery.

REALITY NO. 4: Immediately following the sealing of our ports we can expect Russian bombers and troop transports to reach Pittsburgh, Cleveland, Detroit and Chicago. This would be a secondary and far more expensive effort for the attackers, also intended to retard our recovery.

These are not fanciful suppositions but the logical deductions of qualified experts within our Government. Our Government has no way of knowing whether the Russians will launch such an attack against us; it does know, however, that the Russians can shortly have all the means for such a blow.

Much has been written about how the Russians are developing new-type submarines with German assistance. And the general assumption has been that these submarines are being designed for high-seas attack on individual ships in the traditional manner. This is an unwarranted assumption. There is no indication that the Russians ever expect to stalk convoys in the pattern of the first and second world wars.

Why should any nation ever again send out submarines to torpedo individual ships? Our six ports which the Russians can decommission handled 90 per cent of our seaborne supplies during both wars. These ports are our railheads. What would our thousands of ships be worth if they couldn't enter the harbors of Boston, New York, Baltimore, Norfolk, Seattle or San Francisco? Or if they couldn't use the Panama Canal?

REALITY NO. 5: Our counterattack against Russia should be planned on the assumption that we will have lost indefinitely our six principal ports and the use of most of our ships. Any planning based on the large-scale employment of shipping during the initial phase of a third world war is unrealistic and unsafe.

The Russian bomb has further reduced any contribution which western Europe, even Britian, can make to the combined power of the West. No longer need there be a pretense that a dismembered Germany and a shattered France or Italy can be safeguarded if Russia chooses war.

This is not to say that we should abandon western Europe; or that we won't fight for it; or that we should cancel the Marshall plan; or even that we should cease efforts to help rebuild the continental armies. It is only to recognize a reality of our times. Indeed, prior to the fact of the Russian bomb, no military authority defended arms-for-Europe on any basis other than morale-building or aid-toward stability.

In an atomic age, with the power of the West depleted by the material and political ravages of two world wars, the counterbalance to Russia cannot be erected on the Rhine; it should be erected on the Mississippi. If Russia is to be deterred from war, the deterrent cannot be western Europe; it can only be America.

So small has the world become that in the planning for a third world war the position of western Europe is comparable to that of Belgium in the planning for the first conflict. Perhaps its people can find some comfort in the fact that it will not even be a decisive theater; that theater will be the skies over Russia or America.

The position of Britain is changed in that no one can now predict how long or how certainly Britain can be safeguarded as a base. During the last war, had Germany's rocket and jet development been advanced a year, Britain would have been made untenable. Britain's ports, by which she lives, are as vulnerable to underwater explosions as our own; and the close-packed island is a pitifully lucrative target for rocket and aerial atomic bursts. Even the traditional fog, an ally the last time, would be an enemy the next, since the fog would tend to hold the atomic cloud closer to the ground and retard its dissipation.

We cannot avoid being apprehensive as to how an unpredictable British government might react under atomic threat. Could some future British government be intimidated into accepting a deal with Russia? Suppose Russia should offer to by-pass Britain in return for the internment of American atomic bombs and bombers? It would be a tempting offer.

This apprehension is what lies behind our objections to any large-scale placing of atomic eggs in the British basket. Prudence requires that Britain be marked: Preliminary Base Only.

With Russia holding such advantages, how then can we establish the counter-balance—the foil which must be assembled if the free world is to have hope for peace or victory? If we must receive the first blow, if our ports can be destroyed, if our shipping can be rendered useless, if western Europe cannot be safeguarded, and if Britain can only be a "preliminary base," how can we impose our will-for-peace on the Russian adventurers?

The answer—the only answer we have--is this: Intercontinental air warfare based on the American and African continents—the American continent as the strategic base for initial retaliation; the African continent as the tactical base for the building up of air power to support ground operations aimed at ultimate occupation of enemy territory.

Russia may deal us a terrible atomic Pearl Harbor; she may occupy western Europe and neutralize Britain; she may put our ships out of action; but if, after all this, we can still master the skies over Europe, then Russia will be destroyed and we will be the ultimate victors. The continents of America and Africa provide us the strategic and tactical bases from which this can be done.

The atomic bomb did not appear until the last days of the second war. The aerial effort in that conflict was elementary compared to what it will be the next time. Yet even after the second war the scientists who made the Strategic Bombing Survey reached this conclusion:

"The experience of the Pacific war supports the findings of the survey in Europe...that no nation can long survive the free exploitation of air weapons over its homeland. For the future it is important fully to grasp the fact that enemy planes enjoying control of the skies over one's head can be as disastrous to one's country as its occupation by physical invasion."

Initially, we must base our strategic air power on North America because of two realities: 1, we have no other completely reliable base, and 2, we obviously must be in a position to deliver an instant cataclysmic retaliatory blow to neutralize the initial wound we must accept. Our means for matching Russia's initial blow is our principal hope for deterring Russia and thus having peace; therefore we must erect this means on the most secure of all bases—and that is our homeland.

This is why our Government has given first priority to the development of bombers capable of intercontinental warfare. And except for the dissent of a minority group of Navy admirals, our responsible planners are convinced that we already have such bombers and will shortly have even more effective ones.

The Navy minority sought to base our means for the retaliatory blow on supercarriers. The Government rejected this plan for several sound reasons which would be more apparent to the public if the Navy would release the Bikini report. The most obvious objection to the supercarrier is that in an atomic war it would stand little chance of ever leaving a harbor.

Africa becomes a full partner in this concept of the next war. Not just Mediterranean Africa, but all of Africa. In the initial phase Africa would be important as a turnaround base for our strategic bombers. A fallacy exists that immense bases are required for aircraft such as the B-36. Actually the B-36 can use any airstrip that will accept a B-29. Many such landing strips are now available on the African continent. All they are needed for--in the initial phase--is to refuel the bomber if its assigned target makes a return trip through Africa more feasible than a direct turn above the target.

But the ultimate value of Africa lies in its development as a tactical rather than a strategic base, that is in support of ground operations in the secondary effort against Russia.

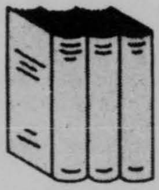
The many advantages of Africa become apparent. The population is meager; the people are not particularly amenable to communism. On the entire continent, except for two harbors, there is not a lucrative atomic target. There are wide open spaces, no vast population centers which can be intimidated or made to suffer unduly. As a military base in the atomic age Africa is superior to any other continent; and Africa is the principal source of the raw materials for atomic weapons.

We should deliberately develop Africa as our potential tactical base. Efforts by American industry under the President's Point Four program should be coordinated with military planning. Railroads, modern highways and electric power for Africa could one day be the difference between defeat and victory.

We can overbalance Russia's advantages and assure peace or victory if only we are willing to plan realistically. We need not abandon hope; all the free men of the earth are on our side. In our plans there can be roles aplenty for our diplomats, our Air Force, our Navy, our Army, our industry. Our diplomats can seek peace; our Air Force can be maintained in readiness to strike; our Navy can plan to protect our harbors and to deliver our forces in the secondary phase; our Army can prepare for its traditional role; and our industry must support all of them. And in all our planning we must realize that there is a limit to our cash and credit, that our enemy is intent upon exhausting both, and therefore we must create a better war machine for less than present costs.

The Russian bomb has cast its shadow over all of us. But the Russians are realists; and if we plan intelligently, we can still hope for peace.

March 1950 Uncl



THE BOOK SHELF

RECOMMENDED READING
FOR YOUR OFF DUTY HOURS

TITLE: Design of Turboprop Transports, Part I

SOURCE: Flight 29 Dec 1949 (56-21-40 Wkly);pp 831-833; 4 illustration, 1 tb.

Large transport design requirements to permit the most effective use of turboprop engines are discussed. Reasons for the interdependence of the operating conditions of the turboprop and the performance characteristics of the aircraft are explained. The effect of varying the wing area and aspect ratio on operating efficiency of turboprop transports is analyzed. Factors involved in the effective use of turboprops are outlined, and curves of turboprop performance are shown for a cruising speed of 350 mph at 30,000 ft. Relationships among range, weight, and power are discussed for turboprops for various operating conditions. Dynamic response to gusts is also considered. Maximum overstress factors are shown as a function of span with altitude as a parameter.

CADO 1 Apr 50 Uncl

TITLE: Civil-Military Relationships in American Life

AUTHOR: Edited by Jerome G.Kermin

PUBLISHER: The University of Chicago Press, Chicago

In eight essays by prominent educators, journalists, and public officials, this volume seeks (1) to identify the changes in conditions which have caused a greater influence of the military profession on American life, and (2) to examine how American freedoms can be preserved by safeguarding the predominance of civilian power. The book notes the historical American tradition of civilian control of the government in war as well as peace and the lack of military consciousness in America in peacetime. The various authors examine America's civil-military relationships in the light of our postwar policy of maintaining large-scale military forces until international organizations become strong enough to replace national force. The essays cover the following subjects: "Science, Technology, and War," "From Soldier to Citizen," "The Recruitment and Training of the New Armed Forces," "Civilian Control of a Department of National Defense," "Government of Conquered and Dependent Areas," "The Military and Foreign Policy," "Civil-Military Relations in the United Nations," and "Security Without Militarism: Preserving Civilian Control in American Political Institutions."

AF 157723 Uncl

TITLE: World's Flying Boats

SOURCE: Naval Aviation News, March 1950
Chief of Navl Operations
Navy Department
Washington 25, D. C.

A brief discussion is presented on current and future heavy-type flying boats. Among those described are the American JRM Mars and XP5Y-1; the British SR-45 Princess and Short Solent 2; and the French Latecoere 631 and SUD-EST S. E. 1210. The credit of establishing and maintaining the world's overseas airways goes to the flying boat. Beginning with the construction of the "America" in 1914 and the Curtiss NC's in 1919, flying boats have, until just recently, been larger than their landplane contemporaries; yet the possibility of flying boats seems by no means exhausted. Hughes' 400,000-lb "Hercules," the largest flying boat in the world, appeared in 1945 and was flown in November 1947. It was designed to carry a payload equivalent of a 60-ton tank with full complement of armor and men, or 750 soldiers fully equipped.

CADO 1 Apr 50 Uncl

TITLE: Any Future for the Flying Boat?

AUTHOR: A. R. Boone

SOURCE: Air Trails
775 Lidgerwood Avenue
P.O. Box 489
Elizabeth, N.J.

Research conducted by Convair in the design of hulls using radio-controlled models now points the way to supersonic seaplanes. Flying-boat development, however, must progress first through the subsonic phase, which is to be realized soon in the 5Y-1 which should be flying by mid-spring. It is estimated that the 5Y-1 will cruise at 350 mph. Later comes the transonic, then the supersonic. Progress in the latter two phases is largely under wraps. It has been publicly stated, however, that research already has entered the transonic phase. At least one jet-propelled model is flying now. Now that the new conception of water-based airplanes has actually produced the 5Y-1--it is actually in being, and not merely a dream--we begin to recognize the significance of this development. Transonic water-based planes can be built today, not next year. From this fact, too, it is possible to speculate on their strategic uses in event of war. Vessels of other types in conjunction with midocean docking or mooring facilities can handle fueling and repair. With coming designs, it will be possible to water-base aircraft and lose nothing in performance.

CADO 1 Apr 50 Uncl

TITLE: Medical Aspects of the Atomic Bomb

AUTHOR: Maj. G. M. McDonnel

SOURCE: Ordnance Mar-Apr 1950
705 Mills Building
Washington 6, D. C.

Atomic casualties, which are produced as a result of blast, heat, and ionizing radiation, are discussed. The relative value of these agents determined by a scale of biological significance will vary primarily with the type of detonation, namely in the air, on or near the ground, and under water. With an air detonation, the ranges of the blast and thermal effects are distributed over the greatest possible area. In the ground detonation the ranges of blast, heat, and ionizing radiation are less than the air-detonation values. The heat and initial ionizing radiation produced as a result of an underwater detonation are largely contained within the surrounding water. It is stated that the danger from radiation has been highly overrated.

CADO 1 Apr 50 Uncl

AIR FORCE LETTER)
NO. 205-25)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 30 MARCH 1949

SECURITY

Disclosure of Classified Information to Reserve Forces Personnel

(Effective until 30 September 1950 unless sooner rescinded or superseded.)

Paragraph

Purpose 1
Scope 2
Policy 3
Investigation and Clearance 4
Residents of Foreign Countries and Foreign Nationals 5
Requirements 6

1. Purpose. To provide uniformity, this Letter outlines the policy of the Air Force with respect to the dissemination of classified military information to Reserve Forces personnel.

2. Scope. This Letter applies to the Air Force Reserve and the Air National Guard, and in addition, its provisions will be followed in connection with activities concerning the Air Reserve Officers' Training Corps and the Senior Division of the Civil Air Patrol. This Letter does not apply, however, to personnel on extended active duty.

3. Policy. In compliance with the provisions of AFR 205-1 regarding security of military information, Reserve Forces personnel may be entrusted with classified information as follows:

a. RESTRICTED information may be disseminated for official military purposes to any Reserve Forces personnel.

b. Except as authorized in c below, information classified no higher than CONFIDENTIAL may be disclosed to Reserve Forces personnel not on active duty who are actively participating in official training activities, provided that possession of the information is essential to the training course or program.

c. SECRET information may be disclosed to Reserve Forces personnel on active duty for training purposes and personnel not on active duty who have a mobilization assignment, provided that possession of the information is necessary in the performance of official assigned duties.

d. TOP SECRET material will not be used for training purposes in connection with Reserve Forces training programs. As authorized by paragraph 7, AFR 205-1, 14 March 1949, however, individuals serving on short periods of active duty whose assignments require it may be given access to the TOP SECRET information essential for the performance of their assigned duties.

e. Documents containing information classified higher than RESTRICTED will not be disseminated for retention by individuals. Such documents will be stored in military files only.

f. Reserve Forces personnel not on active duty who receive classified information will be informed that the information affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation or transmission to an unauthorized person is prohibited.

g. Upon termination of active duty training, personnel will be briefed on the necessity for maintaining security of their professional knowledge while on inactive status.

4. Investigation and Clearance. Commanders concerned are responsible for requesting personnel security investigations and clearing personnel referred to in this Letter whenever required or necessary in accordance with separate Regulations.

5. Residents of Foreign Countries and Foreign Nationals. The provisions of AFL 182-4 and 8f, AFR 205-1, 14 March 1949, will be observed regarding dissemination of military information to persons residing in foreign countries, or to foreign nationals as defined in paragraph 2i, AFR 205-1.

6. Requirements. Although it is the desire of the Air Force to make available to Reserve Forces personnel such classified information as is required for training purposes within established training programs and courses, it is of primary concern that no breach of security will result from this policy. Commanders concerned will review continuously all classified material required by or of direct value to Reserve Forces activities, and whenever appropriate, will initiate down-grading action thereon in accordance with paragraph 27, AFR 205-1, 14 March 1949.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

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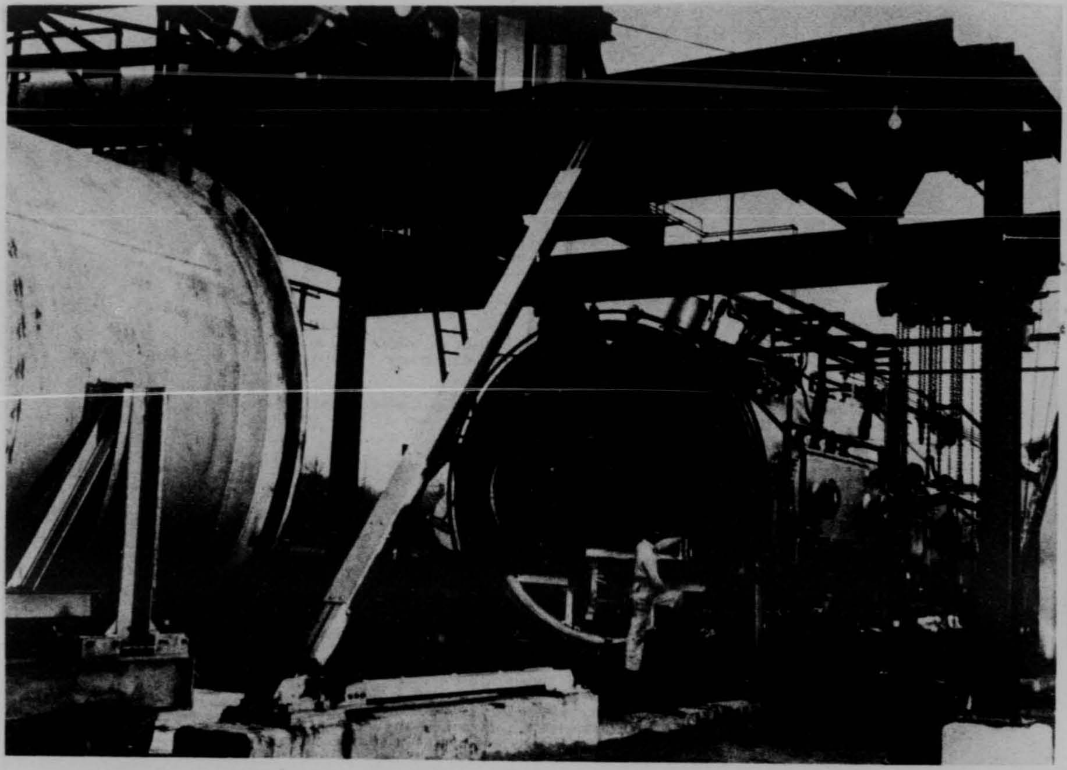
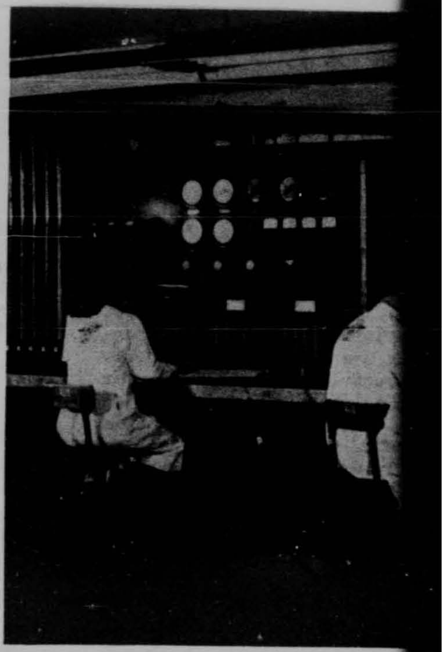
*This Letter supersedes AFL 205-25 (formerly 46-7), 31 March 1948.
This Letter has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.





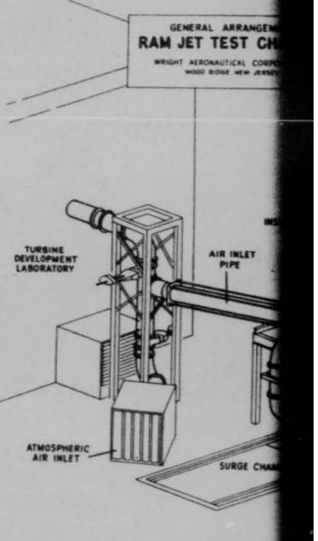
SUPERSONIC RAM-JET TEST CHAMBER

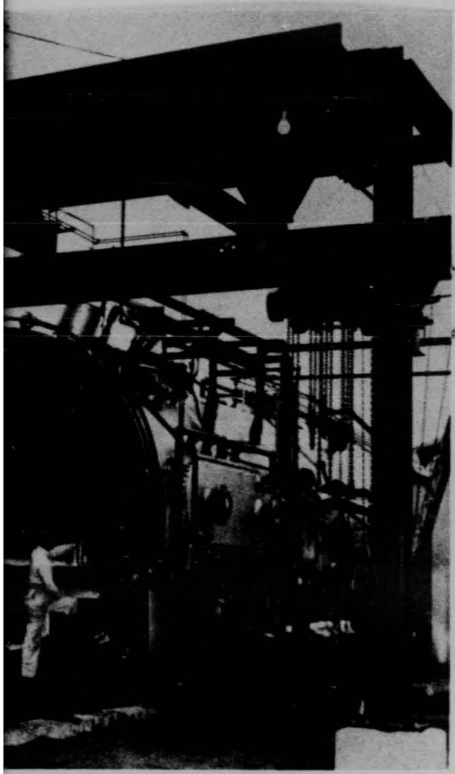
A new supersonic ram-jet engine test chamber which can simulate flight speeds up to 2,600 miles per hour—about four times the speed of sound—and altitude conditions up to 80,000 feet, has been developed for the Air Force by the Wright Aeronautical Corporation of Wood-Ridge, New Jersey.

The test chamber, which is 12 feet in diameter and 96 feet long, was designed particularly for the development of supersonic ram-jet engines and is part of a multi-million dollar facility at Wood-Ridge capable of testing all types of engines, including turbo-props and turbo-jets. Ram-jets up to 20 inches in diameter may be operated in the new test chamber at the present time. Future modifications will make it possible to test units twice that size.

In a typical test, a ram-jet is mounted on a platform in the center of the 12-by-96-foot stainless steel chamber. Air, supplied by turbine compressors in the adjacent turbine laboratory, is directed at supersonic speeds through a "mouth", 20 inches in diameter, at the front of the chamber into the air intake duct of the ram-jet engine. The motors which drive the air compressors are capable of producing 15,000 horsepower, and the compressors can deliver air to the rate of 140 tons per hour. Pressurized steam at the rate of 150 tons per hour is vented into the chamber's exhaust system to aid in the escape of exhaust gases from the ram-jet, and to reduce pressure in the chamber, thereby simulating "high-altitude" conditions. By varying the incoming air pressure and the outlet steam pressure, it is possible to "starve" or "overfeed" the engine, thereby effecting altitude and speed changes. The thrust generated by the engine being tested is measured by an electronic thrust computer attached to the engines.

To muffle the roar of exhaust gases and steam jets near the rear of the chamber, three cylindrical silencers, each 45 feet high, have been installed at the end of the exhaust line. Because of the 4,000 degree temperature of exhaust gases, the chamber is cooled by a jacket of circulating water for cooling and is set on rollers to allow for a one-inch heat-induced expansion.





TEST CHAMBER

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i-Ridge, New Jersey.

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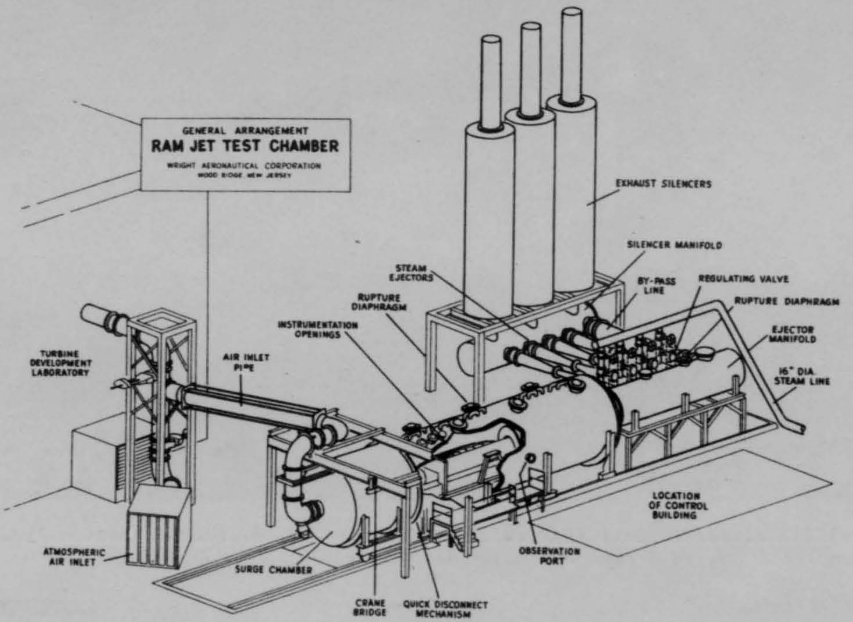
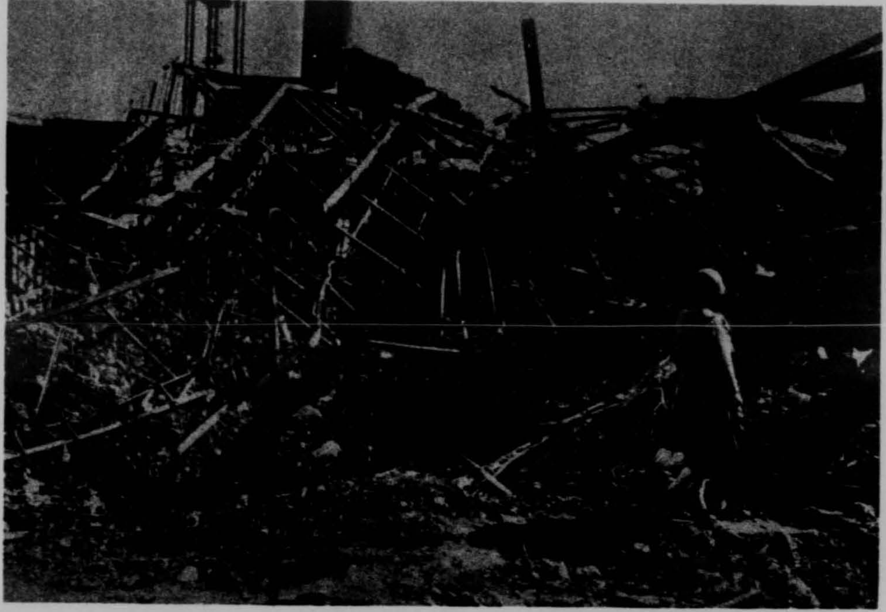

GENERAL ARRANGEMENT
RAM JET TEST CHAMBER
WRIGHT AERONAUTICAL CORPORATION
WOOD RIDGE NEW JERSEY
EXHAUST SILENCERS
SILENCER MANIFOLD
STEAM EJECTORS
RUPTURE DIAPHRAGM
BY-PASS LINE
REGULATING VALVE
RUPTURE DIAPHRAGM
INSTRUMENTATION OPENINGS
EJECTOR MANIFOLD
TURBINE DEVELOPMENT LABORATORY
AIR INLET PIPE
16" DIA. STEAM LINE
LOCATION OF CONTROL BUILDING
ATMOSPHERIC AIR INLET
OBSERVATION PORT
SURGE CHAMBER
CRANE BRIDGE
QUICK DISCONNECT MECHANISM

WAS THE SECOND FRONT IN THE AIR A MYTH?

In line with current Soviet propaganda claiming credit for all important accomplishments in all fields of activity, Red Star of 13 March 1949 carries an article entitled, "The Myth of the 'Second Front' in the Air," written by Soviet Colonel N. Chistov. The author bases his entire article on the premise that in World War II Anglo-American "ruling circles" held far-reaching concealed aims, did not want to expand combat operations in the west, and that, to cover their policies, purposely exaggerated the Anglo-American air bombing of Germany as a second front. He seeks to prove that the 1000-plane Allied raids on Germany during the conflict were actually ineffectual, and that the war burden was carried by Russia more or less alone. It is a classic example of the type of thing fed the Russian people daily by their Kremlin masters.

The tenor of Chistov's article is revealed in its opening paragraph: "During the World War (II), and at



FIESLER AIRCRAFT PLANT NEAR KASSEL. Admitted Dr. Hjalmar Schacht: "Your bombers destroyed German production and...made the defeat of Germany certain."

times even now, in the foreign military press the 'decisive' role of the Anglo-American Air Forces in the combat operations against Fascist Germany is praised in every possible way. However, those who make such declarations purposely refrain from observing that the rout of the Hitlerite military machine took place on the Soviet-German front under the powerful blows of the Soviet Armed Forces. It is precisely here that the main forces of Hitlerite Germany were concentrated and operated. The whole course of the war depended on the outcome of the struggle on the Soviet-German front."

Chistov then asserts that many Anglo-American spokesmen verbally subscribed to Italian General Douhet's theory that victory in warfare could be achieved by complete rout of the enemy through powerful blows from the air, followed by occupation by navy and ground forces after the enemy had capitulated. Profession of this theory is said to have served to conceal the slow operations of the Allied armies as well as "aspirations which had nothing in common with the desire to participate actively in the struggle against the German fascist aggressors." This latter innuendo is not clarified.

Having made his assertions and charges, Chistov sets forth to prove concurrently that the Douhet theory was false and to minimize the value of Anglo-American air activities over Germany. Says he: "...Let us turn to the facts published in the press(?) since they open up the true significance of the notorious 'second front' in the air. Thus, according to official date, in 1944 American strategic bombers alone threw 446,000 tons of bombs in the European theater of operations. The Air Forces of the English threw 525,000 tons. And so, nearly a million tons of bombs were thrown on Hitlerite Germany. Nevertheless it continued the struggle...(Some English and Americans had)...promised to put Germany on its knees in half a year; in actuality, however, even after aerial bombardment of a greater scale than they had proposed, Germany continued to resist."

A quotation from the Summary Report of the United States Strategic Bombing Survey (European War), dated 30 September 1945, will clarify this circumstance of continued German resistance referred to by Chistov:

"The German experience suggests that even a first class military power--rugged and resilient as Germany was--cannot live long under full-scale and free exploitation of air weapons over the heart of its territory. By the beginning of 1945, before the invasion of the homeland itself, Germany was reaching a state of helplessness. Her armament production was falling irretrievably, orderliness in effort was disappearing, and total disruption and disintegration were well along. Her Armies were still in the field. But with the impending collapse of the supporting economy, the indications are convincing that they would have had to cease fighting--any effective fighting--within a few months. Germany was mortally wounded."

Chistov continues: "More than that, in January 1945 the Anglo-American troops in Western Europe were in such a position that it became necessary to save them from defeat by the immediate development of offensive operations on the part of our forces in the district of the Vistula and Danube."

But, according to the Survey, "when the Germans launched their counter-offensive on December 16,

CREIL MARSHALLING YARD. Stated General Jahn: "The attacks on the German transport system...had a paralyzing effect on... all German industry."

1944, their preserves and fuel were insufficient to support the operation. They counted on capturing Allied stocks. Failing in this, many panzer units were lost when they ran out of gasoline." And at this late date, Germany's transportation system had been so badly mauled by Allied bombings that "the Ardennes counter-offensive, the troops and equipment for which were marshalled over the railroads, was probably the last such effort of which the Reichsbahn would have been capable in the west."

Some more from Chistov: "...As we know, after the war the American management for the study of strategic bombardments sent special commissions to Germany and Japan. This management then published a number of documents. In analyzing these documents, Colonel Tarle writes (in the journal, The French Air Forces, Vol. No. 24, 1948): 'The tactics of strategic bombardments did not produce the results the Anglo-American command had expected. When the Allies occupied Germany they were astonished at the number and importance of subterranean plants.'..."

The Bombing Survey does not bear out this assertion. On the contrary, the following quotation therefrom actually refutes it:

"...Germany never succeeded in placing any substantial portion of her war production underground--the effort was largely limited to certain types of aircraft, their components, and the V weapons. The practicability of going underground as the escape from full and free exploitation of the air is highly questionable; it was so considered by the Germans themselves. Such passive defenses may be worthwhile and important but it may be doubted if there is any escape from air domination by an enemy."

At this point, Chistov quotes German aircraft production figures to show that the Anglo-American Air Forces were unsuccessful in their attempts to destroy German aircraft production. Says he:

"Notwithstanding the attacks on the airdromes and aircraft factories, the production of German aircraft rose from 8,925 in 1939 to 15,596 in 1942 to 39,807 in 1944. In 1944 three times more bombers and eight times more night fighters were produced than in 1942.

"One cannot but note the fact that the strong German Air Forces were, of course, routed not at their home air bases but in the fierce aerial combat on Soviet-German front. It is precisely here, in the skies of Moscow, Stalingrad, over Belorussia and the Ukraine, that the Soviet pilots destroyed the main force of the Hitlerite Air Force (50,000-60,000 aircraft), and having achieved complete supremacy in the air made it much easier for the Anglo-American Air Forces to conduct their operations."

Chistov, of course, relates and asserts only what suits the Soviet purpose. While it is true that the Allied effort to destroy the German aircraft (airframe) industry was not a complete success, it did cripple and hinder the German effort. It will be noted below that Chistov nowhere mentions the result of the Allied attack on Germany's oil—and aviation gas—production, vital to tanks, armored vehicles, and to flying aircraft produced.

According to the US Strategic Bombing Survey, the German oil supply was tight throughout the war, and was a controlling factor in military operations. The chief source of supply, and the only source of aviation gasoline, was 13 synthetic plants together with small production begun from 3 additional ones that started operations in 1944. A preliminary attack was launched on 12 May 1944, followed by another on 28

WRECKED BALL-BEARING WORKS AT PARIS. Cried the general manager of Junkers Italy: "The attacks on the ball-bearing industry were an unqualified succe and disorganized Germany's entire war production."

May; the main blow was not struck, however, until after D-day. (In the months before D-day and for a shorter period immediately following, all available air power based in England was devoted to insuring the success of the invasion.)

A quotation from the Survey clearly tells the story:

"Production from the synthetic plants declined steadily and by July 1944 every major plant had been hit. These plants were producing an average of 316,000 tons per month when the attacks began. Their production fell to 107,000 tons in June and 17,000 tons in September. Output of aviation gasoline from synthetic plants dropped from 175,000 tons in April to 30,000 tons in July and 5,000 tons in September. Production recovered somewhat in November and December, but for the rest of the war was but a fraction of the pre-attack output.

"The Germans viewed the attacks as catastrophic. In a series of letters to Hitler, among documents seized by the Survey, the developing crisis is outlined month by month in detail. On June 30, Speer wrote: 'The enemy had succeeded in increasing our losses of aviation gasoline up to 90% by June 22nd.'

"... In August(1944) the final run-in-time for aircraft engines was cut from two hours to one-half hour. For lack of fuel, pilot training, previously cut down,was further curtailed..."

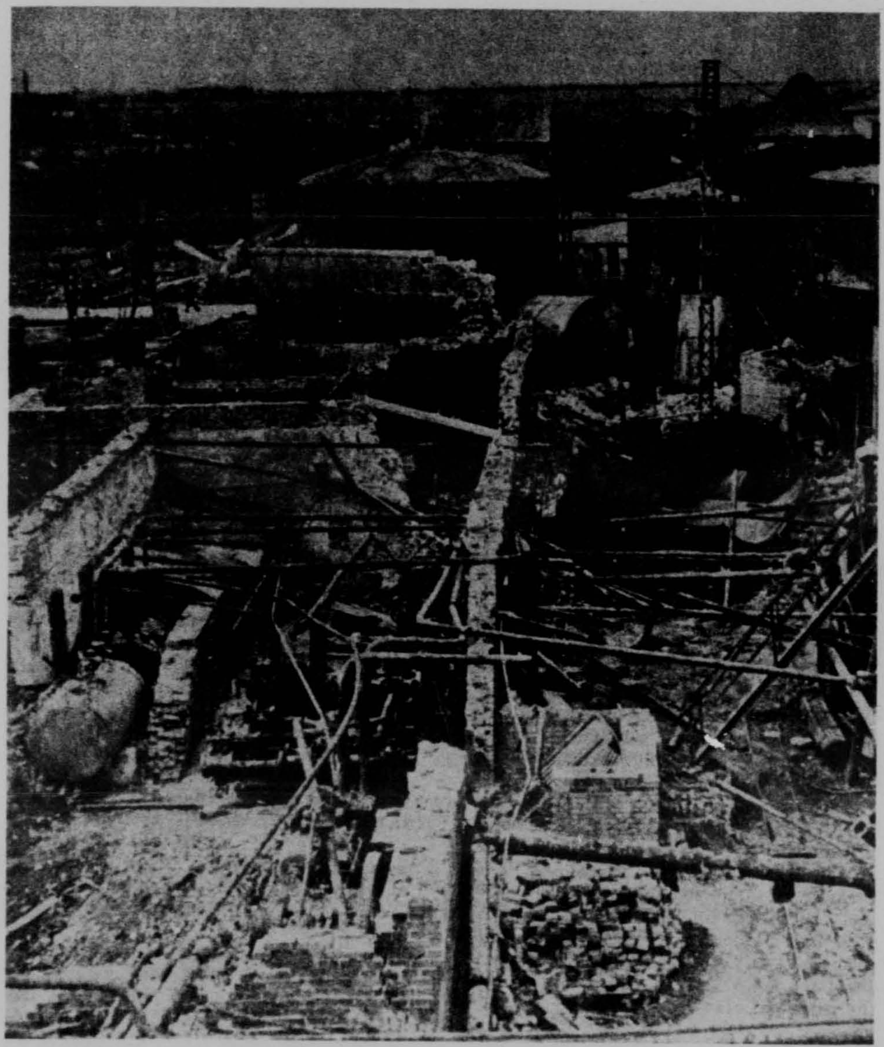
Chistov continues: "Admiral Kastex, in his article,'The Irreproachable Doctrine', in the journal, The Frencn Air Forces,Vol. No. 27, 1948, points out that about 30% of the total bomb tonnage of the Anglo-American strategic bombers was thrown on German cities, and the result was quite mediocre. Chemical plants suffered but slight damage. Ball-bearing works suffered so little that at the end of 1944 they were producing a normal amount of goods. The production of powder and explosives rose in 1944 to 171% of 1942. The production of tanks rose from 100% in 1940 to 1269% in 1944."

Now, according to the Bombing Survey, the order of priority for attack on German industry was as follows:

1. Submarine bases and pens(1942)
2. German aircraft (airframe) industry,including ball-bearing plants (June 1943)
3. Marshalling yards and bridges in France prior to the Normandy invasion (Spring 1944)
4. The oil industry, including synthetic nitrogen, methanol, and synthetic rubber (May 1944)
5. Steel and transportation system of the Ruhr (Mid-1944)
6. German transportation system (Sept 1944).

In the spring of 1943, Allied naval and air power scored a definite victory over German submarines. The attack on the German aircraft industry--primarily on airframe plants --was opened in the summer of 1943. The attack on the aircraft plants, like the attack on the ball-bearing plants, showed that to knock out a single industry with the weapons available in 1943 and early 1944 was a formidable enterprise demanding continuous attacks to effect complete results. Recovery was improvised almost as quickly as the plants were knocked out.

But the attack on the oil industry can be termed a great success. Consumption of oil exceeded production from May 1944 on. Accumulated stocks



DAMAGE AT PLOESTI. Said Generalmajor Albrecht von Masson: "The attack on German oil production opened in 1944 was the largest factor of all in reducing our war potential."

were rapidly used up, and in six months were practically exhausted. The loss of oil production was sharply felt by the armed forces. Through the summer, the movement of German Panzer Divisions in the field was hampered more and more seriously as a result of losses in combat and mounting transportation difficulties, together with the fall in fuel production. By December, according to Speer, the fuel shortage had reached catastrophic proportions. For example, in February and March of 1945 the Germans massed 1200 tanks on the Baranov bridgehead at the Vistula to check the Russians. They were immobilized and overrun for lack of gasoline.

The attack on the synthetic oil plants also cost Germany its synthetic nitrogen and methanol supply and a considerable part of its rubber supply. It became necessary to fill shells with a mixture of explosives and non-explosive rock salt extender. There was a general shortage of ammunition on all fronts at the end of the war.

"The loss of methanol coupled with the reduction in nitrogen was followed by a precipitate decline in production of explosives." (US Bombing Survey.)

During the last half of 1944 both the cities and transportation system of the Ruhr were the targets of extremely heavy attack, primarily by the RAF. Production of steel in the Ruhr was reduced by 80% between June and the end of the year. Steel shortage might have been decisive if the war had continued.

The attack on Germany's transportation system was the decisive blow that completely disorganized the German economy. It reduced war production in all categories and made it difficult to move to the front that which was produced. The attack also limited the tactical mobility of the German Army. The attack on the waterways paralleled that on the railways; investigation showed that it was even more successful. On 23 September 1944 the Dortmund-Ems and Mittelland canals were blocked, stopping all through water traffic between the Ruhr and points on the north coast and in central Germany.

The Bombing Survey quotes Speer's reporting to Hitler, March 15, 1945: "The German economy is heading for inevitable collapse within 4-8 weeks."

What the Allied planners really overlooked was the German power system, which, except for isolated raids, was never a target during the air war. An attack was extensively debated during the course of the war. It was not undertaken, partly because it was believed that the German power grid was highly developed and that losses in one area could be compensated by switching power from another. This assumption was incorrect. Generating and distributing facilities were relatively vulnerable and their recuperation was difficult and time consuming. Had electric generating plants and substations been made primary targets as soon as they could have been brought within the range of Allied attacks, the evidence indicates that their destruction would have had serious effects on Germany's war production.

Chistov continues: "Such...facts ...are witness to the unsoundness of the endeavors to palm off the myth about the decisive operations of the Anglo-American Air Forces as a strictly carried out theory of separate air warfare with a definite scientific basis. We must note that during the war there were many common sense statements abroad that rejected the attempt to foist upon the public the view of aerial bombing as a second front...The Chief of Staff of the English Air Forces (Tedder) likewise did not agree that the war could be won by the operations of bomber aviation alone.

"Soviet fighters during the whole of the heroic struggle against the German fascist armies closely watched the development of military operations in the West. They clearly understood that these operations could in no way be considered the real second front in Europe, because, notwithstanding the mass use of aircraft and its increased role in warfare, victory could only be achieved when all the armed forces took part in the engagements, including the ground armies...Only the heroic struggle of the Soviet Armed Forces, which in the course of several years alone fought fascist Germany and could by themselves, without the help of outside, break completely the Hitlerite military machine and liberate Europe from the German fascist invaders, only this struggle forced the ruling circles of the Allies to speed up the landing of ground armies in France."

But neither historical fact nor the Survey itself, heretofore quoted, backs Chistov's inferences and assertions.

THE ALLIED STRATEGIC PLANS

Chistov then concludes:

"Thus, the course of military operations alone on the Soviet-German front dispersed the myth about the decisive operations of the Anglo-American strategic Air Forces.

"In both the RAF and the USAF there were some who believed that air power could deliver the knockout blow against Germany, and force capitulation. This view, however, was not controlling in the overall Allied strategic plan. The dominant element in that plan was invasion of the Continent to occur in the spring of 1944." Plans called for establishing air superiority prior to the date of the invasion and the exploitation of such superiority in weakening the enemy's will and capacity to resist.

Allied air power was decisive in the war in Western Europe. Hindsight inevitably suggests that it might have been employed differently or better in some respects. Nevertheless, it was decisive. In the air, its victory was complete. At sea,

HERMANN GOERING: "Without the U.S. Air Force, the war would still be going on elsewhere, but certainly not on German soil."

its contribution, combined with naval power, brought an end to the enemy's greatest naval threat--the U-boat; on land, it helped turn the tide overwhelmingly in favor of Allied ground forces. Its power and superiority made possible the success of the invasion. It brought the economy which sustained the enemy's armed forces to virtual collapse although the full effects of this collapse had not reached the enemy's front lines when they were overrun by Allied forces. It brought home to the German people the full impact of modern war with all its horror and suffering. Its imprint on the German nation will be lasting.

In spite of Chistov's assertions, it is clear from historical facts, some of which are set forth herein, that the second front in the air during World War II over Europe was no myth. It is also clear that this second front in the air--this attack against Germany proper and the German economy--was part of a larger strategic plan which contemplated and led to the re-opening of the second front on the ground of Western Europe by the Allies in the spring of 1944. Furthermore, it seems more than coincidence that swift Russian advances in Eastern Europe in 1944 and 1945 followed upon the destruction of German industry and transportation during 1944 by Anglo-American Air Forces. It is to be doubted that the Kremlin values the Chistov article as anything but propaganda for consumption by the credulous.

Air Intel Summary Vol IV No.7 Rest

No nation should ever permit itself to be frozen to any static concept--whether that concept is the crossbow, or gunpowder, or the Maginot Line, sea power or air power, or the atomic bomb.-*James Forrestal*

REORGANIZATION OF SAC

A reorganization of the three air forces which comprise the Strategic Air Command to provide each with similar capabilities and components to perform their strategic missions took effect April 1.

The reorganization assigns SAC bases in the western part of the U.S. to the Fifteenth AF with headquarters at March AFB, Riverside, California; SAC bases in the central U.S. to the Eighth AF with headquarters at Carswell AFB, Texas; and those in the eastern U.S. to the Second Air Force with headquarters at Barksdale AFB, La.

A major change in reorganization is in the reconnaissance forces. Formerly all SAC reconnaissance units were assigned to the Second AF. The reorganization gives each of SAC's air forces its own reconnaissance and bombing capabilities, thus enabling it to work as an independent Air Force. Geographical reorganization also permits improved supervision at less cost in travel time and man hours.

Since both the 5th and 9th Strat Rcn Wgs are presently located at Fairfield-Suisun AFB, California, the Air Force plans to redesignate the 9th Strat Rcn Wg and the 28th Bomb Wg at Rapid City AFB, S.D., as the 28th Strat Rcn Wg. The 9th and 28th Wings will be equipped with 30 B-36 type aircraft when they become available. Personnel of the 9th Reconnaissance Technical Sq located at Fairfield-Suisun AFB will be transferred to Rapid City AFB and the unit will become the 28th Reconnaissance Technical Squadron.

USAF IT April 50 Uncl

POLAR GUIDE

THIS IS THE ELEVENTH OF A SERIES OF ARTICLES ON ARCTIC INDOCTRINATION

Chapter 18--Land Survival (Continued)

LIVING OFF THE COUNTRY

FOOD ANIMALS, BIRDS, AND FISH

In most parts of the polar regions, animals are to be found all year around, on land, in lakes, and in the sea. Virtually, all animals are edible. If you are forced by necessity to live for several weeks on an all meat diet, be sure to eat plenty of liver.

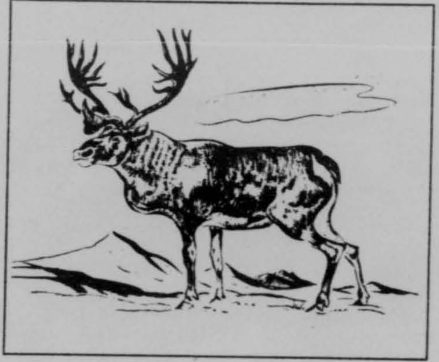
Do not, however, eat the livers of polar bears or bearded seals. The livers of these animals contain a tremendous concentration of Vitamin A and will make you sick.

CARIBOU. Caribou usually travel in herds. They are found on the tundra in both winter and summer. Sometimes in summer, they are also found on off-shore islands. Whether caribou are plentiful or not, shoot only as many as you require. Consider the Eskimos, whose need for food and clothing is as great as yours and whose friendship is essential. In shooting, aim for the shoulder or neck rather than the head; antler prongs make the head a deceptive target. Soft-nosed bullets are more effective than the steel-jacketed.

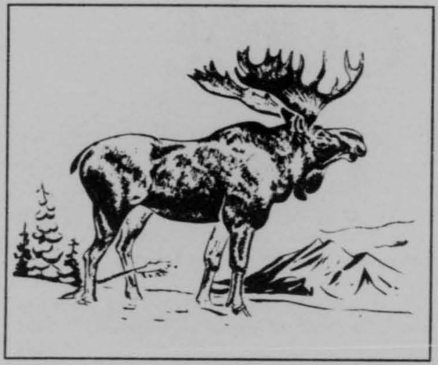
Skin caribou promptly, especially in summer. If you do not have time for skinning, at least remove the entrails. When skinning, keep the fat with the carcass rather than the skin. (These suggestions apply to other large animals as well). The caribou's stomach contents (mixed with oil or blubber) can be eaten. So can the eyes, brain, bone marrow, tongue, entrails, and especially the liver. Caribou meat freezes quickly in winter. Kept frozen and snow-covered, it will last indefinitely.

MOOSE. Moose are excellent food animals. Look for them in or near lakes or swamps. In clear, cold weather you can best spot a moose or caribou by climbing a hill or tree and looking for the animal's "smoke" which rises like the smoke of a camp fire.

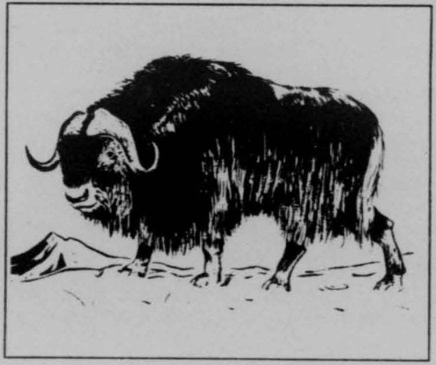
MUSK OXEN. Musk oxen are most abundant today on little-known islands north of the continent proper. They live in the wildest, most remote barrens and seek meadowlands



Caribou.



Moose.



Musk ox.

between hills and ridges. Keep on the lookout for tufts of their long, dark-grey hair and their soft wool on boulders in muddy spots. They live on grasses, heather, and small bushes, and, when necessary, will eat moss and lichens.

Musk oxen are easier to stalk and shoot than caribou. If possible, approach and shoot them from behind cover. If they are startled, they may clatter up the nearest hill and bunch tightly together, facing you with lowered horns. In that case your approach is easy. But face and forehead shots are almost sure to be wasted; a neck or shoulder shot is the surest. In winter, skin animals quickly before the meat freezes solid. Prepare the meat as you would caribou.

SEALS. Seals are widely distributed and generally common. Their flesh and liver are excellent food. (Do not eat the livers of bearded seals.) In summer and autumn, seals come to the surface of the water in order to breathe, and as their heads pop up, they make good targets. Seals sink in fresh water all year around and in salt water from May through October. They generally float in salt water from November through April. When hunting seals, stay down-current from them, if possible, so the current will bring them to you. Concentrate on one animal and shoot at the head, neck, or shoulders. Seals shot in the lungs or stomach usually escape.

Another method of getting seals in the summer and autumn is to catch them in coarse nets made of strips of animal skin or rope with a mesh about nine inches square. The nets are usually floated across narrow channels through which seals are known to pass. An all-service, large-meshed net may be equally good for catching seals and young white whales.

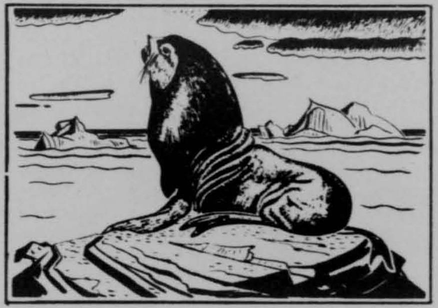
In the winter the best place to hunt seal is in openings (leads) in the pack ice. You will frequently find quite a number of seals at the leads and they will be easier to shoot there than at their breathing holes. Carry along your fishing line, hook, weight, and cork. You will need these in order to retrieve you seal—the weight in order to be able to throw the line far enough and the cork to keep the hook afloat on the water. After you have killed the seal, toss the line, weight, and cork over the lead on the far side of the seal. Then gradually pull the line until the hook is near the seal, jerk it slightly to catch in the seal's skin, and pull the seal over to the edge of the lead where you can retrieve it. If you are careful, even a small hook will do the job.

Shooting seals at breathing holes and retrieving them is much more difficult and requires considerable patience. Generally, seals make a number of breathing holes within a fairly small area and when you find one hole you can be relatively sure that there are others in the vicinity. These holes are depressions in the center of little mounds of ice built up over the surface. The mounds result from the fact that each time a seal comes to breathe at the hole he has to break through the ice that formed over the hole since the last time he breathed there, and this ice gradually piles up around the hole to form a mound. To kill and retrieve the seal you will need some kind of spear or gig in addition to your gun.

If you are alone, the only thing to do is to wait patiently, practically at the edge of the hole, holding your gun in position to shoot the seal as soon as his head pushes up. The seal will not keep his head above the water very long and you must be ready for an instant shot. Have your spear or gig very close by so that you can spear him as soon as you shoot; otherwise he might be lost under the water.

If there are a number of crew members hunting together, locate all the seal's breathing holes in a given vicinity and place one man equipped as previously described at a centrally located breathing hole. Then have the others stomp about at each of the other holes so that the seal will have only one breathing hole at which to come up. This will make it more likely for the seal to come up at the particular hole being guarded.

In the spring, seals lie on the surface of the ice next to their breathing holes and bask in the sun. A basking seal is hard to approach and, unless killed instantly by a shot in the head, it slips down into its hole and is lost. Approach the

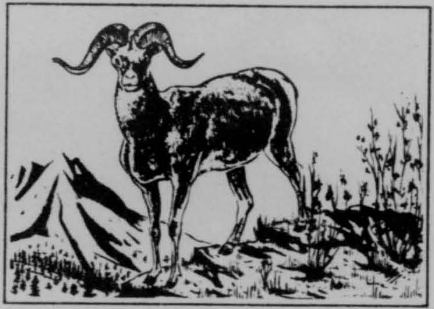


Hair Seal.

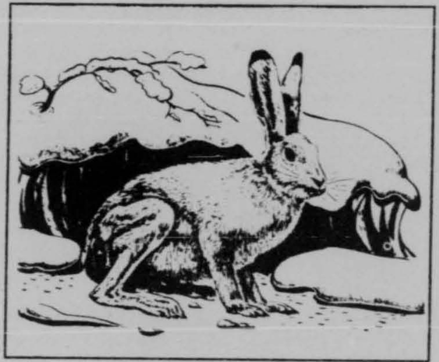
Polar bear.

seal by pretending you are a seal also. Eskimos know that seals lying on the ice sleep in a series of short naps, generally lasting about a minute or less, separated by quick glances about. So the Eskimo lies flat on the ice and gradually works closer, moving forward while the seal naps. Should the seal see him moving and become fidgety, the Eskimo raises his head and looks around as a seal does. The chances then are that the seal will mistake the hunter for another seal and will no longer be worried. However, you should observe two rules. One is not to dress in white, for if you do the seal might mistake you for a polar bear, become frightened, and leave the spot. The other is not to approach the seal directly.

The fresh liver, heart, and kidney of the seal are choice parts, exceptionally rich in food value. You can make the oily flavor somewhat less pronounced by carefully removing the blubber and blood from the meat. The blood is edible, however, and you should save it. Eskimos sometimes eat the liver raw, fresh from the body. You will prefer it broiled or fried. If you broil seal meat, put some fat with it. The easiest way to prepare it, though, is to cut off chunks and put them in water to boil. Don't boil the meat too long because that destroys the vitamins. By putting blubber in with the meat when you boil it, you can get a pressure-cooker effect, for the fat will form a layer on top of the water that will act somewhat like a sealed lid.



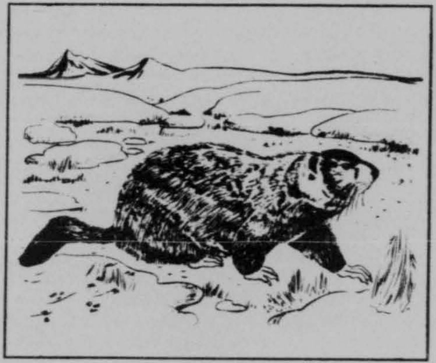
Mountain sheep.



Hare.

Before you store seal meat, carefully remove the blubber; otherwise it will turn rancid and will not be fit to eat.

POLAR BEARS. Unless you have a powerful, high-velocity, big-game rifle, it is not a good idea to hunt for polar bears. Bears are hard to kill and a wounded bear is very dangerous. Of course, it is possible that the bear will approach you, for polar bears, as well as brown, grizzly, and black bears are born raiders and may be quite aggressive. In that case, shoot the .22 caliber barrel of your survival gun to sever the spinal column, cut an artery in the heart, or penetrate the brain. If this fails, wait until the last possible moment before firing the .410 barrel. If you fire it into the bear's face at point-blank range,



Marmot.

say at 8 to 10 feet, it will stop or blind him.

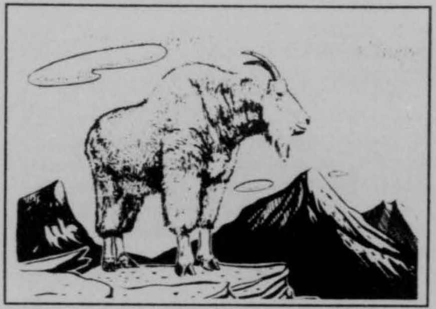
MOUNTAIN SHEEP. If you are stranded in the mountains of Alaska, mountain sheep (big-horn) may be almost your only source of meat. Because the sheep are usually found high up on the slopes, hunting them usually means stalking and long shots, and retrieving your game may be hazardous. The hunt is never easy but it may help to remember that all mountain sheep are less suspicious of anything they see or hear above them than of what they see or hear below.

MOUNTAIN GOATS. The goat is not as good to eat as the mountain sheep but meat is meat when you are hungry. Furthermore, the goat is not very difficult to stalk, once you have climbed up to the goat zone.

WOLVES. The wolf is edible, and its fur may be used for clothing. It is almost sure to be found wherever there are caribou or reindeer. Being clever, it may rob a trap line for weeks at a stretch without allowing itself to be seen by the trapper.

FOXES. Fox meat is edible. The fur is warm but not durable; hence it is not usually used for clothing. Foxes are keen-eared and curious. Conceal yourself well and lure them out for a good shot by vigorously kissing the back of your hand in imitation of a wounded bird or mouse. Or you can make a fox-trap by building up a dome-shaped structure of stones or snow-blocks, about eight to ten feet in diameter, five feet high, and open at the top. The walls should slope in strongly. Bait the trap with a chunk of meat. The fox will climb the structure, jump into the trap from the top to get the meat and then will be unable to get out.

HARES. Hares are common in the polar regions. The simplest method for getting polar hares is to hunt them with a rifle. Firing a gun along a cliff will sometimes set a dozen hares running. A running hare is a tricky target; do not waste ammunition on it. But a sharp whistle often halts the hare just long enough for a successful shot. You can snare hares easily in clumps of shrub willows where they feed. Set your snare either along a used runway or in thick shrubbery in a willow clump. You can make a simple snare by attaching a wire noose to a growing twig. Make a passage by thrusting a



Mountain goat.

Wolf.

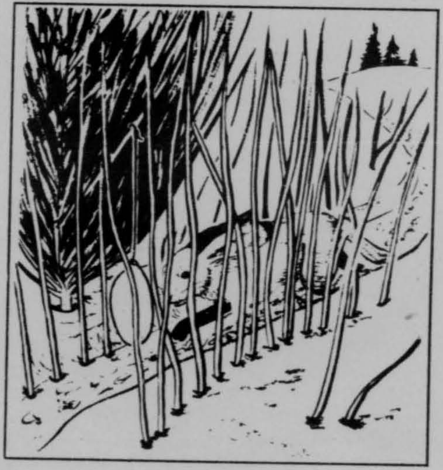
stick into the earth opposite this twig, and running a fence of sticks out from these two main pillars so that the hare is forced to use the opening. The noose (about 4 1/2 inches in diameter) should hang in the opening and should be from six to eight inches above the ground at its base. Try to visit your snares at least twice a day. If you do not, a fox may eat your catch.

When you eat hare, be sure to eat its blubber or other fat as well. Hares are rarely fat, and you need fat in the polar regions. Although you will lose weight steadily on a continuous diet of lean hares, it is better to eat hares than to starve to death.

MARMOTS. The hoary marmot, a woodchuck-like animal, is good-sized and makes excellent food. In late summer, before hibernation, it is very fat. You can catch a marmot in a steel trap set at the mouth of its burrow, or you can shoot it. Do not fire, however, until it is some distance away from its den and is perched on a boulder. In the summer, if you have no gun, cut it off from its burrow. It will run straight past or over your feet and you can kill it with a stout stick or a stone.

LEMMINGS. If you cannot get larger game, you might have to eat these polar mice. In summer, look for lemmings under rocks or scuttling along their runways in the moss or grass. You can often catch them with your hands. In winter, their nests are on or near the ground, deep in snow drifts. You can catch them by setting snares of very fine wire along their winter runways, but be sure to cover completely the cutaway parts of the burrow where your trap or snare is set, because lemmings seem to avoid light. Another difficulty in trapping these animals is that shrews, weasels, or other lemmings may eat your catch.

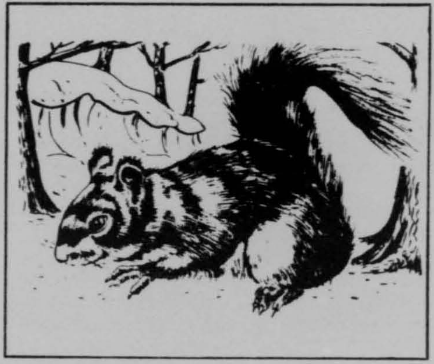
PORCUPINES. The non-hibernating porcupine ranges northward to the very limit of trees, reaching even northern Labrador where animal life is scarce. It often sleeps high in a tree curled up near the trunk. Kill porcupines with a club and save your ammunition. Be careful of the spines.



Hare snare.

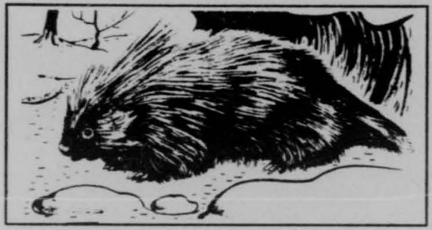
MUSKRATS. These rodents range northward to the tree limit. They inhabit streams and marshes and build a moundlike house of grass, with an entrance below water. If you open this house quickly, you may surprise a drowsy animal, or, in late spring or summer, find a brood of young. In winter, it may be worth your while to follow a fresh muskrat track that leads away from water. Muskrats sometimes wander into the uplands where they can be caught easily.

SQUIRRELS. The red squirrel lives in the evergreen woods of Canada and Alaska. It doesn't hibernate. To lure it close for a shot, stand still a moment, then start kissing the back of your hand loudly.

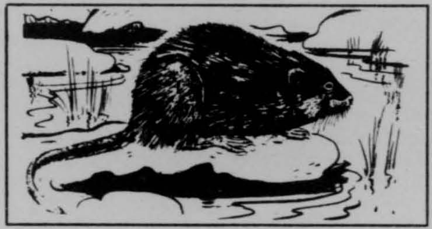


Squirrel.

Westward along the Arctic Ocean from Hudson Bay, you may be able to get a ground squirrel during summer (but not in winter, for it hibernates) with a snare placed at the mouth of its burrow or with a simple deadfall made of a flat, heavy stone propped up with a short stick and baited with grass, grain or other food.



Porcupine.



Muskrat.

OTHER ANIMALS. The beaver, mink, fisher, pine marten, otter, and Canadian lynx range well northward in wooded parts of Canada and Alaska. They are edible. Because they don't hibernate, they are a possible source of food in winter. The wolverine ranges far into the tundra, and even throughout Baffin Island. It is tough and evil-smelling, but it is edible.

Look for animals in holes in rotten standing trees. In winter, trees may be inhabited by flying squirrels, mice, and owls. In summer, woodpeckers, owls, and small mammals frequently nest in them. A big cavity in a tree near a river may contain a "goldeneye" duck's nest. Rap on rotten trees as you pass--animals may emerge from them.

COUP OPERATIONS

A coup operation is a military operation executed in such a way as to surprise the defender and to create an advantage for the attacker.

Generally speaking there are two purposes of a coup operation. First, its purpose may be to obtain influence or power. Second, it may be intended to inflict serious damage on a country, such as on its defense installations or resources. Measures of the latter type open the way for an attacker to obtain considerable advantage for himself, even though he uses limited or very small forces. This is especially true just before or during the early phases of open hostilities. A coup can also be carried out under peacetime conditions, as a preparation for subsequent operations.

THE OBJECTIVES OF A COUP

It may be expected that the objective of a coup operation will be one or more of the following: the nation's defense and administration; its natural resources; manufacturing facilities; or the inhabitants themselves. The choice in any particular case naturally depends on the objectives of the attacker's subsequent operations. Selection of the target is influenced by many different factors which must be taken into account at the time of the attack. One factor which is always likely to be of influence is the desire to create substantial advantages for the attacker or to inflict serious damage on the adversary with only a limited engagement of forces.

In both civilian and military defense, it should be expected that the objectives would be installations and supplies of various kinds. By seizing or destroying these, the technical and material resources of the defense can be seriously reduced. The same is true, broadly speaking, where coup operations are successfully carried out against war industries. The effects of such operations are immediately felt when the affected industries are engaged in the final stage of a manufacturing process. Damage inflicted on communications can seriously hamper and retard vitally needed transportation and may be of catastrophic consequences to the defense. This will be especially true where transportation concerned with mobilization and concentration is affected. Coup operations against laboratories and other research establishments may have serious future consequences, due to the fact that irreplaceable apparatus or instruments may be destroyed or valuable research data may be seized by the enemy.

In the sphere of administration, coup operations directed against various elements of a country's central administration, including the higher military staffs, may give an adversary particularly valuable information concerning defense plans and resources before actual warfare has begun. After the outbreak of war, such operations can give the attacker certain advantages, due to the fact that difficulties and chaos are produced in the conduct of the defense. Control of the propaganda and communication facilities of a nation in the early stages of a war gives the attacker an opportunity to undermine a nation's army and to reduce its power of resistance. The nation's defense may also be disorganized by false communications.

In the field of a country's resources, as in its military defense, industrial establishments, warehouses, and communications are of the highest importance. They are therefore natural objectives of coup operations. Perhaps the quickest results are obtained by an enemy through efforts against stocks of finished products, or against industries engaged in the final stages of a manufacturing process. If measures are taken against industries which produce raw materials or partially finished products, such as mines or steel mills, the effects are not generally discernible at once. Later, they might have catastrophic consequences. Electric power plants and transformer stations must be regarded as probable objectives of enemy action. Also, water and gas works and other public installations can certainly be considered. Damage done to installations of this type may produce serious results, not only immediately but also on a long-range basis.

Coup operations may also be aimed directly or indirectly at a nation's population by spreading disease. Owing to developments in bacteriological and parasitic warfare, terrifying results from coup operations of this type are possible. Either bacteriological or radio-active agents may be used directly against human beings. But it would appear that widespread results could be obtained indirectly by contaminating water and food supplies or by destroying harvests and killing cattle.

PREPARING FOR A COUP

Preparations which must be made for a coup naturally vary with respect to their nature and extent. The preparations depend on the goal and on the anticipated difficulties. World War II presented numerous instances of coup operations on a large scale. The type and extent of the preparations vary, but there are certain things that must be done in all cases.

First, a suitable objective must be selected. This choice is not made at random but is generally an integral part of a general plan directly connected with the plan of military operations.

The planning of a coup is based on prior investigations. The study of objectives includes the use of maps, photographs, technical diagrams, and other information found in catalogs, newspapers, periodicals, or reference works. An objective may also be studied on the spot. Investigations of the latter type may be made either by persons sent out especially for the purpose or by contact men.

The chances of obtaining the necessary information will be considerably augmented if contact men can be procured who are connected in some manner with the objective to be investigated.

It will also be highly desirable to procure collaborators or contact men who are well acquainted in the locality where the coup is to be executed, and who will be able to cooperate actively in its execution.

ORGANIZATION REQUIRED

The execution of a coup will ordinarily be carried out by a group of individuals. This group may vary from only a few individuals to a large military force.

The mission may either be assigned to a group of persons in the country planning the operation or entrusted to political sympathizers or other contact men in the country where the coup is to be executed. Naturally, a combination of both of these methods can also be employed.

Where the first method is used, the force will usually be instructed, trained, and equipped in the home country. Later, the force will be secretly or openly transported to the country in question. Where the second method is employed, the instructions for the execution of the coup operation as well as the necessary equipment are, in most cases, supplied by foreign collaborators.

ANTI-COUP DEFENSE

The above considerations automatically lead our thoughts toward certain measures to be taken against coup operations. These measures may be divided into those calculated to render preparations for coup operations difficult or impossible, and those calculated to limit or thwart such operations.

Measures against coup operations are primarily aimed at hindering the planning of such operations. It is of great importance, therefore, that everything published concerning the possible objectives of a coup be so composed that the material cannot directly serve the wrong interests.

Foreign agents are often forced to take costly and dangerous risks in securing information if caution is observed in publishing material relative to new mines, power plants, or other similar installations. This is also true as regards news which, in itself, appears to be of little significance and could not be classified as secret.

It is evident, therefore, that if necessary caution is to be observed, a clear idea will be required concerning what objects in one's own country are or could be actual objectives of a coup. A clear idea of possible objectives is also necessary in order that various measures may be taken to protect them.

Measures taken to hinder the preparation of coups should be the concern of police forces, civil defense agencies, and certain military organizations. In time of peace, police and military missions in this field should be dominant. Civil defense can only assist in educational activities and provide some personnel on a voluntary basis during peacetime. Obviously, planned activities of various types, especially those in which there is cooperation with police, the home guard, or local draftee contingents, are to be included under this head.

The measures which must be taken by these organizations to prevent coup operations, when such operations are first being planned, present entirely different aspects in time of war. Not only the military defense, but also civil defense and the police encounter many difficult situations. For example, fire-fighting units are ordinarily not part of the civil defense organization in peacetime. However, such units play an important part in controlling coup operations. Therefore, they should be a part of the defense forces at all times. The distribution of the defense tasks among the various authorities is a very difficult matter. Generally speaking, where "foreign-political" or military methods are employed, the defense force appears to be the proper one to intervene. If "domestic-political" means are to be employed, police measures will probably be taken in most cases.

Effective anti-coup defense calls

for prior organization. First of all, an inventory of the actual targets must be made and kept constantly up to date.

Inasmuch as coup planning and coups may occur at other than war periods, planning for defense against coups also must be conducted in time of peace.

Coordination of anti-coup defense measures must be realistic. The authorities concerned must keep one another well informed on the various tasks to be performed and on the measures which have already been taken. Tactical coordination, possibly by a common commander in areas where action must be taken to thwart a coup, will probably be necessary.

One of the most important actions to be taken is to reduce the time required for organizing anti-coup defense units. The trend appears to be toward using small, well-trained, well-armed units which are capable of quick intervention. Arming the personnel working in vital installations and institutions would seem to offer many advantages.

In anti-coup defense, even more than in general defense, knowledge of the enemy's plans increases the chances of disrupting them. Efficiency of the intelligence service is, therefore, of great importance.

Discontent and unhappiness on the part of the population are of assistance to an adversary in obtaining willing contact men and collaborators to prepare and execute coup operations. In anti-coup defense, therefore, the removal of these contributing causes of disloyalty to the greatest degree possible is important.

CONCLUSION

Anti-coup defense within the framework of national defense is highly important. All of the people of a country may have a part in anti-coup defense measures, even perhaps to a greater degree than in other types of defense.

Military Review Feb 50 Uncl

URC-4

Temporarily designated the URC-4, this new miniature air-sea rescue transmitter-receiver will eventually replace the famous "Gibson Girl."

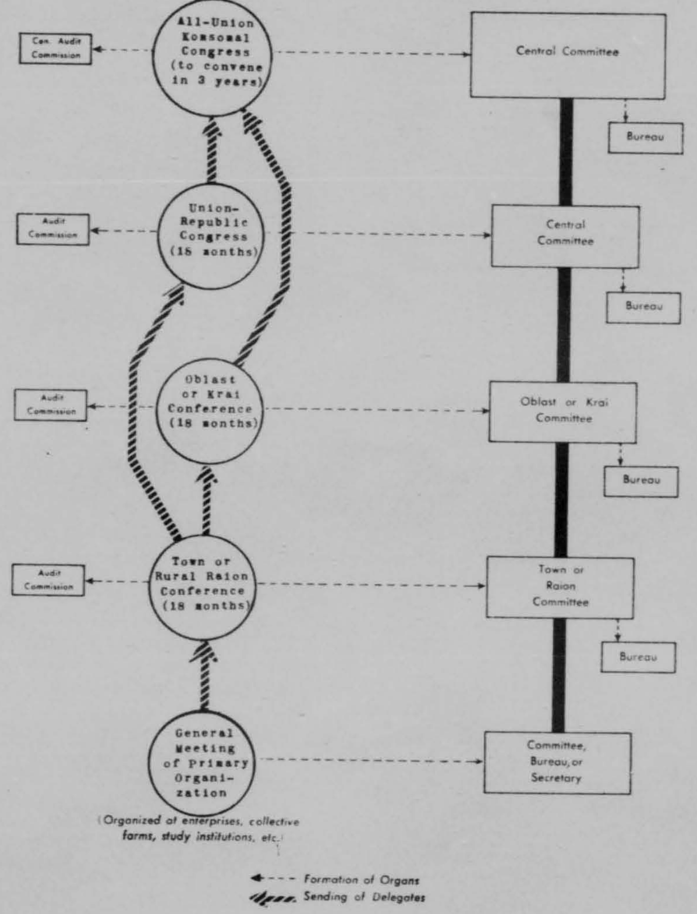
Developed by AMC, this new set is not much larger than a ration kit. The mercury-type battery is a separate unit with a rubberized cable connection long enough to allow the battery to be slipped in a pocket while the set is in use. The battery will not deteriorate thru lack of use or age.

The set operates on Very High or Ultra High Frequency and can transmit either voice or code over an 80 mile range.

The entire suit is completely impervious to salt water and withstands temperatures from +160 to -50 degrees Fahrenheit.

CHART 14

Komsomol Hierarchy


Cen. Audit Commission
All-Union Komsomol Congress (to convene in 3 years)
Central Committee
Bureau
Audit Commission
Union-Republic Congress (18 months)
Central Committee
Bureau
Audit Commission
Oblast or Krai Conference (18 months)
Oblast or Krai Committee
Bureau
Audit Commission
Town or Rural Raion Conference (18 months)
Town or Raion Committee
Bureau
General Meeting of Primary Organization
Committee, Bureau, or Secretary
(Organized at enterprises, collective farms, study institutions, etc.)
Formation of Organs
Sending of Delegates

This is the last of fourteen charts on USSR organization of Government and Communist Party.

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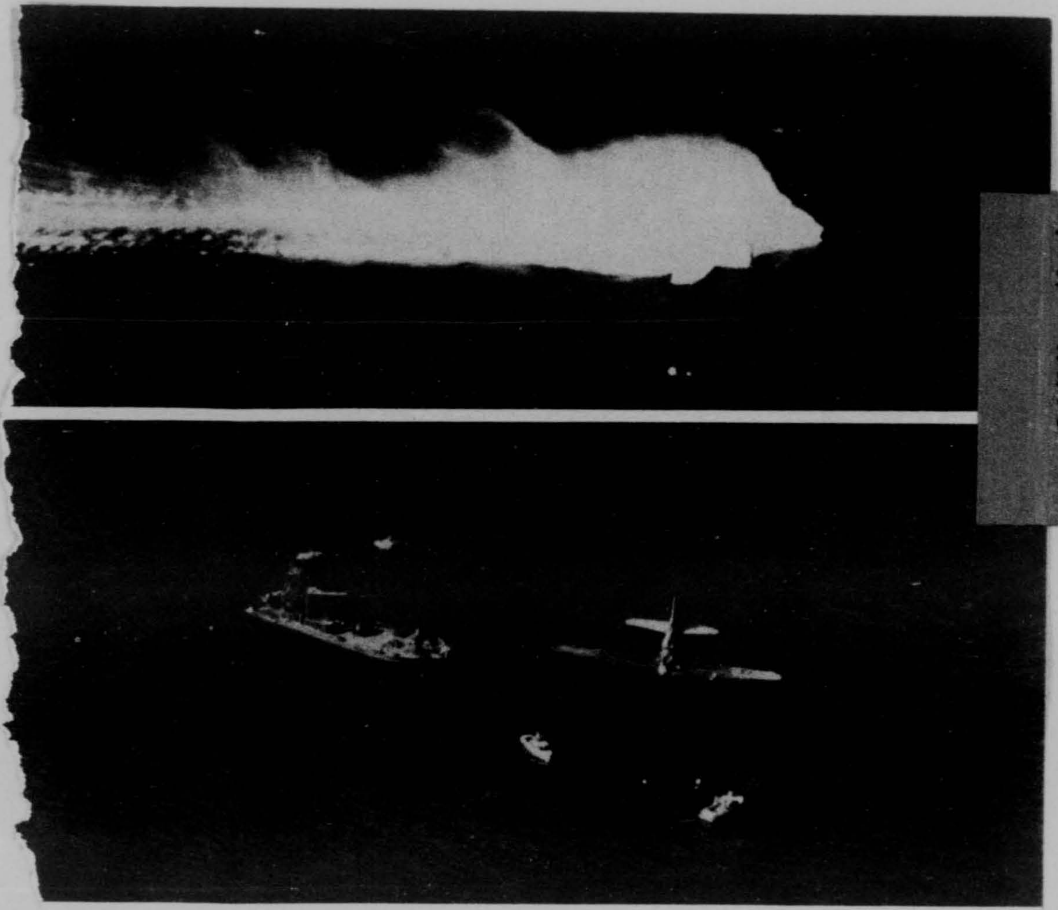

The shots above and on the front cover show three stages in the experimental ditching of a B-17 in the Gulf of Mexico.

The Air Proving Ground Command and the Air Materiel Command cooperated in these tests to determine the effect of ditching on airplane structure. A total of seven B-17's were ditched.

The crewless planes were guided to the watery runway by remote control. The sole concern of the "rescue crews" was recovery of the valuable recording instruments and motion picture film which recorded the crash and the damage to the plane at the time of impact.

This information will be used by Air Materiel Command to strengthen future planes against the hazards of ditching.

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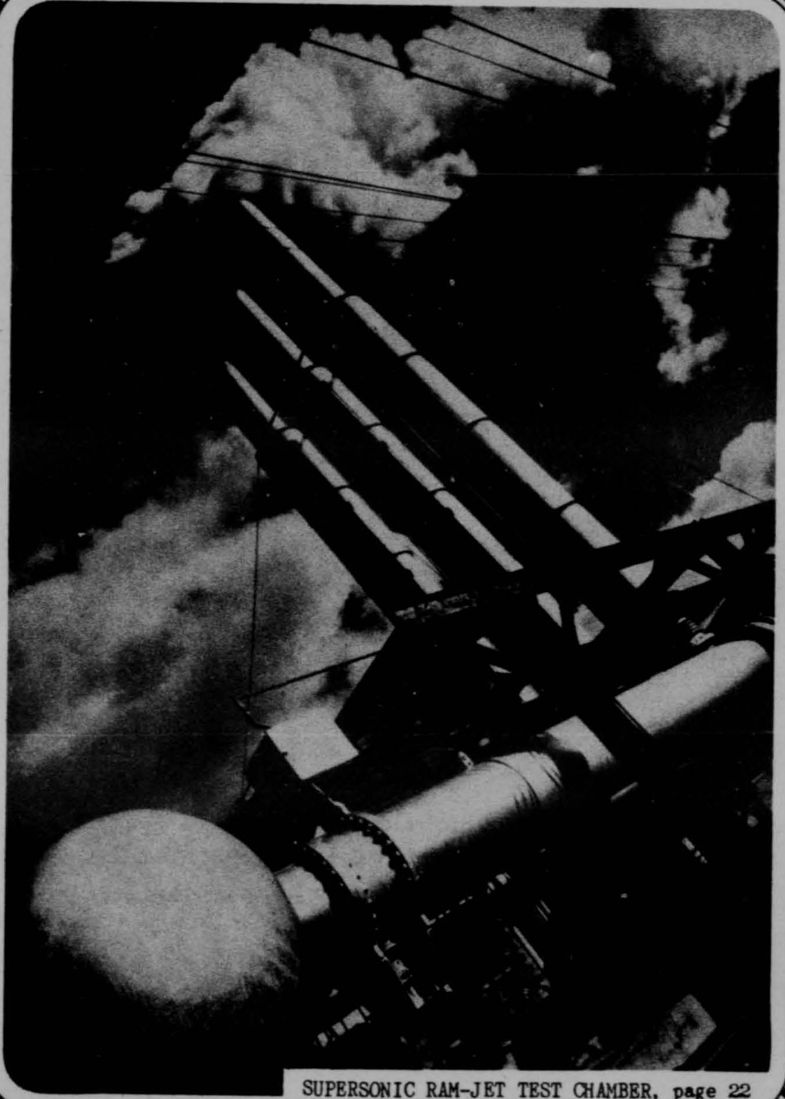

SUPERSONIC RAM-JET TEST CHAMBER, page 22

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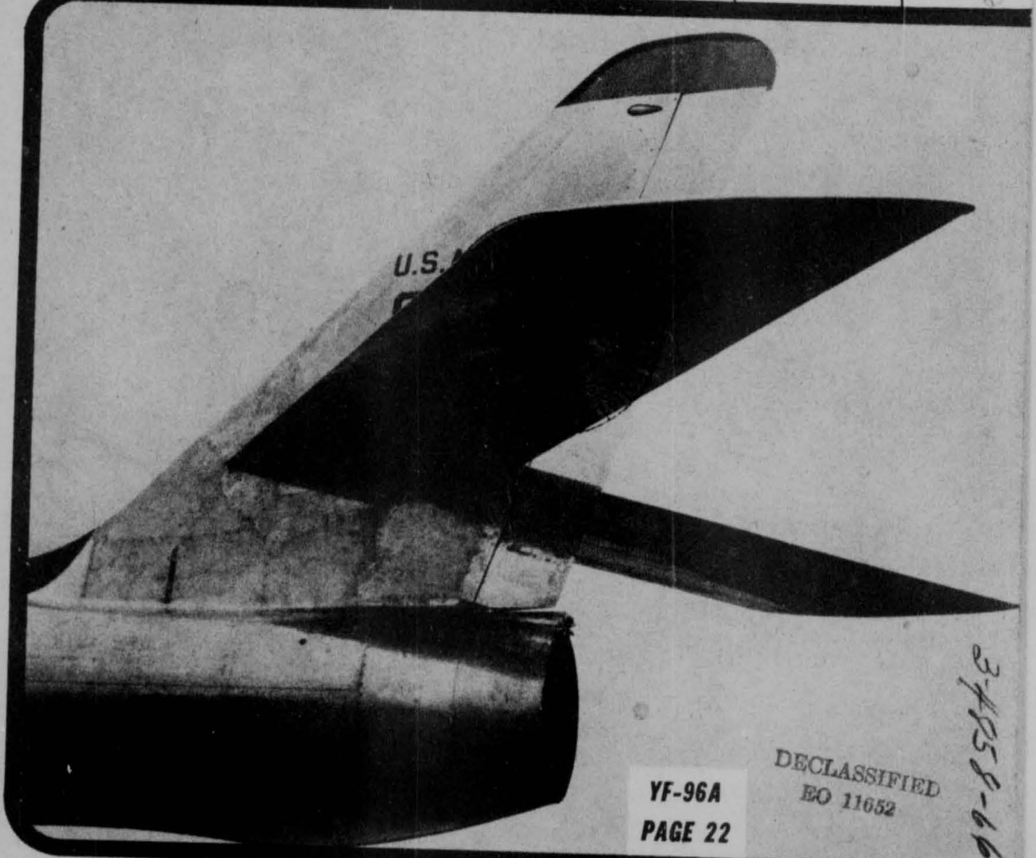

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3. Human Values & world security
4. United Nations
5. Communism
6. Hungary
7. Communism in Hungary
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2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

Two types of material are solicited for publication:

1. Stories and pictures relating to the intelligence activities being conducted within an organization.
2. Original articles of a noncontroversial but informative nature.

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MILITARY AIR POWER IN EUROPE

This article is a condensation of a series of articles by Ansel E. Talbert, Aviation Editor of the New York Herald Tribune, one of America's leading aviation writers. It is reproduced through the courtesy of Mr. Talbert and the New York Herald Tribune.

A shadow is being cast across the face of Europe today by the wings of Soviet Russia's Red Air Force.

Soviet military aviation now consists of about 15,000 first-line aircraft divided among (1) "Air Armies" attached to the ground forces (2) the interceptor arm of the Soviet air defenses and (3) the independent long-range bomber force now being expanded by special order of Stalin. There are also air units attached to the Soviet Navy.

The Red Air Force is numerically the strongest air force in the world although its offensive and defensive capabilities are in many respects far below those of the combined strength of the United States Air Force and naval aviation. It is more than twice as large as the German Luftwaffe, which had nearly 6,000 first-line planes available on all fronts in the summer of 1940 to implement Nazi dreams of conquest.

New production for the Red Air Force includes a jet interceptor with swept-back wings, probably designed by Artem I. Mikoyan and Mikhail Gurevich, and four-engined bombers resembling the American B-29 Superfortress.

Soviet aviation is backed by an aircraft industry which--according to Stalin--produced 40,000 aircraft of all types, including trainers and liaison planes, in 1944. This, by way of comparison, was the year in which the United States constructed 96,000 airplanes, a large percentage of which were four-engined bombers.

The United States supplied 14,795 aircraft of all types to Soviet Russia during the recent war.

There is general agreement among strategists in Europe that the Red Air Force is a formidable instrument for co-operating with the Red Army in a sweep westward across the Continent. In fact, in its present composition it is an air force organized primarily for supporting ground troops--mechanized cavalry in particular.

MIKOYAN

GUREVICH

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Most strategists believe that with Allied forces now available in Western Europe--and these forces are being strengthened--the Red Air Force could hardly be bested or kept from gaining air superiority at any point east of the Pyrenees or the English Channel.

An accurate picture of Soviet Air power, however, must bring into focus both strong points and weaknesses. There is evidence of the existence of many of the latter.

The Red Air Force, for example, did little strategic bombing in World War II. As a strategic air force capable of trading blows against industrial targets during the next three years with heavy bomber units of Great Britain and the United States, the Red Air Force is regarded as second or third rate.

This is so--even now that Soviet scientists have accomplished an atomic explosion--unless the British and Americans allow it to become first-rate by default. All signs point to the opposite right now.

Morale of the Red Air Force, except under conditions of combatting invasion of the Soviet Union, is open to question. This is attested by the number of deserters up to the rank of colonel who have been claiming refuge in Western Europe during the past two years.

During World War II sizable aviation detachments of the German-sponsored "Russian Army of Liberation" commanded by Lieutenant General Andrei A. Vlassov, former "Hero of the Soviet Union," were organized at Marienbad and Eger, Czechoslovakia. Recruiting was from among captured Red Air Force pilots. General Vlassov's air chief was Major General Victor Maltzev, former Red Air Force officer. Ground units of this anti-Stalin army performed well on the Eastern Front but surrendered without fighting to the Allies in the West.

It is not generally known in the United States that the Red Air Force high command has been purged again and again by order of Stalin from 1937 through the present post-war period. This is true also of the directorates of top Soviet Aeronautical research centers such as the Zhukovsky Air Engineering Academy in Moscow.

Stalin's policy of using alternately the knout and sugar-candy reward is nowhere more apparent than in the Soviet aircraft industry. A.N. Tupolev, famous designer of bombardment aircraft, and many other outstanding aeronautical engineers have (1) served jail terms for "crimes against the Soviet state" and (2) received high decorations and "Stalin prizes" for achievements.

During the last twelve years the post of chief of the Red Air Force has become almost as unhealthy for its holders as was that of Minister of the Interior under the last Czars of Russia. The latter office frequently became vacant suddenly as the result of direct action by revolutionists; the Red Air Force post is vacated only by order of Stalin and the Politburo but the changes come with the same abruptness.

Starting with General Yakov I. Alksnis, who also held the position of Vice-Commissar of Defense, the following commanders of the Red Air Force have been removed during the years indicated either by firing squads or by sudden demotion to insignificant posts and disgrace:

General Yakov I. Alksnis (1937);

General Alexander D. Loktionov (1938); General Pavel Rychagov (1940); General Yakov Smushkevich (1941); and Marshal of the Air Force Alexander A. Novikov (1946).

The careers of General Alksnis and Marshal Novikov shed light on what can happen to high officers in Soviet Russia who make political missteps. General Alksnis was an old-time Bolshevik who became chief of Soviet aviation in 1933. He was obsessed with the idea of making it as progressive and powerful as that of any other nation. In 1934 he visited Great Britain and the Netherlands to observe air progress, and in 1946 he visited Czechoslovakia for the same purpose.

This foreign travel evidently was a serious error. At the start of Stalin's widespread purges of Soviet military men accused of "conspiring with foreign powers" General Alksnis was appointed to the tribunal which condemned to death Marshal Mikhail N. Tukhacheveky. A short time later General Alksnis faced a firing squad himself.

Marshal Novikov came to power in 1941 a few weeks after the German invasion of Soviet Russia. More than 2,500 Russian planes were destroyed on the ground in forward areas by the Luftwaffe during the first few days of the war. General Smushkevich, then Air Force head, disappeared suddenly.

When he took over General Smushkevich's post, Marshal Novikov was thirty-four years old and a major general. Almost immediately he was promoted to lieutenant general and on January 18, 1943, to colonel general. The following month he became the first Soviet Marshal of Aviation and personally conducted Red Air Force operations at Stalingrad.

NOVIKOV

Marshal Novikov became friendly, as did his opposite number in the Red Army, Marshal Georgei Zhukov, with American military and air leaders. Apparently he lost prestige after Stalin and Molotov made a post-war visit to Germany and saw the results of the combined British-American strategic bombing offensive. There may have been no direct connection between this episode and what resulted, but early in 1946 Marshal Novikov was removed from his post without explanation. It is known that he was sentenced to from six to eight years in prison. Only his outstanding war record saved him from the fate of General Alksnis.

RUSSIAN AIRCRAFT INDUSTRY LAGS

Marshal Stalin is credited in official Soviet publications with being an authority in many fields including economics, finance, agriculture, labor relations, painting, music, the drama, philosophy, education, literature, history and others.

Some of Stalin's personal contributions to the arts and sciences are open to question but there is no doubt about his direct and personal influence on Soviet air strategy.

Stalin's precocious son, Vassily, who at twenty-nine is a Red Air Force lieutenant general, said publicly that not a single Soviet aircraft type existed "which does not in some manner embody the suggestions and guidance of my father."

Probably no chief of state has intervened so often in Air Force affairs as Stalin, except possibly Adolph Hitler. It was Hitler who personally decided over the arguments of Air Marshal Hermann Goering and other Luftwaffe chiefs that the fast German Me262 fighter was to be used for bombardment.

This turned out to be one of the luckiest decisions of the war--for the Allies. How constructive some of Stalin's equally arbitrary decisions will be, remains to be seen. Until recently nearly 75 per cent of Soviet air strength was assigned to "Air Armies" attached directly to and designed primarily to co-operate with the Red Army commands.

VASSILY STALIN

Such Air Force organization and stress on ground support aircraft can be traced directly to Stalin's personal experiences in the Russian civil war. An official World War II publication of the Soviet government disclosed:

"In the summer of 1936" (Note: Just before Stalin's first purge of the Air Force high command), "Stalin said that in 1920 he had observed the tremendous effect of low-flying attacks by Soviet planes on Baron Wrangel's retreating White Guards. Acting upon Stalin's instructions, Sergei Ilyushin designed the IL-2, a classical type of attack plane popularly known abroad as the Stormovik.

"In analyzing the rout of armored German troops, the historians of the future will not overlook the important part played by the IL-2."

There is no question that the Stormovik was an excellent weapon for knocking out German tanks--particularly after the bulk of Germany's air power was shifted to the Western front. This was done in an unsuccessful attempt to halt the British-American strategic bombing offensive which eventually paralyzed German oil production and communications.

Historians are likely to remember also, however, that Mr. Ilyushin, the Stormovik's designer, told American correspondents in a war-time interview: "We never agreed with the theory that aircraft would play an independent role in the next war ...we believed that the air force would be an arm of the ground forces primarily."

Stalin now has changed his mind, reportedly after viewing the results of strategic bombing in Germany. Marshal Alexander A. Novikov, who put Stalin's ground support theories into practice during most of World War II, has been purged, and General Alexander Golovanov, commander of the Long Range Bomber Force which Stalin has ordered expanded, is now a Red Air Force Marshal.

Mr. Ilyushin apparently can take a hint, for his most recent designing efforts have been concerned with a four-jet bomber patterned after the new United States Air Force Boeing B-47, which recently crossed North America at better than 600 miles an hour.

Serious difficulties have been encountered in putting the new Soviet aviation policy in effect. The aircraft industry of the Soviet Union was the last of any major nation in the world to give up wooden construction of major portions of its first-line aircraft.

Marshal Konstantine A. Vershinin, who succeeded Marshal Novikov as chief of the Red Air Force on March 22, 1946, has been vociferous in calling for increased production efforts from the Soviet aircraft manufacturing industry "to counter the intrigues of international reaction."

In an address on the last Red Air Force Day, Marshal Vershinin, probably inadvertently, pointed a finger at three weaknesses of Soviet aviation. He stated then that the Soviet Union was putting "special efforts" into the development of (1) high speed jet interceptors for defense; (2) multi-engined strategic

EAGER STUDENTS. The Soviets are starting their young, with model clubs for the juniors, regular flight instructions for the older boys and girls.

bombardment aircraft, and (3) radar aids for all-weather flying.

There is further evidence that one additional weak point--possibly the most basic and important one--is jet aircraft engines. Paul H. Wilkinson, editor of "Aircraft Engines of the World," and an experienced engineer, is certain that the Soviet Union is several years behind in jet developments as it was previously in piston engines.

At the beginning of World War II all engines used in combat aircraft of the Red Air Force were slightly modified or redesigned versions of America's Wright Cyclone engine, France's Gnome Rhone and Hispano-Suiza engines and Germany's BMW, for which licenses to manufacture had been purchased.

During the early days of the present British Labor government, the Soviet Union was allowed to purchase more than fifty British jet engines of the Rolls-Royce Nene and Derwent type, but this soon was stopped. Soviet designers have the present help of numerous German technicians but it is unlikely that they have solved all problems of mass producing an outstanding jet engine. This still is a kink in the United States aircraft industry which built the world's best piston engines.

In addition to its lack of strategic bombardment background the Red Air Force during World War II had no actual experience in countering strategic attacks with radar-directed interception. Nearly all escaped Soviet pilots have mentioned particularly the lack of electronic aids to all-weather flying available in the Soviet Union and the obvious progress of the United States in this field. Two years ago Soviet transport planes never operated at night, a feat which Americans have been doing for more than a decade, as ordinary routine.

BRITAIN STRESSES AIR DEFENSE

Britain is playing a vital role in European aviation today but for the time being it is chiefly a defensive one.

The nation is expanding and modernizing the British Royal Air Force and the Royal Navy Air Arm with prime emphasis on the defensive capabilities of both. All first-line day-fighter squadrons in the United Kingdom are equipped with Vampire jet-interceptor-fighters of the type holding the world altitude record of 59,000 feet or with Meteor jet fighters having operational speeds of better than 600 miles an hour.

The total personnel of the Royal Air Force at present is about 228,000 as compared with 419,000 in the United States Air Force. There are thirty major aircraft manufacturing companies in Britain together with

MOSQUITO. This old reliable war horse will presently be replaced by twin-jet night fighters.

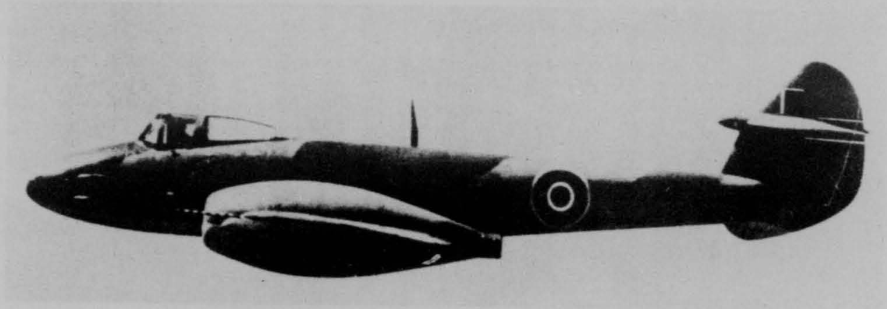
seven additional companies building aircraft engines. Nationalization of the industry is extremely unlikely, a member of the Ministry of Supply told this correspondent.

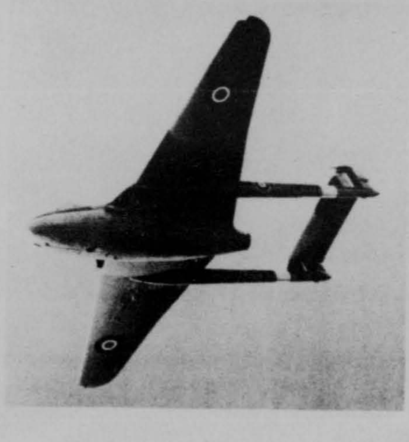
By June of 1950 the R.A.F. expects to double the present strength of its jet day fighter squadrons in Great Britain. It also plans to equip all night fighter squadrons at present flying Mosquitos--one of the fastest twin-engined piston aircraft of World War II--with twin-jet night fighters.

A new swept-back-wing jet fighter developed from the Vickers attacker is being produced for supersonic interception. Fighter planes of superior armament and speed were the R.A.F.'s chief asset during the Battle of Britain and now, as before, quality of product is stressed.

Britain is selling relatively small quantities of Vampires and Meteors to all the friendly nations of western Europe including Sweden and Switzerland. The nation's air representatives have followed this up with negotiations for producing these types under license in the above countries.

This is bringing about a standard-





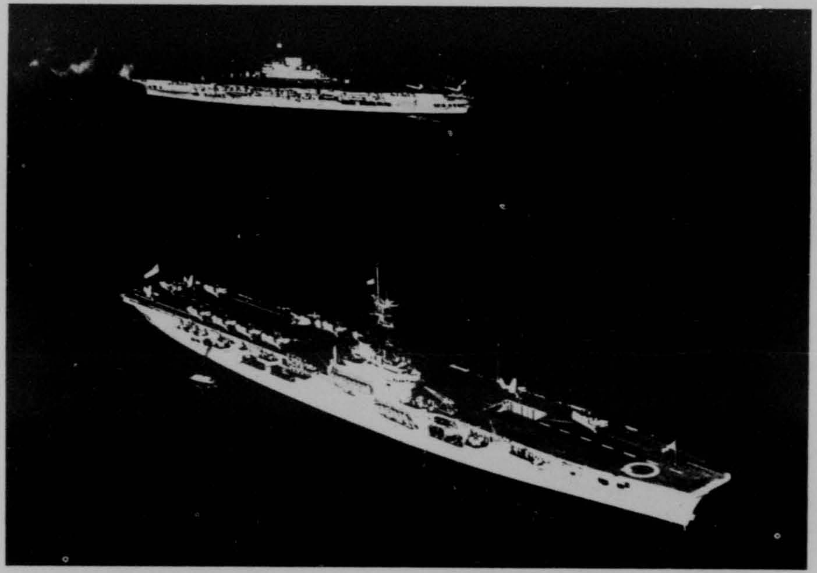
METEOR (top) AND VAMPIRE I. British plans call for equipping Western European Nations with these planes either by their own production or by licensing others to produce them.

ization of both aircraft types and strategy among European nations faced with the threat of the Red Air Force.

One of Britain's most important air centers at present is the Central Fighter Establishment located in Norfolk County and commanded by Air Commodore D.F.W. Atcherley. Its current "Number One Priority" problem is defense against high speed bombers. This is linked with a study of the likely trends of future air attack against Britain and the nation's allies.

Every R.A.F. pilot now is trained to fly in all types of weather. One cannot get his wings unless he has demonstrated competence as an instrument flyer. All-Empire schools specializing in instrument flight instruction are being created in Great Britain, and pilots from allied nations will be admitted to these and other specialist schools.

Although the British airmen feel that they are unable at present to afford large-scale production of giant bombers of the U.S. Air Force B-36 type, they have just flown their first jet bomber, the English Electric A-1 twin-jet. Also, the nation is known to have larger ones on the drawing boards.



ORTHODOX CARRIERS. H. M. S. Vengeance (foreground) and Implacable. Experiments to eliminate aircraft undercarriage in shipboard operation may revolutionize carrier design.

One year from now the R.A.F. expansion program calls for limited production of medium jet bombers. The R.A.F. Bomber Command's chief offensive weapon at present is the four-engined Lincoln, a conventional piston-engined bomber of slower speed than the American B-29 but larger bomb capacity.

Meanwhile, the Royal Navy has been conducting experiments with jet fighters in collaboration with the British Ministry of Supply looking toward the complete elimination of aircraft undercarriage in shipboard operations. This is done through use of catapults and a new secret "flexible flight deck."

Some navy enthusiasts even foresee the disappearance of the orthodox aircraft carrier with its long flight deck in favor of new carriers of the future which would be less vulnerable to bombardment. They look even farther ahead and predict that small teams will be able to set up mobile catapults and mattress-like "flexible flight decks" on land in a fraction of the time now necessary for the building of even small airstrips.

The Vampire was the world's first jet aircraft to land and take off from a carrier at sea. A slightly modified version of the aircraft called the Sea Vampire already is in operational service with the carriers of the Royal Navy.

In spite of the Sea Vampire's superior performance, Royal Navy scientists conducting the landing experiments believe that complete elimination of the aircraft's undercarriage will save approximately one-twentieth of the all-up weight. This gain, they point out, could be translated into improvements in range, ceiling, climb or firepower.

Initial tests were made first with models and gliders to determine hitherto unknown details about landing fast jet fighters having no under-carriage. Later production-type Vampires were used on an experimental "flexible flight deck" constructed at Farnboro and later they were repeated on the flight deck of the Royal Navy carrier H.M.S. Warrior.

The carrier Formidable is being reconstructed to take the Royal Navy's most modern jet aircraft including designs still under development. The flight deck and other equipment of the carrier Indomitable have just been surveyed with a view to modernization, for despite the achievements of the R.A.F. in World War II the British discovered that a strong and modern Navy Air Arm was a great asset in modern warfare.

RADAR WALL, JETS, GUN CREWS

The master plan for defense of Western Europe against the Soviet Air Force calls for a radar wall around all of the democratic nations, backed up by jet fighter squadrons and anti-aircraft batteries.

The radar wall will extend more than 1,500 miles from the Baltic Sea across Europe and the Mediterranean Sea to the southern boundaries of French North Africa. It will include Western Germany and as much of the nation as is in democratic hands when the wall becomes operational.

Each of the nations which signed the Atlantic Pact is expected to take part in the scheme eventually, although the initial plans were worked out by Great Britain, the Netherlands, Belgium, Luxemburg, and France. These countries plan to start constructing radar stations on their own territory before the end of 1949.

The major part of the electronics equipment under present plans will be manufactured by Britain and France, although some may come from the United States.

Co-operation for air defense measures among the nations of the so-called "Western Union" passed the planning stage last year when on request from the Belgian and Dutch chiefs of staff, the British War Office dispatched two heavy anti-aircraft training teams to Europe. One went to Deventer, about twenty miles northeast of Arnhem in the Netherlands and the other to the Belgian Artillery School at Brasschaat, north of Antwerp, for instructional purposes.

Major General C.W.E. Heath, commanding general of Number One Anti-aircraft Group controlling the air defense of London, went with them. The request, incidentally, went through the Western Union defense committee's advance echelon headquarters at Fontainebleau near Paris.

Nearly all the nations of democratic Western Europe now have chosen the British-designed de Havilland Vampire or the Gloster Meteor as their standard jet-interceptor. Quantity delivery of Gloster fighters and dual-control jet trainers for the Belgian air force is about to start.

France, which is making a considerable effort toward reinstatement as an air power, already has received a small number of Vampires from the British government.

This correspondent learned in France that the nationalized French aircraft company Societe Nationale de Constructions Aeronautiques du Sud Est had just signed an agreement with the British de Havilland Company to manufacture the Vampire under license in France.

One of the most interesting developments in aviation on the European Continent is the return of private enterprise to French aircraft manufacturing. Before World War II the entire industry was nationalized and had a poor production record during the crucial months before the fall of France.

Part of this failure was due directly to the sabotage of production by Communist workers during the period of the Hitler-Stalin pact. At this time official Marxist dialecticians were describing the fight of Britain and France against Nazi Germany as "an imperialist war."

In the current post-war period which saw Communist ministers included in several French Cabinets, numerous Communist party card holders wormed their way into positions of responsibility in the French aircraft industry.

A short time ago, while this correspondent still was in France, the government discharged nearly 300 aircraft industry workmen of the nationalized company S.N.C.A. du Nord. These men, all members of the Communist-directed General Confederation of Labor, appeared at a Paris airfield where a new jet fighter prototype manufactured by their company was being tested and vociferously attacked "manufacture of weapons for the coming imperialist war."

Later the government moved security troops into the company factory at Issy les Moulineaux. The 1,400 workers were advised that because of "obvious and continued sabotage of combat aircraft construction" the factory would be closed until further notice.

FRENCH CHIEF OF AIR STAFF. General Charles Francois Lecheres, an able career soldier, is the popular boss of the French Air Force.

A bill has passed the French National Assembly which will allow the French government to dispose of such parts of the nationalized aircraft industry as the Minister of National Defense designates. It is understood that the present middle-road French government is anxious to close a large number of the nine nationalized and Communist-dominated aircraft plants in the Paris area.

The industry at present is still between 75 and 80 per cent nationalized, but some of the outstanding new military aircraft prototypes are the products of private factories.

The French "Army of the Air" has a total effective personnel at present amounting to 73,000 men. Jean Moreau, the Air Minister and an old pilot, admitted to this correspondent that this is "insufficient for bringing into being an air force strong and well-organized in accord with the place which France and the French Union will occupy in the world of tomorrow."

Sweden is not a member of the Atlantic pact but the co-operation between Sweden and Great Britain is much closer than is realized in the United States. Considerable numbers of British-built Vampires have been delivered to Sweden during the last two years and an unusual agreement has just been concluded. This will allow Svenska Flygmotor A. B. to build de Havilland Goblin jet engines at Trollhattan, send them to Britain duty free for installation in Vampire fighters which then will be flown to the Swedish Air Force for delivery.

ONLY U.S. CAPABLE OF HEAVY AIR ASSAULT ON RUSSIA

America's air power, in conjunction with the atom bomb, is providing the only real counter-balance in Europe to the strength of the Red Air Force.

Important elements of this air power include Air Force squadrons of very long-range bombers operating from bases on land, and Navy air units of very fast planes attached to carrier task forces capable of roaming almost at will the seven-tenths of the earth's surface which is water.

Britain's fast jet interceptors are beginning to gird Western Europe defensively together with radar and anti-aircraft batteries. It may be that in the unlikely event of war with the Soviet Union during the next three years these jet aircraft will be able to exact ruinous attrition from Red Air Force bombardment units.

British Hurricane fighters did that with Air Marshal Goering's "invincible Luftwaffe" in the Battle of Britain and actually halted the attack. But defense alone does not win modern wars. And admittedly only the United States at present can afford to produce in quantity the complex air weapons necessary to exploit by offensive bombardment several clearly defined weaknesses in the economic and military structure of the Soviet Union.

How formidable is the gantlet of Soviet fighter defenses which they would have to run? According to press association cables from Moscow, the Soviet Union demonstrated some jet fighter planes so fast that foreign observers who watched them streak past "could not agree on their characteristics."

This description of dazzling speed would have been more impressive if the detail that the jet fighters flashed across Tushino Air Field "at altitudes under 1,000 feet" had not been added. At low altitudes even 100-horsepower light planes look fast, as promoters of midget airplane races in the United States discovered some time ago, and the noise is terrific.

The low-altitude flying act is not exactly a new trick in the repertoire of Soviet propaganda either. Thirteen years ago on May Day, 1936, press dispatches from Moscow reported that an air fleet included squadrons of four-engined bombers "skimmed the spires of the Kremlin" and then at low altitude "roared over the crowd with such speed that few figures on the size of the fleet agreed."

The previous May Day, 1935, according to other cables, a formidable air armada of 700 military aircraft came across the Red Square "flying so low that they seemed in danger of clipping the Czarist double-eagles which still top the Kremlin towers." The cables added: "speed of the aircraft...impressed foreign observers."

. During World War II speed was one characteristic for which Soviet combat aircraft were not noted, and although Red Air Force ground-attack aircraft such as the IL-2 Stormovik performed well, Soviet four-engined bombers made only a few sporadic raids throughout the conflict. It would not be well to underestimate Soviet jet fighters, but it also is worth keeping in mind that air shows in the Red Square are not intended to provide data for objective foreign appraisals.

The most obvious weakness of the Soviet Union right now is oil. Air Marshal Goering sourly stated a truism growing out of bitter German experience when he told his Allied captors: "Without oil nobody can fight a war." After American and British strategic bombardment of German oil supply sources, German Panzer units were stranded for lack of fuel. Fighter units could fly only once a week in many cases because they lacked aviation gasoline.

At present the Soviet Union, which produces only one-eighth of the petroleum available to the United States by conservative estimates, is not well supplied with petroleum products for the nation's own economy.

The nations of Western Europe are relatively oil-less. In the event of a Red Army advance toward the English Channel, the Soviet Union would need large additional quantities to operate the area's transportation system and industry. Before World War II, crude petroleum produced in Western Europe amounted to less than 2 per cent of the area's total consumption.

New oil fields are being exploited under intensive pressure from Stalin in Siberia and in the huge square of land between the Volga River and the Ural Mountains northeast of Stalingrad. Considerably more than 50 per cent of all Soviet petroleum still comes from the rich and concentrated oil fields at Baku on the Caspian Sea.

Until recently at least, approximately 80 percent of all Soviet aviation gasoline was refined in the Baku area. This, incidentally, is within easy range of American B-29's and British Lincoln heavy bombers used in the Middle East.

To modify this situation the Soviet Union has been making almost frantic attempts during the last two years to move all existing equipment from the German synthetic oil plants in their zone of occupation to undisclosed areas deep inside Russia. For several years these could produce unaided only a portion of the fuel needs of the huge Red Air Force. Even if sufficient, the benefits of this production would depend on the efficiency of the Soviet transportation system.

Actually the railroads of Soviet Russia are considered by Allied strategists to be highly vulnerable to air attack, even though there are few marshalling yards in the European sense. The Soviet Union, with roughly three times the land area of the United States, has less than one-third the railroad mileage.

Under war conditions the Russian railway system would be under severe strain without any outside interference. Air bombardment would certainly intensify the strain.

Other high priority targets in the Soviet Union after oil centers and communications probably would be (1) electric power stations (2) Soviet aircraft engine factories and (3) centers such as Moscow. (Besides being a ball-bearing and aircraft manufacturing city, Moscow is the location of many top Soviet air research and aeronautical engineering laboratories.)

The United States Air Force is within theoretical reach of some of the most important strategic targets in Soviet Russia through B-29 units operating from Britain and Western Europe, the Middle East, Scandinavia, Okinawa and several other points.

These attacks could be supplemented and possibly supplied with fighter escort from highly-mobile air carrier task forces of the United States Navy. Chiefs of this service have disclosed that the new North American AJ-1 bomber is a plane designed specifically for carrying the atomic bomb.

The United States Air Force is building its future long-range strategy around the huge Convair B-36 with the idea of "conducting if necessary intercontinental warfare from bases inside the United States." Former General Muir S. Fairchild, deputy chief of staff of the Air Force, told this correspondent:

"There is discouraging evidence that the full significance of our widely discussed long-range weapons is seldom completely grasped. Our possession of some such aircraft already has made obsolete the old method of defense against air power which involved conquering or absorbing all possible base areas which would be useful for strategic attack. Now that air attack is possible from great distances to the heart of any major power, none can defend itself from such an attack by piece-meal conquest of other nations."

Whether or not the B-36 is as good as the Air Force claims it to be, this correspondent cannot say. It is beyond question, however, that any future war involving the United States would see major emphasis put on the strategic air offensive. The B-36 has been chosen by the Air Force as its basic future weapon until a better one can be built. Its use should enlarge the capacity of the nation to destroy any enemy's will to resist.

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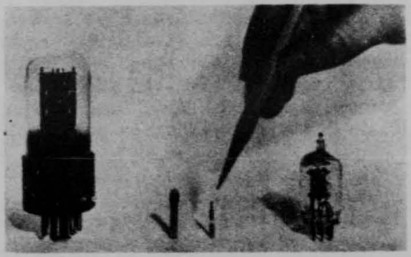
"TOM THUMB" RADIO TUBE



The new "Tom Thumb" synthetic radio tube, which is about the size of a kitchen match head, will probably go a long way towards reducing the size and weight of airborne electronic equipment.

Developed by Air Materiel Command's Components and Systems Lab, the subminiature tube, called a "fieldistor," is now in its early stage of development.

Being only 1/90 the size of a standard radio tube, the "fieldistor" resembles the end of an eye dropper. Ten of these tiny tubes could be carried in a thimble.

The small size and structure of the "fieldistors" will enable them to better withstand engine vibration, gunfire damage, and landing shock which literally shakes the life out of ordinary tubes. Another big advantage of the new tube is that it uses such a small amount of current that most batteries can be eliminated. For instance, portable radios of the future, equipped with "fieldistors," could be operated with a very small battery. Other civilian items for which the tubes would be useful include radios, television equipment, hearing aids, fire and burglar alarms and thermostats.

AMC warns that the new tubes will not be available for civilian use for some time, since they are still in the development stage. For one thing, the tube is still a bit too noisy. About 250 tubes have been made by hand and the cost is high. However, with mass-production methods, it is believed "fieldistors" could be made at a reasonable cost.

Development of the "fieldistor" is but one of many projects underway in the USAF to reduce the size and weight of various equipment.

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HUMAN VALUES & WORLD SECURITY

"We face hard realities in seeking world security and until we can get the 100 percent participation in collective security hoped for in the United Nations, we must seek a collective defense with as broad a base as possible as the essential alternative," Ambassador Warren R. Austin said on December 7.

Speaking before the Rochester Institute on International Affairs in Rochester, New York, Ambassador Austin said that in the United Nations, the free world is demonstrating its unity and warning against dangerous adventure.

The United Nations provides the facilities for harmonizing policies and initiating cooperative efforts to strengthen and stabilize the member nations. Most of all, the United Nations is the indispensable bridge over which the majority and minority must some day meet and agree to cooperate on building an enduring world security. To this end we reject the tricks and propaganda substitutes for strengthening the peace while eagerly seeking with outstretched hand the genuine opportunity for cooperative action.

What the United Nations strives for primarily is world security. Experience is unfolding better methods and increasing faith for its ultimate achievement on a universal basis.

The term "security" has a broad and comprehensive connotation. Always at the heart of it is the idea of protecting human values. So the concept of collective security goes far beyond the exercise of police power with the aim of preventing war. It encompasses collective measures to deal with the causes of conflict, which, in the last analysis, always concern human values.

It is no accident that the statesmen coming from governments in exile and from countries overrun by the aggressors linked respect for human rights with peace and world security.

The Paris Assembly has been called "the Human Rights Session." It not only adopted the declaration, but it also voted unanimously for the convention on genocide—the multilateral treaty outlawing, as an international crime, the destruction of nationalities, races, or religious groups. This convention is now awaiting the required number of signatures to bring it into force.

In the Fourth Assembly, just now concluding its deliberations, security and freedom were again linked in a resolution on the essentials of peace. This was a substitute resolution for a Soviet proposal which accused various unnamed states, and especially the United Kingdom and the United States, of fomenting and planning a new war and called for a five-power pact for strengthening peace. After decisively rejecting this Soviet resolution, which I characterized as an "artificial olive branch surrounded by thorns," the Assembly adopted the substitute on the essentials of peace by a vote of 53 to 5.

The majority resolution rested firmly on the Charter, "the most solemn pact of peace in history," which laid down the "basic principles necessary for an enduring peace."

The resolution declared "that disregard of these principles is primarily responsible for the continuance of international tension."

"The General Assembly calls upon every nation," reads the resolution, "to promote, in recognition of the paramount importance of preserving the dignity and worth of the human being, full freedom for the peaceful expression of political opposition, full opportunity for the exercise of religious freedom, and full respect for all the other fundamental rights expressed in the Universal Declaration of Human Rights." The Soviet bloc of five members voted "no" to this paragraph among others. In so doing, they identified one source of the present apprehension in the world.

Through the United Nations we have sought world security and continue to seek it on all fronts. Fundamental freedoms are of crucial importance, because it is through the exercise of freedom that people struggle for all the other social, spiritual, economic, and political values contributed to a secure world. But we have tackled directly the problems of improving standards of living, expanding production and trade, increasing health and education, advancing the welfare of non-self-governing peoples and their attainment of self-government. The activities of the United Nations carried on through the Economic and Social Council, the Trusteeship Council, and the specialized agencies such as the World Health Organization and the Food and Agricultural Organization all contribute to world security. These efforts are designed to create the conditions and opportunities which will provide a favorable climate for peace. Indeed, they are the worlds of peace.

There is no use blinking at the fact that the hoped for unity on the central problem of maintaining peace and security is lacking. Nothing short of that unity can give us the assurances we seek. Nothing short of that unity can relieve us of the anxieties and expenses involved in alternative approaches to world security.

Now it is to the sense of anxiety that the Soviet Union directs its propaganda campaigns and phony peace proposals. The Cominform has just resolved to make new mass appeals and mobilize popular demands for peace. The order has gone out, and the Moscow-directed Communist parties may be expected to stage new rallies in a so-called "peace offensive." We have to be alert to avoid being victimized to some degree by the repetitive propaganda which makes its appeal to the natural fear of war and wish for security.

SOVIET PROPAGANDA LINE

In this General Assembly, we have just given a preview of the propaganda line. It was exhaustively elaborated by the Soviet spokesmen and those from Poland and Czechoslovakia in the long debate on Mr. Vyshinsky's resolution. Yugoslavia alone among the Communist countries pulled off the false face of peace worn by the Cominform and revealed the aggressive features of the true face of Sovietism.

The delegates to the United Nations after 4 years of carefully listening to the speeches of the members of the Soviet bloc have learned a new vocabulary--what Mr. Bevin calls "The up-side-down language." They have learned that a "peoples' democracy is in reality a Kremlin-directed and supported tyranny, that "fascist brigands, imperialists and war-mongers," and any number of similar terms, refers to Yugoslav Communists, European socialists, liber-

VISHINSKY

BEVIN

al democrats, in short, to everyone who disagrees with the aims of the Kremlin. The world "peace" means nonresistance in the path of Soviet expansion.

As the delegates listened to the violent arguments of the Soviet spokesmen in this debate, the feeling was widespread that they were not calculated to convince us, not even directed at us. Rather, it seemed to many of us that the words were uttered from the rostrum of the United Nations as a convenient method of providing a handbook for speakers at mass meetings in a subsequent campaign to sow dissension and confusion. The simple record of the vote shows that not one single delegation responded to the Soviet appeals. Every one of the delegations except Yugoslavia, which abstained, the three Soviet states, Poland, and Czechoslovakia affirmatively supported the alternative resolution on the essentials of peace.

This whole propaganda maneuver and the debate it set off concerns the vital question of world security. It is worth analyzing.

This was not a U.S. vs. U.S.S.R. dissension. It was not a so-called "East-West" debate. It was the Soviet states, Poland, and Czechoslovakia against the rest of the world with no exceptions.

What could be the purpose of such a performance? First, I think its purpose is to tighten controls and justify police measures against dissenters at home. Their people are given only their side of the story—what they said, not what the rest of the world said. The object here is to convince their own people that they are completely encircled by enemies who are planning an attack from all sides and thus to drive workers to greater efforts for production while foregoing the fruits of their labors and at the same time to justify purges and liquidations of grumblers or dissenters or traitors. The prior suppression of fundamental freedoms makes this possible. Regardless of what the outside world may try to do or say, it can't get through to the Russian people.

A second purpose, in my judgment,

is to provide a propaganda line for the fifth columns in other countries in hope that to some degree public opinion, which controls the governments instead of being controlled, may be confused and divided. This line plays on very strong fears as well as powerful wishes. The speeches produced as patterns by Mr. Vyshinsky and his colleagues are full of wild assertions, appeals to idealism and bitter condemnations documented by piles of quotations ripped out of context, distortions, and shocking fabrications.

At what did their resolution and their speeches strike? On this question the delegates at the United Nations had no illusions. The target was our growing plans for collective security.

In this debate the attack was leveled at the pact of Rio by which the nations of this hemisphere plan their common defense, the aid to Greece and Turkey program which helps hold the line against Soviet expansion at that point, and most of all the Atlantic pact and mutual defense program by which the United States and Western Europe present a united front. The European Recovery Program was also attacked because it is expanding production, increasing stability, and averting the kind of chaotic conditions which invite minority dictatorships to power.

Having blocked agreement in the Security Council on world security, they seek to weaken the collective security measures we are taking as the essential alternative.

The next question is, why did every other nation join in rejecting their proposal?

They rejected the propaganda claim, on which the whole resolution was based, that a war is being prepared against the Soviet Union.

They rejected the attempt to characterize as preparations for aggression the building of necessary defenses.

They rejected the tricky paragraph on the prohibition of atomic weapons as another in a long line of attempts to circumvent the United Nations plan to outlaw such weapons by an effective system of control and safeguards against the hazards of violations and evasions.

They rejected the proposal for a new pact among the five powers to strengthen the peace as fatuous insincerity in the light of the Soviet record of obstruction and noncooperation in the United Nations, and violations and repudiations of existing treaties and pacts.

In the debate and the substitute resolution on the essentials of peace, they displayed the reasons for their unity in resisting Soviet threats to world security. The Soviet states, Czechoslovakia, and Poland substantiated and underscored the claims of all the others by violently opposing and voting against a resolution which simply asked all members to act in accordance with the principles of the Charter in the spirit of cooperation.

SOVIET DESIGN AND TACTICS

At the center of the problem of world security is the well-known aim of the Soviet regime to disrupt and overthrow governments from within through support of the conspiratorial forces of Communist parties and to insure subservience to Kremlin dictates.

Thus, we are not confronted by a state regime that is interested in getting along with other independent countries but one that persists in designs to dominate them. These designs, documented by Soviet theoreticians, by the extensive training program for conspiratorial leaders, and by along record of confirming acts, are understood by the members of the United Nations. Their hopes that the common war effort might lead to peaceful cooperation and the abandonment of the will to dominate were dashed by events.

IRAN

Contrary to their pledges, the Soviet army remained in Iran attempting to force that little country to accept Soviet dictation, withdrawing finally only under world-wide pressure brought to focus in the Security Council. The Soviet forces left behind an organized and armed minority which they apparently hoped would be able to control the territory they evacuated and flout the authority of the government.

FAR EAST

In the Far East they dismantled Manchuria, forced the partition of Korea, refusing subsequently to cooperate with the United Nations Korean Commission, and turned over the confiscated Japanese arms to the Chinese Communists to carry on a civil war.

TURKEY

Turkey was subjected to threats and pressure, thus creating the necessity of aid and support and the beginning of the movement for collective defense.

GREECE

Likewise, war-ravaged Greece was violently attacked by the Communist forces from within, supported the world-wide propaganda machine of the Soviet Union and by the practical assistance of the northern neighbors, already dominated by Soviet force. Again, Soviet voices called for peace. Yes, peace by the submission of the majority to the force of the minority. But at no point would these so-called peace makers cooperate with the overwhelming majority of nations through established United Nations Commissions.

BALKANS

The pledges of free elections for Bulgaria, Rumania, and Hungary made by Premier Stalin himself in agreement with President Roosevelt and Prime Minister Churchill were cynically disregarded and circumvented. The story of Hungary presents the general pattern by which the minority overwhelms the majority. It is put succinctly in a speech of Jozsef Revai, one of Hungary's leading Communists, published in the March-April 1949 issue of "Tarsadalomi Szemel" (Sociological Review).

Mr. Revai remarks, "We were a minority in the Parliament, and in the government, but at the same time we represented the leading force. We had decisive control over the police forces. Our force, the force of the Party and the Party and the working class, was multiplied by the fact that the Soviet Union and the Soviet Army were always there to support us with their assistance." This admission was apparently too blunt, so the periodical in which the speech appeared was recalled.

PEACE TREATIES

The efforts in this Assembly of the United Nations to obtain compliance with the peace treaties guaranteeing human rights to Hungary, Bulgaria and Rumania, were met with denunciation and repudiation of Soviet obligations.

CZECHOSLOVAKIA

The tragic story of Soviet domination of one of Europe's proudest little democracies, Czechoslovakia, is well known. This crude maneuver, by which the Communist minority seized control, threatening civil war with Red Army assistance on the minority, shocked the world. More than any other incident in the long series of moves for Soviet expansion, the seizure of Czechoslovakia alerted the free world to the necessity for a strong and collective defense.

YUGOSLAVIA

The case of Yugoslavia strips away the last pretense of respect for small states, even when they are governed by Communists and formerly recognized as so-called "peoples' democracies." Refusal to follow the dictates of the Kremlin to the letter subjects even such a Communist government to threats and pressures--troop movements on its borders, incidents, and repudiation of treaties.

POLAND

In Poland where again the minority with the support of the Red Army succeeded in eliminating and destroying the majority parties, the domination is made decisive by installing a marshal of the Red Army as Minister of Defense.

INDONESIA

Soviet policy of rule or ruin was never more vividly applied than against Indonesia in the midst of its struggle for freedom and independence. Its Communist Party first tried to undermine and overthrow the Republic in an armed revolt. President Sukarno and Premier Hatta who put down that revolt were then attacked as quislings and traitors. The efforts of the United Nations to achieve a peaceful settlement between Indonesia and the Netherlands were sabotaged.

HATTA

But in spite of, and partly because of, this blatant behavior to obstruct peace, the United Nations Commission for Indonesia paved the way for a free and independent United States of Indonesia, resting on what Premier Hatta called five basic principles: "devotion to God, Humanity, Nationalism, Democracy, and Social Justice."

In the closing days of this General Assembly, Soviet opposition to peace in this area was bitterly pressed. As the Indonesians and the Dutch approached the final peaceful settlement--the birth of a nation and the foundation of a Union--the Soviets made frantic efforts to prevent settlement and discredit both parties to the accord.

Members of the United Nations have studied these events in detail. They are not easily hoodwinked by protestations of peaceful intentions. They remember the tense case of the Berlin blockade as it was debated in Paris and the Soviet veto which turned down the conciliatory proposal. They also know that firmness and patience backed up by the airlift overrode that veto.

Many of them have experienced the Cominform tactics to disrupt recovery in their countries and to prevent their organization of national defense in cooperation with others.

In the light of such a record, one can imagine that the Soviet resolution added insult to injury when it sought to condemn the measures for collective security reluctantly taken in response to their own provocative actions as preparations for a new war. They block the path to peace settlements, to unanimous agreement on practically every situation to come before the Security Council, to agreement on the control of atomic energy and the reduction and control of armaments, to agreement on the establishment of peace forces as contemplated by the Charter. Then they accuse those who cooperate to get as much collective security as they can in spite of this obstruction of plotting war against them.

You may be certain of one thing: this unreasonable and violent assault upon almost all members of the United Nations has welded them into a unity. That unity is producing collective defense. That collective defense is the solid foundation of world security.

But it is not what we want. It is what under the circumstances we are forced to take as the unfortunate alternative to comprehensive collective security encompassed in the Charter. World security depends upon stopping further encroachments upon the free world. It rests upon the capacity of the many to stand together so overwhelmingly that aggression is obviously foolhardy.

In the United Nations, this unity is built up and expressed. The specific threats to the peace come under public debate and the collective power of the many can be brought to bear as a deterrent against dangerous adventures. Even in spite of the veto, the majority have succeeded—as in Indonesia—and will continue to succeed in working for peaceful settlements of disputes, isolating and conciliating conflicts and exposing peace—disturbing acts or situations to the light of world opinion.

This opinion is the essence because it determines in any given situation whether the collective defense is really united and prepared to resist encroachments. And because of this fact, the Soviet propaganda campaigns are devised to split and confuse public opinion.

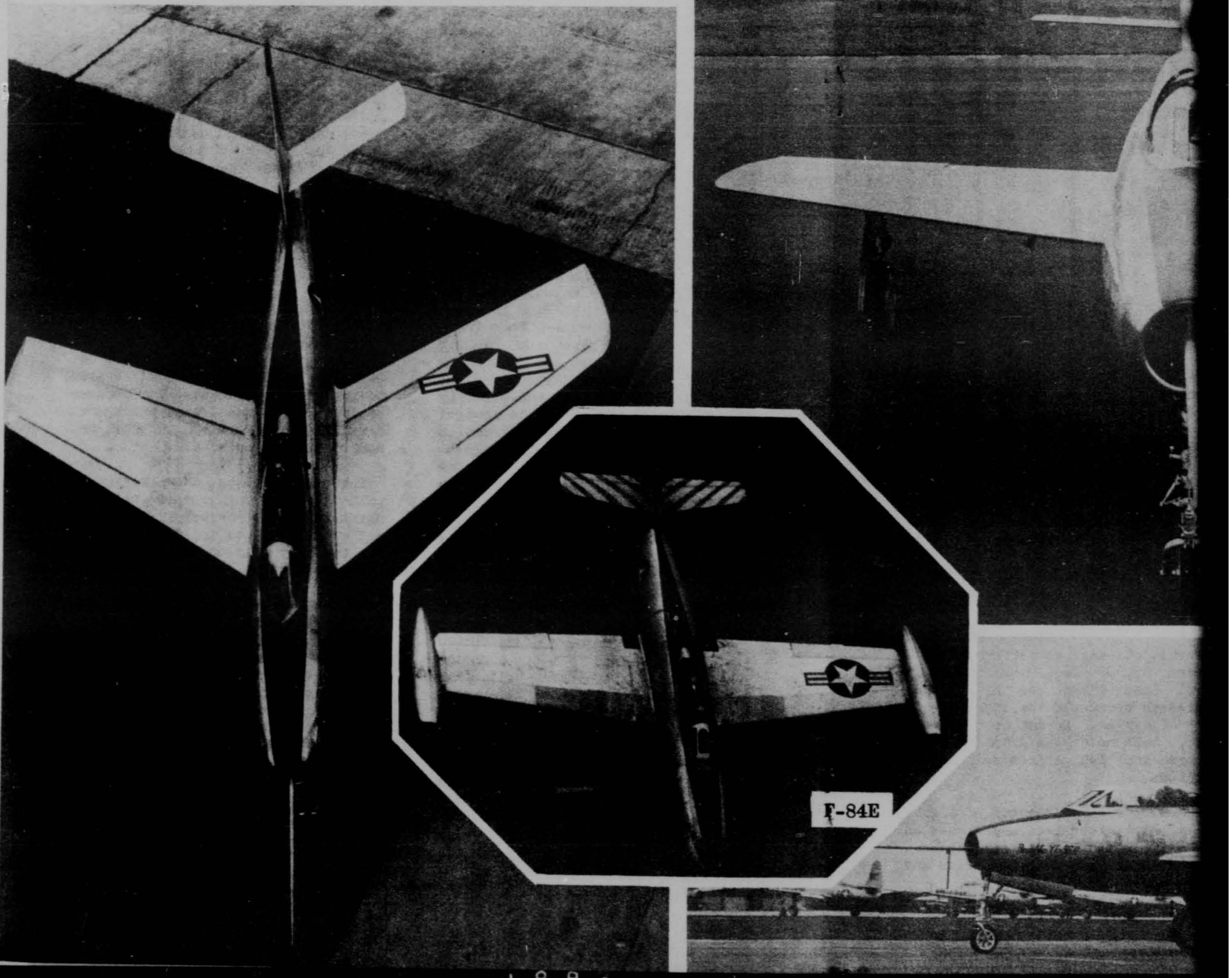
The propagandists know very well that peace-loving people hate to maintain world security at such a price and by such collective force. But the only road open to the eventual cooperation of all in the maintenance of peace is the determined demonstration that the aims of those who seek world control cannot be achieved.

We should realize that the people in the countries of the obstructive minority pay a much bigger price for the aggressive policies of their leaders than the people of the rest of the world who are thereby forced to organize an expensive collective defense. The price of noncooperation and the will to dominate on the

Continued on Page 43

YF-96A, JET FIGHTER

STORY ON PAGE 24



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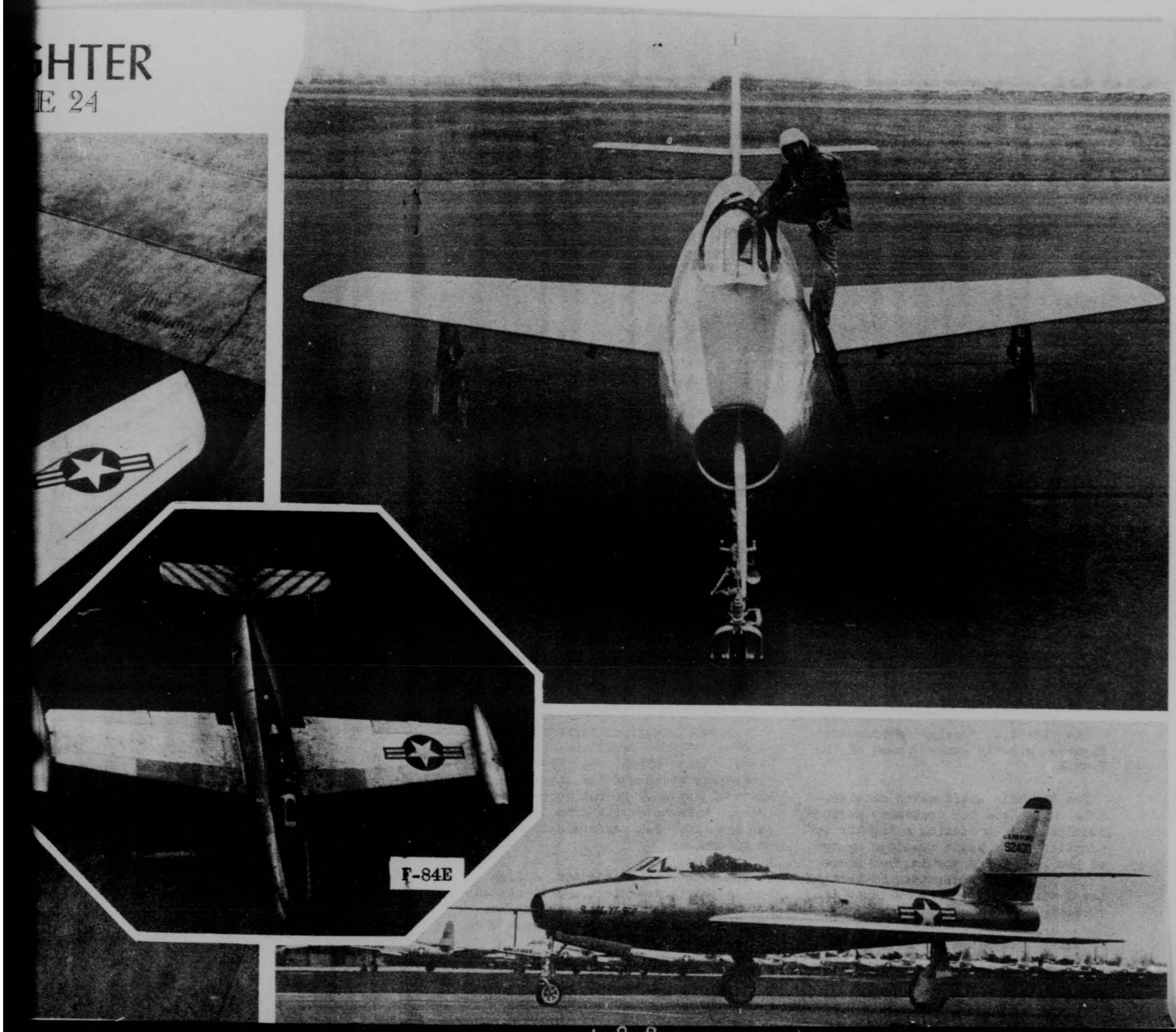
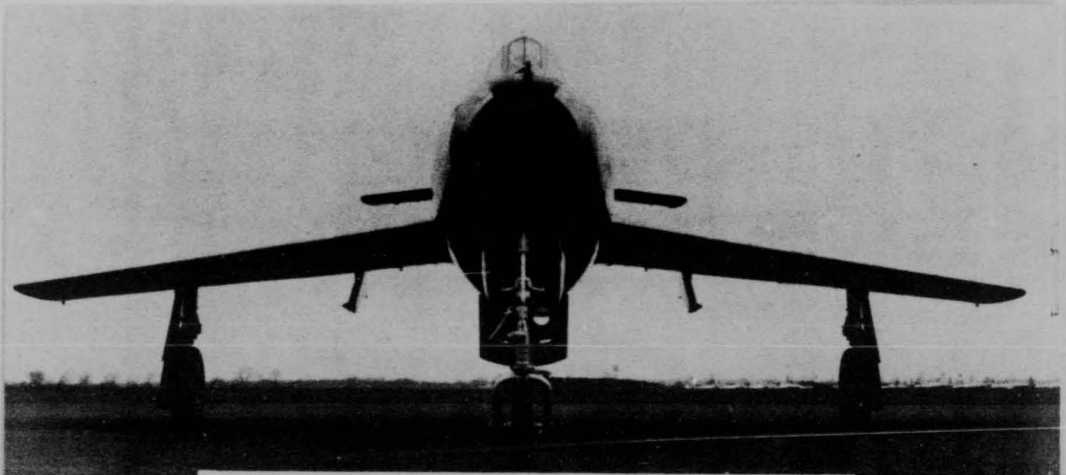




YF-96A, JET FIGHTER

The YF-96A, new swept-back version of the F-84 Thunderjet, has completed taxi tests. The plane has been dismantled and flown to Edwards AFB where it will be flight tested.

The jet fighter, built by the Republic Aviation Corporation at Farmingdale, L. I., has swept-back wings of the type preferred by designers for supersonic flight and will be designated the YF-96. Features of the aircraft resemble parts of both the Republic F-91 jet-and-rocket powered fighter and the Republic F-84-E, which during the last few days had its combat radius extended to beyond 1,000 miles for bomber escort and enemy territory penetration work.

The YF-96's "design performance" figures greatly exceed those of the F-84-E.

The Republic staff saved considerable time from the customary period required for producing a fighter by adopting the basic fuselage design of the F-84-E and working from there. Five months is understood to be the total time required for building the prototype.

Unlike the wings of the F-91 jet-and-rocket plane, which were extremely thin and were wider at the tips than at the junction of the wing and fuselage, the wings of the new YF-96 have a distinct taper and are so designed as to permit fuel to be carried internally.

The new jet plane probably will be used for high altitude interception up to 40,000 feet, with very high altitude duty reserved for aircraft equipped with additional rocket engines. The YF-96 is powered by the latest version of the Allison J-35 turbo-jet engine and also may have tactical use in fast ground-attack missions.

Turbo-jet engines perform best at around 35,000 feet and above that level lose thrust as the altitude increases because of the atmosphere's lack of oxygen. Rocket motors, however, take no oxygen from the atmosphere and can perform well at any altitude.

The wing span of the new jet fighter is thirty-four feet and it has an over-all length of thirty eight feet. Its cockpit will be pressurized and air-conditioned.

POLAR GUIDE

This is the twelfth of a series of articles on Arctic Indoctrination

Chapter 18--Land Survival (continued)

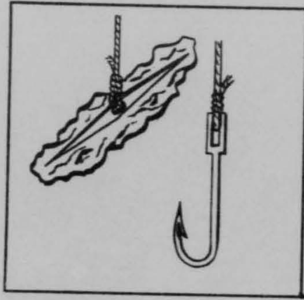
FISHING FOR FOOD

All northern fish are edible--even the ugly spiny-headed sculpin of the tidal pools. And all salt-water fish except the shark may be eaten raw--straight from the water. Raw shark meat is poisonous. Before you eat it, broil it several times or dry it. Fresh-water fish may contain parasites that might make you sick. Cook the fish if possible—cooking kills the parasites.

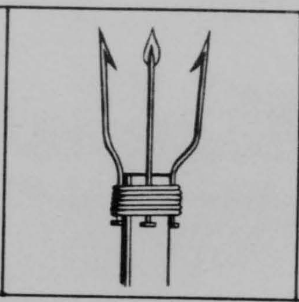
There are innumerable streams, lakes, and ponds in the polar regions; but many shallow tundra lakes have no fish of any sort in them. The only fish in some fair-sized streams are tiny minnow-like sticklebacks; and shallow rivers that teem with salmon at the spawning season may suddenly have no fish at all. On the other hand, coffee-colored muskeg streams are inhabited by fine trout that take bait eagerly if they see it. The deeper parts of small streams are sometimes full of fish, and all tidal pools are worth investigating.

The hook and line are not your only means of catching fish. You can catch them with the same type of snare as for a hare. They can also be speared, shot, caught with improvised nets, or stunned with sticks and stones. In fact, in shallow water, you can even catch them with your hands.

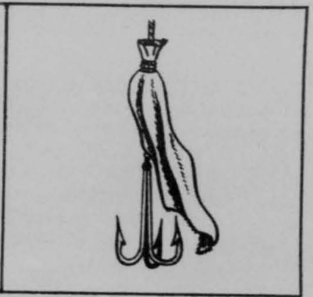
IMPROVISED HOOKS. Lacking a real fishhook, you can make one from a nail, canned fish key, or piece of stiff wire. A soldier at Dutch Harbor caught a 20-pound halibut with a bent finishing nail and a small chunk of meat, and many an Eskimo boy has caught flounders, sand dabs, and sculpins with bent pins baited with pieces of lemming or chunks of embryo from a duck's egg. Another effective device is a fishing needle of wood or bone sunk in bait. The



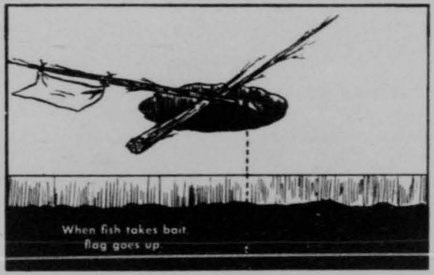
Fishhooks.



Spear.



Jig.


When fish takes bait flag goes up

Automatic Fisherman.

needle is swallowed whole, and a pull on the line swings it crosswise, causing it to catch in the fish's stomach or gullet. The needle can also be used to catch sea gulls.

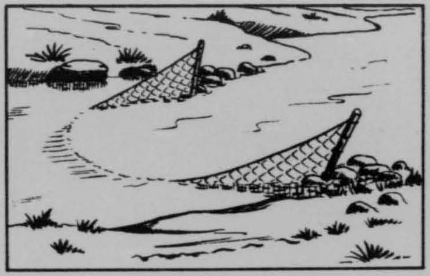
BAIT. Don't expect to find grasshoppers in the polar region--they don't live that far north. Use any insect, piece of meat, minnow or other bait you happen to come across. Some northern fish will nibble at any small object that falls into the waters. Others, at certain seasons, pay no attention to the most tempting bait. Cod swim up to investigate strips of cloth or bits of metal or bone and can be "jigged" before they know what's happening. With a simple jigging apparatus or baited hook, salmon trout can be caught in winter through a hole in the ice of a deep lake.

JIGGING. Jigging gear consists of a hook or a cluster of hooks attached below a "spoon" of shiny metal, a bit of bone, or a small weighted strip of cloth. Let the jig down into deep water, jerk it upward at arm's length, let it sink back, jerk it up again;repeat the procedure until a fish is snagged on one of the hooks. You can catch cod this way in water from a few feet up to more than a hundred feet deep. Be sure the hooks are weighted sufficiently to carry the lure rapidly downward so that it suggests something alive.

NETS. You can make a good net out of stout twine or from the inner strands of parachute shroud lines. For the full-grown salmon trout of tundra streams the meshes should be about two inches square. For such small fish as capelin and smelts, that travel in schools, you will want a scoop net with quite a fine mesh. Make one out of a pliable willow branch and netting or twine.

To make a net for stretching across a narrow channel approximately four feet wide and one foot deep, you need about twenty-six lengths of twine or parachute cord--each five feet long. Tie these in groups of two, at two-inch intervals, to any stake or metal bar two to three feet long. Keeping the rows of knots even, you begin tying the meshes, using simple overhand knots rather than square knots or grannies, and tie the loose ends to another stake or metal bar of the same length. When in place, such a net sticks out of the water a bit at either side of the channel, but the pull of the current drags the top of the net down to the surface.

NARROWING A STREAM. To catch fish,



Fish Net.

a shallow stream may be narrowed by building a fence of stones, stakes, or brush, out from either bank, leaving only a narrow channel through which the fish can swim. Stretch a net across this channel; be sure to secure it firmly with stakes or boulders, or you'll lose both net and fish. If you have no net, you can stand ready to hit, shoot, or spear the fish as they swim past. But keep very still while you wait. Fish dart away at the first sign of danger.

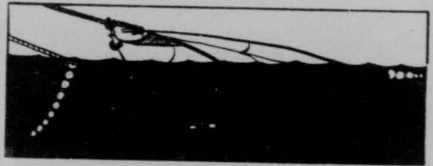
DIVERTING A STREAM. If you know a small stream has fish in it, try diverting its channel so as to strand the fish in pools along the old channel. This method is sometimes surprisingly successful.

TIDAL FLAT FISH TRAP. To strand fish when the tide goes out, pile up a crescent of boulders on the tidal flat. Scooping out the area inside the crescent isn't essential but increases effectiveness of the trap.

SPEARS. A good "fish-catcher" can be made from a stout stick of about the diameter of a broom handle, with lengths of stiff wire firmly bound to and projecting from the end in such a way as to hold a fish on the bottom when it is struck from directly above. The tips of the wires need not be sharpened or barbed. If you have a drilling tool, bore holes for the wires.

A spear can be made out of a bar from an airplane tie-down kit or from any piece of metal tubing strong enough to hold its shape in spite of the buffeting it will get. If a file is available, sharpen or barb the tip. An effective trident spear also can be improvised from materials at hand.

DOGGLING. Fish like to hide in sheltered places under rocks or along the banks, and here you can catch them with your hands. You'll have to be quick; but when you have no fishing gear and they are your only chance for a meal, keep after them. If you don't find crannies where fish are hiding, try making some for them.

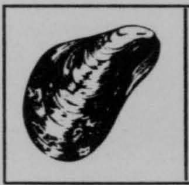

Improvised Plankton Net.

SHOOTING FISH. Don't try to shoot fish that are more than a few inches below the surface, and if you shoot from the side, aim below the fish to allow for refraction of light rays. Even with a high-powered rifle you'll be wasting ammunition if you shoot at fish two or three feet under water.

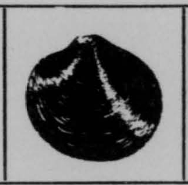
FISH IN TIDAL POOLS. Tidal pools with masses of seaweed in them may seem at first to contain no fish, Poke around. You may find large numbers of small fish hiding among the seaweed near the surface and a few big ones deeper down. For the small fish you need a scoop net. For the big ones deeper down, use a sharpened pole or spear.

PLANKTON. In polar waters, one of the best sources of food is plankton. a conglomerate of minute sea animals, fishes, and plants which abound in polar waters. Whales and other Arctic animals, including birds, depend to a great extent on plankton for food, and laboratory tests have shown that it is high in nutritive value.

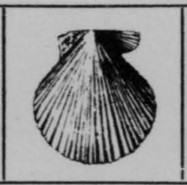
You can readily gather up plankton by dragging a conical net through the water. If you don't have a



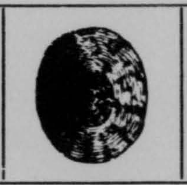
Mussel.



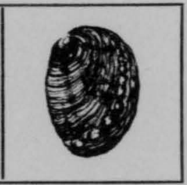
Clam.



Scallop.



Limpet.



Abalone.

plankton net, you can improvise one from the upper part of a parachute canopy. Cut out the top to form a cone about three feet long. Tie the vent shut with a string and make a ring about 2 1/2 or 3 feet in diameter to hold the mouth open. Then tie a bridle to it and drag it through the water. Be patient. It will take quite a bit of dragging to secure a substantial amount of plankton.

The best way to prepare plankton is to boil it and make a soup of it. But you can also eat it raw. The only disadvantage will be that, when raw, the tiny shells will stick in your teeth.

FOOD FROM THE TIDAL FLATS

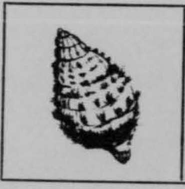
The ocean shores of southern Alaska and the Aleutian Islands are rich hunting grounds for clams, mussels, scallops, snails, limpets, chitons, sea urchins, and sea cucumbers--all edible. These sea foods aren't found throughout the whole polar regions, but where there are stretches of open water along the shore you are sure to find some of them at any season. Most of the makings for an emergency shore dinner can be gathered easily at low tide--and eaten raw on the spot. You can pick up a meal with your hands, dig it out of the mud with a stick, or pry it from the rocks with your pocket knife.

MUSSELS. All polar mussels are edible. However, avoid any that don't shut up tight when you touch them; they are sick or dead and are unfit for food. And beware of the black mussel about two inches long that is attached to rocks by tough threads. Along the north Pacific coast this type of mussel sometimes becomes deadly poisonous in summer (May to September). Cooking does not destroy the poison. On the other hand, this mussel can be eaten safely along the coasts of Labrador, Hudson Bay, and Greenland.

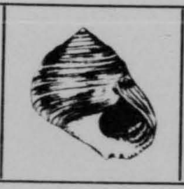
CLAMS. Occasionally clams are found lying on the sand or mud, but as a rule you have to dig for them. At low tide they reveal their presence by spouting jets of water a foot or so into the air. By digging quickly where a jet shoots up, you will find the clam a few inches below the surface. You can dig with your hands, but it saves wear and tear to use a stick or empty clam shell. Clams clear their systems of sand if left in salt water a few hours, but they can be eaten raw as soon as they are dug up.

Some Alaskan clams are quite large; certain varieties are as big as your fist; one type weighs up to ten pounds. While some clams are tough, all are edible and many kinds are available.

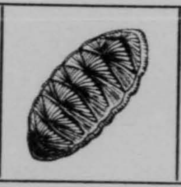
The same poisonous organism that sometimes affects the black mussel on the north Pacific coast may also affect clams in this area from May to September. The poison can be avoided by eating only the lighter



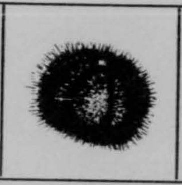
Triton.



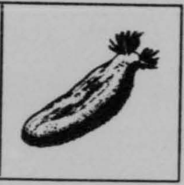
Periwinkle.



Chiton.



Sea Urchin.



Sea Cucumber.

parts of clams; don't eat the black liver mass.

SCALLOPS. One of the best-eating of the mollusks is the scallop. It has a fan-shaped shell and swims free. Generally it stays offshore in deeper water, but sometimes it may be found close to shore.

LIMPETS. The limpet clings to rocks like an adhesive pad. It is about as big as a half-dollar and is covered with a single cone-shaped or cap-shaped shell. All limpets are edible, but they are rather tough, and gathering enough of them for a meal requires a lot of work.

ABALONES. The abalone of northern waters never grows as large as the famous California abalone, but it has a fine flavor and is prized as food. It has a single, rather flat shell, three to four inches wide, and clings to the rocks so tightly that it must be pried loose.

TRITONS. The best-known of the northern tritons is the hairy triton. The shell of this snail is covered with a growth that gives it a plush-like appearance. Hairy tritons may be eaten raw, but the Indians prefer to cook them. They are tough and when cooked have a strong, slightly disagreeable odor.

PERIWINKLES. These abundant tiny snails of northern waters are only about an inch long, so it takes a lot of them to make a meal. Put the shells in boiling water for a couple of minutes, and you'll be able to extract the meat easily.

CHITONS. Chitons are moccasin-shaped and cling to rocks tightly. When pried loose they roll up, with their hard plates protecting their soft insides. They are pretty tough but can be eaten raw. The edible portions have to be cut loose from the shell with a knife. The most palatable chitons are three to four inches long and have eight bony plates plainly visible on the back. Larger ones, with the back plates hidden under the skin, are much tougher and are not very good to eat.

SEA URCHINS. Sea urchins are spine-covered balls several inches in diameter. They are abundant on Aleutian and south Alaskan shores, in Greenland, and in other polar waters as far north as there is land. Eat only the orange or pink egg masses. To get at the insides, poke a stick through the mouth, which is the opening on the underside. The animals are really nourishing; more than one castaway Indian or Aleut has lived a whole season on virtually nothing else.

SEA CUCUMBERS. These queer-looking animals have the shape of cucumbers but are a far cry from the vegetable variety. They may be eaten raw but are much better cooked. Scrape off their slimy outer skin, cut them up, and boil or steam them.

Hungary,
A STUDY IN SATELLITE SUBSERVIENCE

THE MASTER AND THE SLAVE

The servility of the present Hungarian Government to the USSR and the "unequal relation of subjugation" imposed by Moscow upon Budapest are characteristic of the relationship between the satellite and the Soviet master now existing throughout the orbit. The preamble of the new Hungarian Constitution, promulgated on August 20, 1949, contains three toadying references to the USSR: (a) Gratitude is expressed to "the armed forces of the great Soviet Union" for having liberated Hungary; (b) recognition is given to "the generous assistance of the Soviet Union" in the reconstruction of the war-ravaged country;and (c) even the praise bestowed upon the Hungarian people for their work in laying down "the foundations of socialism" is moderated by the statement that in this work they are "supported by the Soviet Union."

The new Hungarian national coat-of-arms, a star over a crossed hammer and a sheaf of wheat, is a direct borrowing from Soviet heraldry and hardly distinguishable from the emblems of the 16 constituent Republics of the USSR. Adulation for the USSR expressed in public places is apparently unlimited in Hungary today. In June 1948 General Gyorgy Palffy (since then liquidated as a "Titoist spy") declared in a public address that "the Communist soldiers of Hungary must serve the interests of the country with loyalty to Stalin and the Soviet Union." In August 1949 the Minister of Education told a conference of high school teachers that "we teachers must prove our love and loyalty toward the Soviet Union by teaching the Russian language." In September 1949 a reference by Vice Premier Matyas Rakosi to "our great instructor Stalin," in a speech before Communist activists, brought a burst of applause and chanting of "long live Stalin."

INSIDE HELP

In the field of foreign policy,the present Hungarian Government is outdoing its wartime predecessor in serving the interests of a foreign overlord. Through the subservience of its leaders, Hungary has become a forward bastion in the current Cominform war of nerves against Yugoslavia. One of the purposes of the recent Rajk trial staged in Budapest was to provide "moral" justification for an intensification of the Cominform campaign against the Titcist heretics. On September 24, 1949, in Paris, the Hungarian delegates stalked out of the UNESCO general conference when that agency decided to extend its activities in Germany; on October 3, 1949 the Hungarian Government issued an unsolicited declaration, coming as faint reverberation of Soviet thunder, protesting against "the establishment of a separate government in Germany which endangers the interests of peace and democracy."

The zeal with which the Soviet puppets in Budapest are turning Hungary into an economic colony of the USSR knows no bounds. Since signing of the agreement for economic collaboration with the USSR on August 27, 1945 (now reinforced by Hungary's membership in the Council of Mutual Economic Assistance, CEMA), the

BUDAPEST. The lovely and once gay capital is now the site of Joint Soviet-Hungarian companies--with profit only to the Soviet partner.

country has been a happy hunting ground for Soviet economic imperialism. So-called Joint Soviet-Hungarian companies, which yield profit only to the Soviet partner, enjoy preferential rights and treatment; the extraterritorial Soviet bank in Hungary is not subject to Hungarian banking regulations. Hungary has undertaken—in addition to its staggering reparations obligations—to pay the USSR $45 million as a redemption of allegedly German assets. Thus, the regime simultaneously abolishes private enterprise with loud protestations of adherence to socialist principles, and reserves a special sector for unbridled exploitation by the USSR.

GOVERNMENT BY A RUTHLESS MINORITY

The complete servility of the present Hungarian regime to the USSR has been made possible by the gradual amassing of all political, administrative, and police powers in the hands of the Moscow-directed Hungarian Communist minority. The Hungarian Communist Party (euphemistically renamed Hungarian Workers' Party since its merger with the Social Democratic Party in 1948), representing only a small minority of the population (5-10%), exercises complete control in Hungary. It has established itself in this position of authority against the will of the Hungarian people, but with the support and intervention of the Soviet occupation authorities, by seizing one by one the instruments of governmental power. As a result the Hungarian people have now been deprived not only of their rights and freedoms as individuals but also of their independence as a nation. The Party is wholly a tool of Moscow. The recent purge of peripheral and deviationist elements, culminating in the liquidation of Laszlo Rajk, former Minister of the Interior and of Foreign Affairs, will undoubtedly result in an even more rigid policy of following unswervingly the policies laid down by the Kremlin.

THE "PEOPLE'S FRONT" A CAMOUFLAGE

In addition to the Hungarian Workers' Party, there are four other parties in Hungary today. These five parties, in close association with certain major front organizations, constitute the Hungarian People's Independence Front. This Front is Communist-led and controlled and serves as a camouflage for the one-party dictatorship. The supremacy of the Hungarian Workers' Party over the Front is guaranteed by the fact that, as a result of previous purges and other repressive measures, the leadership of the other four parties now consists exclusively of collaborationists, crypto-Communists, and Communist puppets. Anti-Communist parties have completely disappeared, the last two remaining such groups being liquidated earlier this year.

The major front organizations are Communist-led and controlled and are used for the purpose of extending Communist domination into every sector of the national life. Organized political opposition no longer exists. Parliament consists solely of Front deputies, all elected under Communist sponsorship on a single slate. However, the overwhelming majority of the population is in opposition to the present regime and kept in line only through the terror of the police state.

The entire administrative apparatus is in the hands of the Hungarian Workers' Party. Successive purges of the civil service, the army, the professions, the churches, and the educational institutions have removed all dissenting elements from positions of authority or influence. A new bureaucracy is being built from Communists and fellow travelers. The training of this new bureaucracy is one of the jealously guarded prerogatives of the Hungarian Workers' Party.

YOUTH GROUPS PENETRATED

Communist ideological penetration in Hungary has been most successful among the youth of the nation--the lower the age group, the greater the devotion to the tenets of Communism. For example, probably the most ardent supporters of the present regime are members of the Pioneer Organization, a youth movement for boys and girls between the ages of 6 and 12, who, like the Hitler Jugend in Germany, are supplied with smart uniforms, recreation facilities, games (including a children's railroad), and receive pre-military training. The Pioneers, as well as all other youth organizations, are members of a national youth association, affiliated with the leftist World Federation of Democratic Youth (WFDY). The national youth organization, which is securely under Communist control, is called the Popular Federation of Hungarian Youth. The extent of the Communist hold over Hungarian youth is illustrated by the fact that the Grand Council of this Federation includes delegates from many different youth groups. Since their coordination with the Federation, these groups have become strict adherents of the sinuous Communist Party line. The World Youth Festival, held in Budapest during August 1949, ended on the following note: "Our overflowing affection and sympathy goes out not only to the people who in 1917 opened a new era in the history of human freedom, but our gratitude is thereby expressed also toward those who five years ago liberated us by shedding their own blood...The freer and happier the Hungarian people are, the more they realize the significance of their liberation and the more they try to express their heartfelt gratitude to the liberating USSR, its youth, and its wise leader, the great Stalin."

TRANSFORMATION INTO A POLICE STATE

In order to maintain itself in power against the popular will, the Hungarian Government transformed the country into a police state. Rights of life and liberty of person are now constantly violated by arbitrary arrest and detention, and an atmosphere of fear permeates the entire country. The Hungarian Workers' Party has freely admitted that the Sovietizing of Hungary could not have proceeded without police terror. In August 1948 the main Communist daily newspaper Szabad Nep declared that it is "the magnificent work of the political police which makes it possible for the working class to concentrate its main strength and main attention upon the building of socialism." More recently, Jozsef Revai, the chief Communist theoretician in Hungary, baldly admitted that the present regime had been able to assume complete power only

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because the Party had "decisive control over the police forces...The force of the Party and the working class was multiplied by the fact that the Soviet Union and the Soviet Army were always there to support us with their assistance." The Soviet Army continues to occupy Hungary pending the conclusion of the Austrian peace treaty; uniformed Hungarian police strength during 1948 was 33,265, about twice the size of the national army. The 1949 budget provides funds for 31,525 state police and 5,010 political and security police—a grand total of 36,535 policemen.

COMMUNIST CONTROL AFFECTS ALL GROUPS

People engaged in urban occupations,as distinguished from agriculture, form about 45 percent of Hungary's population. The control of the regime over this segment became complete with the Communist seizure of the trade-unions, the professional associations, and the government bureaucracy, and with the now almost total nationalization of industry and commerce. (Only small retail trade has not been nationalized.) As a result of expulsions from the un-

TO BE "REFORMED," Hungarian farm women are sorting capsicum pods (red peppers for paprika). Anyone owning over 25 acres today is a "capitalist" and must be dispossessed.

ions, professional associations, government employment and the loss of business ownership, the non-proletarian urban classes are now in the process of being reduced to a proletarian status.

AGRICULTURAL "REFORM" DISPOSSESSES MANY FARMERS

Approximately 55 percent of Hungary's population is engaged in agriculture. Before the war, the Hungarian system of land ownership and land distribution was one of the most archaic in Europe. Immediately after the cessation of hostilities in Eastern Hungary, the Provisional National Assembly, then sitting, initiated and executed a sweeping land reform, as a result of which approximately 650,000 landless peasant families were allotted tillable land, averaging 5 to 7 acres per family. The smallness of these plots was probably due to Communist intentions to demonstrate the unfeasibility of individual farming, thus to facilitate the introduction of agricultural collectivism.

The drive toward collectivization has been in full swing for over a year. It is carried out through cooperatives, tractor and machine stations, and compulsory surrender of produce. Peasants owning more than 25 acres of land have been declared kulaks or rural capitalists, who must be dispossessed and liquidated before the countryside can be socialized. According to a current slogan "every kulak is guilty of something;" in other words, punitive measures against all owners of viable peasant farms are justified and permitted by the regime.

LABOR AT THE MERCY OF COMMUNIST MINORITY

Standards of living in Hungary today appear to be higher than in most other satellite countries. Reconstruction has proceeded at a faster pace and food supplies appear to be more plentiful. The morale of the population is, nevertheless, low, among other reasons because of the extremely high prices and because—particularly among industrial workers—of the constantly increasing work norms. These norms represent the units of production necessary to be paid full wages. During 1948, on the whole, norms were based on the productivity of the average worker. Since January 1949, however, they have been based on the production standards set by the so-called champion workers, which tax the ability of the rank and file of labor. The result is a 35 to 40 percent reduction in basic wages. In consequence, not even the proletariat, on whose behalf the Communists allegedly exercise their dictatorship, has reason to be devoted to the regime.

The general conditions of labor have greatly deteriorated since the inception of the present regime in Hungary. For example, a skilled mechanic in a shoe factory earns between 110—120 forints ($11—$12) per week. The ordinary working day is from 7 a.m. to 4 p.m. with a half hour for lunch.

However, even after 4 p.m. workers are compelled to stay in the plant approximately four nights a week to attend Communist seminars. It takes a week's work for him to earn enough money to buy a pair of shoes manufactured in the same factory. The average Hungarian worker has to put in 150 hours at work in order to earn enough money to buy one suit of clothes. For the same amount of merchandise, the American worker has to put in 25 hours (the Soviet worker, 580 hours). In other words, the Hungarian worker has to work six times as long for the same merchandise as his U.S. counterpart, although he still has not descended to the level of the Soviet laborer, who has to work 23 times longer than an American worker. Compulsory labor is practiced in Hungary today through labor's loss of the right to strike and through the powers granted to the government to freeze workers in their jobs or to transfer them to other jobs at arbitrarily fixed wages. Moreover, several internment camps have been established where inmates are engaged in forced labor. Labor's loss of the right to strike is implicit in a law adopted in 1947, which set a penalty of five years imprisonment for stopping work in industrial plants. When driven to desperation by low wages and constantly increasing work norms, the workers resort to strikes; such strikes are either broken through intimidation or are brutally suppressed by the armed police. As a result of these laws, Hungarian labor has been placed in a state of involuntary servitude.

EDUCATION IS A COMMUNIST TARGET

Under the Communist regime education in Hungary has become a class privilege. The lower schools have been turned into instruments of propaganda and indoctrination; the universities have been transformed into party seminars; teachers and students of dissenting political opinion have been eliminated. The presence of police agents in the classrooms has made a mockery of academic freedom. The nationalization of all privately owned schools (i.e., church schools) in June 1948 and the concomitant nationalization of textbooks has resulted in the substitution of dialectic materialism for the precepts of Christian and civil morality. A vast network of government propagandists and agitators enmeshes the industrial plants, the army, the villages, the bureaucracy, and every phase of the national life. Mass demonstrations and public festivals, in which the citizens are forced to participate against their will, serve to mesmerize the population into artificial enthusiasm for the regime and to demonstrate the political and ideological outward unanimity typical of totalitarian countries. Intellectual life is under the control of the Communist Minister of Popular Enlightenment; freedom of the press, of publication, and of expression has been strangled with the aid of restrictive laws and decrees, severely enforced by the Communist police and the subverted courts. Nothing may be published without the permission of the Press Chief in the Prime Minister's Office; nothing may be distributed without a license from the Communist Minister of the Interior. According to Act VII of 1946, ("Defense of the Republic") even true statements, made in the presence of two or more persons, that are considered inimical to the regime, are offenses punishable by the rigidly enforced law. Restrictive and discriminatory practices employed against the foreign press, including correspondents of Western newspapers and press agencies in Hungary, form part of a systematic campaign to isolate the Hungarian public from the West and to keep the Western public ignorant of conditions in Hungary. On the other hand, a scurillous propaganda campaign against the U.S. and the U.K. and the dissemination of government-controlled information in Western countries are designed to convince the population of the superiority of the Hungarian "people's democracy" over the "decadent imperialist-capitalist" states. At the same time they tend to confuse in Western minds the issues now at stake in Hungary and the orbit.

THE CHURCH HAS BEEN CRUSHED

The dominant religions in Hungary are Catholicism and Protestantism.

Approximately 68 percent of the population belong to the Catholic church, while 27 percent are Calvinists, Lutherans, Unitarians, and Baptists. Since both Catholicism and Protestantism hold to spiritual values that are opposed to Communist materialism and since both creeds represent strong ties to the West, the present regime has undertaken to eliminate their independent influence from the national life. The government's objectives regarding the churches, Catholic as well as Protestant, have been (1) the expropriation of ecclesiastical property with a view to rendering the churches financially dependent upon the state; (2) the nationalization of denominational schools and textbooks, so as to supplant Christian teaching with dialectical materialism; and (3) the elimination of the moral influence of the churches and their reduction to propaganda departments of the totalitarian state for the purpose of deluding the faithful into accepting the Communist-controlled regime as ordained by God. Thus, the main issue involved is not at all the traditional struggle in Europe for the separation of church and state, but rather a determined effort on the part of the totalitarian state to absorb churches which are already a separate entity.

After forcing the Protestant churches into accepting a subverted and government-controlled role in the national society, the Communist leaders began to concentrate on the Catholic Church. The first two over-all objectives, the expropriation of ecclesiastical property and the nationalization of schools, had already been achieved in 1945-46 and in 1948. Secondary objectives, such as the suppression of Catholic youth organizations, the curtailment of the Catholic press, and the cessation of Catholic religious broadcasts, had also been attained. The nationalization of parochial schools, however, created such resistance among the Hungarian Catholics that the regime decided to use a twofold strategy: The loosening of the ties which bind the Hungarian Catholic Church to Rome, and the instigation of division within the Church itself. Because of the uncompromising leadership of Jozsef Cardinal Mindszenty, resistance remained strong. In consequence, overt methods of persecution were resorted to: Placing police spies in churches; police surveillance of Catholic religious activities; confiscation and suppression of official church statements; invasion and seizure of convents; prevention or dispersal of religious processions and pilgrimages; and the arrest, imprisonment, or internment of priests and nuns.

These arrests culminated in the taking into custody of Cardinal Mindszenty, Prince Primate of Hungary, on charges of anti-republican conspiracy, espionage, and illegal dealings in foreign currency. The Cardinal was sentenced to life imprisonment after a staged trial in an irregular court. Even after this drastic step, however, the Catholic Bench of Bishops refused to come to terms with the government. While the state appears to have won a victory over the church, the issue is still awaiting final solution.

SUBVERSION OF A NATION

Apart from its religious and cultural traditions, which have made it an integral part of Western civilization for a millenium, Hungary has strong political traditions partly contemporaneous with, and partly influenced by, the political creed of the Atlantic Community. There have been times in Hungarian history when, although politically extinct, the state continued its constitutional existence. In fact, it was this deep veneration for constitutional continuity which preserved Hungarian national existence, occasionally at the price of a compromise, through successive periods of foreign conquest or domination beginning with the sixteenth century. It may well have been this constitutional tradition which, together with the isolated character of the national vernacular, made Hungarians an "indigestible" element in the Turkish and German-Austrian Empires. Whether or not technological implements available to the Soviet Empire, with its conglomeration of Slav, Orthodox and Communist elements, will be adequate to bring about the total assimilation of the Hungarian state and people in the orbit remains to be seen. There is as yet no indication that Hungarian "indigestibility," resulting from centuries of religious, cultural, linguistic, and political traditions, has decreased to any discernible extent during the past five years of Soviet political control.

Since the process of subjugating Hungary to Soviet-Communist control could not be arrested by opposition either at home or from abroad, the Hungarian people have gradually come to look upon Communism as an irresistible force. The Mindszenty and Rajk trials have served to strengthen this conviction, which deepens with the passing of each month, while the present regime is slowly being accepted as a permanent governmental system. The Hungarian people are said to be praying for war, since through a general conflagration alone can they conceive or regain their liberties. The Hungarians are a traditionally passive people who have reached a high degree of sophistication; in consequence they are prepared to accept the inevitable.

ON THE DANUBE. This peaceful scene is watched over by the church steeple. Will the strongly religious Hungarians regain their freedom?

At the same time, more and more of them are jumping on the Communist bandwagon, partly because of a sense of abandonment, partly because of opportunism, and partly because of successful propaganda. The general attitude of the people is characterized by a sense of futility and impotence and, at the same time, a longing for some miraculous return to the Western community of nations of which Hungary has traditionally been a component member.

The attitude of the population is aptly illustrated by this story. During a celebration, attended by farmers in a small Hungarian village, a microphone was set up in the church square and a Communist announcer from Budapest was exhorting the people to step up and say a few words about their life in the flourishing Hungarian "people's democracy." "Remember," importuned the announcer, "that your voices will be carried by radio waves over mountains, valleys and oceans!" An old peasant stepped up to the microphone and inquired anxiously: "Will my voice be heard over in America too?" Upon assurance from the announcer, the old man wiped his pendant moustache and yelled into the box at the top of his lungs: "H-E-L-P!"

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THE NETHERLANDS EAST INDIES

GEOGRAPHY

The Netherlands East Indies (NEI), once referred to as Dutch possessions in the Malay Archipelago, comprise over 2,000 islands spreading from southeast Asia to Northern Australia. The main groups are Sumatra, Java, Madoera, Celebes, Bangka and Billiton, the Riow-Lingga Archipelago, the Mentawai Islands, the Lesser Sunda Islands, the Molucca Archipelago, and parts of Borneo and New Guinea.

From Batavia, the capital of Dutch administration, distances in nautical miles are approximately as follows: Darwin 1700, Singapore 570, Manila 1800, Hong Kong 1900, Tokyo 2600, Bombay 3000.

Almost all of the large islands feature a central area of rugged mountains with numerous volcanoes (some active in Sumatra and Java), descending to foothills, then to broad plains, and finally to large stretches of marshlands. There are considerable tracts of virgin jungle.

As the major portion of this territory lies south of the equator in the equatorial zone, the climate of the main areas of population, excepting the regions over 2,000 feet, is one of monotonously high temperatures and humidity, heavy rainfall.

Successive migrations over centuries make it difficult to identify the original inhabitants, and none of the main modern groups is homogenous. The total population is over 75 million, with the largest concentration in Java, estimated at 50 million. The bulk of the inhabitants are adherents to the Mohammedan faith. The largest element of

BALIKPAPAN. This pre-war shot shows the oil district. The NEI is a vital source of world supply of oil.

the foreign population is Chinese, numbering about 2 million.

Although the various elements retain their individual languages (over 200), fundamental unity of speech exists throughout the entire area based on the Indonesian form. The official languages, however, are Dutch and Malayan.

The NEI has about 50,000 miles of roads, about 50 percent of which are in Java and Madoera. In other islands such as Borneo and Sumatra, rivers are an important part of communications. Java and Madoera also have the bulk of the railways, totalling 3,362 miles; Sumatra has 1,227 miles. Elsewhere, railways are negligible, and economic development is mainly based on coastal shipping.

RESOURCES

Considerable strategic war resources lie within the area of the NEI. There is primarily, dispersed from Sumatra, Java, and Borneo to Dutch New Guinea, petroleum in large quantities which may well be vital to the democracies in the event of another world war.

Present production of tin from Bangka and Billiton, more than 20% of the world total, is greater than prewar. Rubber exports are also approaching prewar figures. Other valuable resources are bauxite, manganese, nickel, coal, salt, and cement-making materials. The forests add teakwood for local shipbuilding, and sufficient quinine bark to fill the medical needs of the wo-ld.

The agricultural resources of the NEI are a most important source of wealth for a world in want. Food production is nearing prewar peaks with the annual rice export surplus estimated at 100,000 tons for the next ten years. The importance of the spices of picturesque early trading days has given way to foreign-credit-earning production of copra, vegetable oils, and sugar, with an ever increasing output of coffee, tea, tobacco, and sisal.

PIGS GO TO MARKET. Surplus food from the NEI is badly needed by the hungry world.

HISTORY

The period from the second to the eighth centuries in the East Indies was one of the assimilation of culture and the influence of Indian immigration, but in the thirteenth century, Islam became established in Sumatra. It spread along the trade routes, fully taking root by the sixteenth century, when the Portuguese made strenuous efforts to establish their stations throughout the Indies. They were soon challenged by the Spaniards, although the power of both had waned considerably by the end of the century.

In 1602, the Dutch East India Company was chartered. After ejecting the Spanish and Portuguese, it found new rivals in the English and French, but emerged virtually unchallenged.

By the middle of the eighteenth century, the Dutch had established their control throughout Java and extended it over the rest of the East Indian Archipelago. The French revolutionary wars and their effect on European commerce led to the dissolution of the Dutch East India Company, already weakened by corruption, when its holdings were taken over by the Netherlands Government in 1798.

When Java was successfully invaded by the expedition led by Raffles of Singapore in 1811, Palembang, Makassar, and Timor became British territory, but Dutch rule was restored in 1816 through the Convention of London.

From about 1930 onwards, Japan began interfering with Dutch interests, but the Dutch continually resisted all attempts to secure concessions until 1941, which saw the invasion and occupation of the Netherlands East Indies by the Japanese.

In the period between the Japanese surrender and the entry of Allied troops, the Indonesian Republic, headed by Dr. Soekarno, and claiming jurisdiction over the entire Netherlands East Indies territories, was proclaimed.

In February 1946, Indonesian representatives agreed to negotiate on the basis of a proposal from the Dutch Government for a structure for the Dutch Kingdom and Indonesia based on a voluntary partnership. By the end of June, the Republicans issued counter proposals asking for the recognition of an Indonesian Free State to work in alliance with Holland and to embrace all communities in the Indies who wished to be associated with Java. During this time, the difficulties of reaching an agreement were aggravated by hostilities between Dutch and Republican troops. Nevertheless, a large area of Indonesia with a population of over 45 million had agreed to the Dutch plan for autonomy.

The first real milepost was the Linggadjati (Cheribon) agreement reached in March 1947. It recognized the Republic as exercising de facto authority over Java, Sumatra, and Madoera. It provided for the Dutch-supporting areas of Indonesia to be incorporated gradually into a United States of Indonesia by 1949, and for this USI to become a unit in the Netherlands Union under the Dutch Crown. The agreement, like many others, was never put into force because neither side could agree upon its interpretation.

In July 1947, the Dutch began their first "police action," designed to subdue Republican areas which they claimed were controlled by extremists preventing settlement. On the initiative of Australia and India, the United Nations intervened. As a result, a truce was arranged and boundary lines established. Finally a new agreement was signed aboard the US transport Renville at Batavia in January 1948, whereby the Republicans agreed to recognize Netherlands sovereignty until the formation of the USI in January 1949. The Dutch promised to hold a plebiscite to decide whether Indonesians wanted to join the Republic or remain under Dutch rule.

A coup by Russian-trained communists was staged in September 1948. An all-out Republican effort was made to oppose the insurgents, and the campaign ended in December when the Republicans captured Suripno and Sjarifoeddin, after having killed Moeso, the instigator.

However, the Dutch made no move to hold a plebiscite, and the Republican government disregarded Netherlands sovereignty by trying to obtain international recognition in roundabout ways. For instance, at the Economic Cooperation Authority for the Far East Conference at Lapstone last December, the Republic applied and was accepted as an associate member. The Dutch delegation walked out, and a fortnight later Dutch forces launched a new "police" offensive against the Republic. These operations ended in the occupation of the Republic.

In reply to a UN Security Council resolution, the Netherlands Government has stated that it is prepared to establish an interim government immediately, hold elections, and transfer full sovereignty by the middle of 1950.

POLITICAL BACKGROUND

Indonesia has been politically part of the Kingdom of the Netherlands, ruled by a governor-general in the name of the Queen.

As the political and cultural center of Indonesian life, Java has always been the source of any national aspirations. Their formative inspiration seems to have been the Japanese defeat of the Russians in 1905. A few years after the founding of the first national movement in 1908, with its object only self-government, its three leaders were exiled.

In 1918, a representative body, the People's Council (Volksraad) was created. The following year, the Indonesian Communist Party(PKI) came into being, influenced by the Russian revolution. Several thousand alleged Communists were exiled to New Guinea, following an uprising in 1926, when the PKI was dissolved.

The Indonesian Nationalist Party (PNI)was formed by Soekarno in 1927. This was the first party to aim for complete independence, but in 2 years the leaders were all exiled or in jail. A moderate group found in 1937, the Indonesian People's Party, requested recognition of the term "Indonesians" instead of "natives," but was refused. When promulgated, the Atlantic Charter had a great reception in Indonesian political circles, but inquiry about its application to Indonesia by members of the Volksraad met with a non-committal reply from the Dutch government.

The Japanese dissolved all political parties, but after their surrender they recognized Indonesian claims for independence. The Dutch refused to negotiate with Soekarno, who was at the head of the promptly proclaimed Republic, and who had been decorated in Tokyo by the Emperor. But dealings with the more moderate Sjahrir failed to yield any satisfactory result.

The failure of the communist insurrection in September 1948 might well be due to the fact that communist objectives are at variance with the predominant faith of Islam. In addition, the Republicans, anxious as they were at the time to avoid a renewal of Dutch police action, were forced to take rapid steps to suppress the insurrection and so deny to the Dutch the opportunity to resume hostilities.

STRATEGIC SIGNIFICANCE

The barrier to British Empire communications which could be created by a hostile Indonesia can well be imagined, lying as it does across the Strait of Malacca and controlling movement between the Indian Ocean and China Sea. If her numerous air bases were occupied by an enemy power, it could do much towards the isolation of British Malaya, British Borneo, Hong Kong, and Australia from contacts from the west.

Similarly, a considerable amount of shipping could be effectively dispersed among the island's numerous port facilities for use either by or against a communist-dominated Asia.

Indonesia forms a natural line of advance from Asia to Australia's back door, and, with the development of air transport, brings a thousand million Asiatics only 24 hours away.

The resources of Indonesia are of great strategic significance, and their availability to the Western Powers in a future conflict is of the utmost importance.

The indigenous peoples of Indonesia have very strong religious, cultural, and social ties with other nations. They are able to call on the passionate moral support, and where possible, the material support of most, if not all, the peoples of Asia. In addition, their cause for independence finds favor with many European countries. They are bound by blood to the Malays of British Malaya and the predominant faith of Islam allies them directly with Pakistan and the Arab states in the Middle East. Considerable Indian influence is prominent in their culture.

Politically, the rise of the new Asia spirit automatically provides the basis of wholehearted solidarity between Indonesia and the rest of Asia.

Definite Russian interest and support has been forthcoming and there is a belief that much political unrest has been nurtured and nourished by the communists. In support of this is the Dutch claim of the capture of three Malayan-Chinese communist leaders in Sumatra, and the undoubted connection with Moscow of Republican leaders such as Moeso and Sjarifoeddin.

In their endeavors to gain their independence, the Indonesians have submitted their claims through the United Nations, but a member of that organization, Holland, has continually disregarded the efforts of the UN to obtain a settlement. Australia demonstrated great interest in the outcome of the struggle in the NEI, in view of the proximity of this area to her northern borders.

Apart from non-official trades union channels, the Australian government has been prominent in directing UN attention to Indonesian affairs, by granting de facto recognition to the Republic, and spotlighting the Dutch "police action." As a result, the UN set up an Indonesian Commission for investigation on the spot, and it also passed a resolution laying down a date for the granting of independence.

Asiatic countries are unanimous in their support under the leadership of India, which allegedly offered both sanctuary and arms to the Republicans. The Asian conference in January 1949 drew up resolutions recommending the granting of Republican independence. America supported the Republic's claim to independence, even to considering the withdrawal of Marshall Aid to Holland.

Russia made capital wherever possible out of condemning Dutch "colonial oppression." Without doubt, Russia fostered contacts of communists in Indonesia with those in Russia, China, Malaya, and Australia.

Combined pressures finally compelled the Dutch to grant full political sovereignty to the newly recognized United States of Indonesia. Indonesia, however, did not completely sever her connections with Holland. It was agreed that the Dutch Army and administration would be withdrawn, but Indonesia would remain an equal partner in the Dutch union of nations.

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HUMAN VALUES & WORLD SECURITY

CONTINUED FROM PAGE 21

part of their rulers is, to use the Nazi phrase, "guns instead of butter." Because of the productivity of the people of the free world, it is possible for them to have both. Still, the necessity of collective defense deprives us all of the full advantages of our productivity. It is patently against the mutual interests of all peoples to forego the advantages of a world security based upon genuine cooperation in the United Nations.

That is why I believe that if the door to aggression is effectively barred by unified defense and the door to cooperation within the United Nations kept open, the day will come when the futile policies of expansion will be replaced by policies of cooperation in good faith. The great thing about the United Nations is that the shift can take place at any moment.

We must be continuously alert to the slightest step in the right direction. For it will take many steps, many demonstrations of good faith, many acts of cooperation to bring us to a point of mutual confidence which will enable us to resolve the larger issues involved in a new basis for world security.

U.N. SOCIAL AND ECONOMIC COLLABORATION

Meanwhile, the United Nations opens great vistas of opportunity for practical collaboration with most of the members on social and economic improvement. This is directly related to world security because the power to defend rests upon the stability of each society and the confidence of the people in their capacity to go forward. Indeed, the fundamental strength for collective security comes not primarily from the weapons for defense in hand, but from the over-all productivity of the people and their standard of life.

In the General Assembly, we acted unanimously in adopting a program for technical assistance to underdeveloped countries. In spite of the fact that this program involves the leadership of the specialized agencies in which the Soviets do not participate, their delegations supported the plan.

Not only can such specific cooperation efforts contribute to world improvement, but they also offer opportunities for broadening the collaboration in the United Nations. If we can do enough things together to meet practical needs of people, to restore trade, expand education, raise living standards, tap unused resources for human welfare, we can increase the confidence of peoples in collective security.

We are all very young and inexperienced in the art of consultation for common ends. We are used to making speeches in the public forum to interpret our individual views but not accustomed to multilateral consultation to formulate our common views. Here is a new challenge to statesmanship which we have only begun to accept. It has to do with seeking common understandings on which to rest ultimate agreements.

I dare say that by perfecting the process of consultation in the United Nations we may realize one of our greatest hopes of eventually bridging the misnamed East-West chasm. In small groups or in pairs, delegates can explore opportunities in the mode of conversation more easily and effectively than in public addresses. They can seek clarification and definition of each others words, try out generalizations experimentally on specific situations, and be free to revise their judgments. In the process of consultation, they can exchange frank information about the feelings and attitudes of their respective peoples which throws light on why various delegations put emphasis on a different problem or solution.

We are carrying on this process of informal consultation on a broader scale than has ever been attempted. It already shows promise of creating a new basis for agreement. The permanent members of the Security Council have agreed to consult together in this way before major discussions take place in the Council chamber to see whether they can find an approach to unanimity instead of talking their way into an impasse and a veto. Likewise, the delegates of the Big Five and Canada have been exploring their differences on the problem of atomic energy in these informal consultations.

I recognize that it is a slow and unspectacular process. It calls for great patience. But if we persist in it, I think we may gradually work our way out of what appears to be impossible dilemmas. If we really anticipate the day when the facts of stability and strength in the free world will impress the Soviet leaders with the futility of pursuing their aims of expansion, then we can view with hope the possibilities for agreement through informal consultation. It is in such discussion that we may find the chances for the first steps and satisfy ourselves that they are sound steps.

State Dept. Bull. Dec 1949 Uncl

THE BOOK SHELF

RECOMMENDED READING
FOR YOUR OFF DUTY HOURS

TITLE: Supersonic Combat

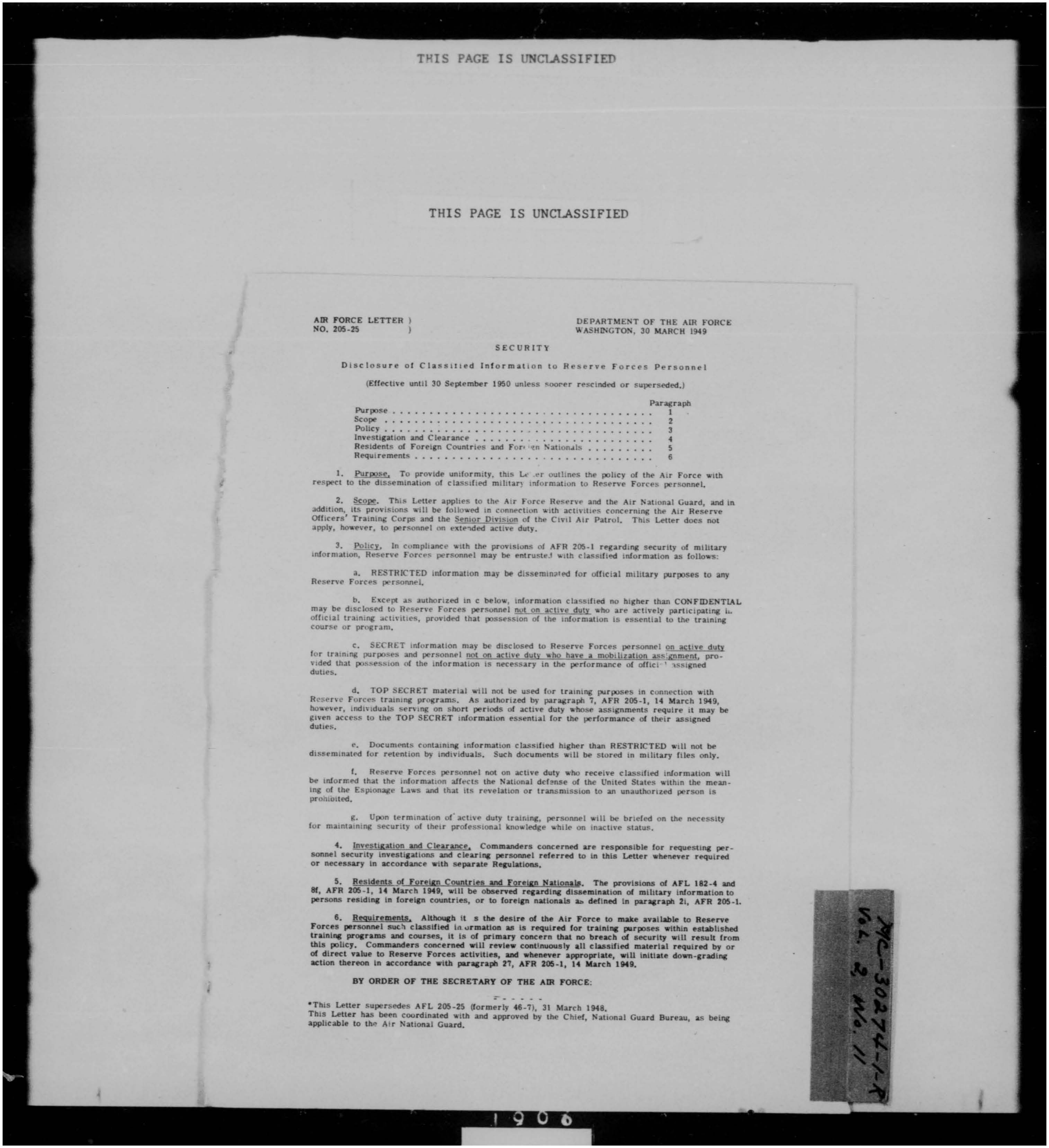
AUTHOR: J.L.H. Peck

SOURCE: Ordnance, Mar-Apr 1950

ADDRESS: American Ordnance Assn.
17th at Penna. Ave., N.W.
Washington 6, D.C.

The fact that supersonic jet-aircraft combat conditions require the development of better armament and tactics is shown through a discussion of tumbling bombs, ballistics, wartime fighters, jets, and target discrimination. The higher speeds employed result in fewer hits, even with the finest markmanship. Target discrimination is discussed in relation to radar-identifying and gun-laying equipment, and fighter positions of attack utilized. Progress in fighter armament includes a new 20-mm automatic cannon (with a maximum effective range of about 2200 ft), a .60-caliber machine gun, an improved 75-mm cannon, and rocket-type missiles. Ballistic factors such as jump, yaw, drift, or dispersion, which are caused by very high speeds and which are not solved by present gun sights, are also examined.

CADO May 1950 Uncl



AIR FORCE LETTER)
NO. 205-25)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 30 MARCH 1949

SECURITY

Disclosure of Classified Information to Reserve Forces Personnel

(Effective until 30 September 1950 unless sooner rescinded or superseded.)

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1. Purpose. To provide uniformity, this Letter outlines the policy of the Air Force with respect to the dissemination of classified military information to Reserve Forces personnel.

2. Scope. This Letter applies to the Air Force Reserve and the Air National Guard, and in addition, its provisions will be followed in connection with activities concerning the Air Reserve Officers' Training Corps and the Senior Division of the Civil Air Patrol. This Letter does not apply, however, to personnel on extended active duty.

3. Policy. In compliance with the provisions of AFR 205-1 regarding security of military information, Reserve Forces personnel may be entrusted with classified information as follows:

a. RESTRICTED information may be disseminated for official military purposes to any Reserve Forces personnel.

b. Except as authorized in c below, information classified no higher than CONFIDENTIAL may be disclosed to Reserve Forces personnel not on active duty who are actively participating in official training activities, provided that possession of the information is essential to the training course or program.

c. SECRET information may be disclosed to Reserve Forces personnel on active duty for training purposes and personnel not on active duty who have a mobilization assignment, provided that possession of the information is necessary in the performance of official assigned duties.

d. TOP SECRET material will not be used for training purposes in connection with Reserve Forces training programs. As authorized by paragraph 7, AFR 205-1, 14 March 1949, however, individuals serving on short periods of active duty whose assignments require it may be given access to the TOP SECRET information essential for the performance of their assigned duties.

e. Documents containing information classified higher than RESTRICTED will not be disseminated for retention by individuals. Such documents will be stored in military files only.

f. Reserve Forces personnel not on active duty who receive classified information will be informed that the information affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation or transmission to an unauthorized person is prohibited.

g. Upon termination of active duty training, personnel will be briefed on the necessity for maintaining security of their professional knowledge while on inactive status.

4. Investigation and Clearance. Commanders concerned are responsible for requesting personnel security investigations and clearing personnel referred to in this Letter whenever required or necessary in accordance with separate Regulations.

5. Residents of Foreign Countries and Foreign Nationals. The provisions of AFL 182-4 and 8f, AFR 205-1, 14 March 1949, will be observed regarding dissemination of military information to persons residing in foreign countries, or to foreign nationals as defined in paragraph 2i, AFR 205-1.

6. Requirements. Although it is the desire of the Air Force to make available to Reserve Forces personnel such classified information as is required for training purposes within established training programs and courses, it is of primary concern that no breach of security will result from this policy. Commanders concerned will review continuously all classified material required by or of direct value to Reserve Forces activities, and whenever appropriate, will initiate down-grading action thereon in accordance with paragraph 27, AFR 205-1, 14 March 1949.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

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*This Letter supersedes AFL 205-25 (formerly 46-7), 31 March 1948.
This Letter has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.

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Vol. 2, No. 11

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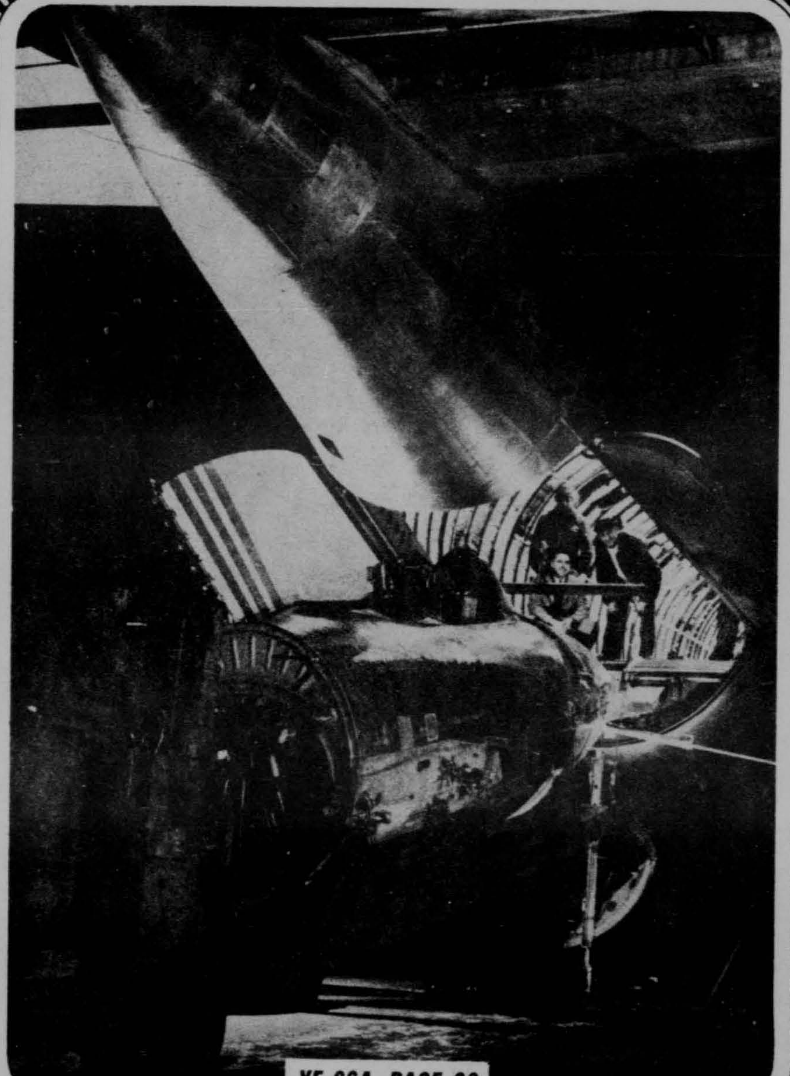

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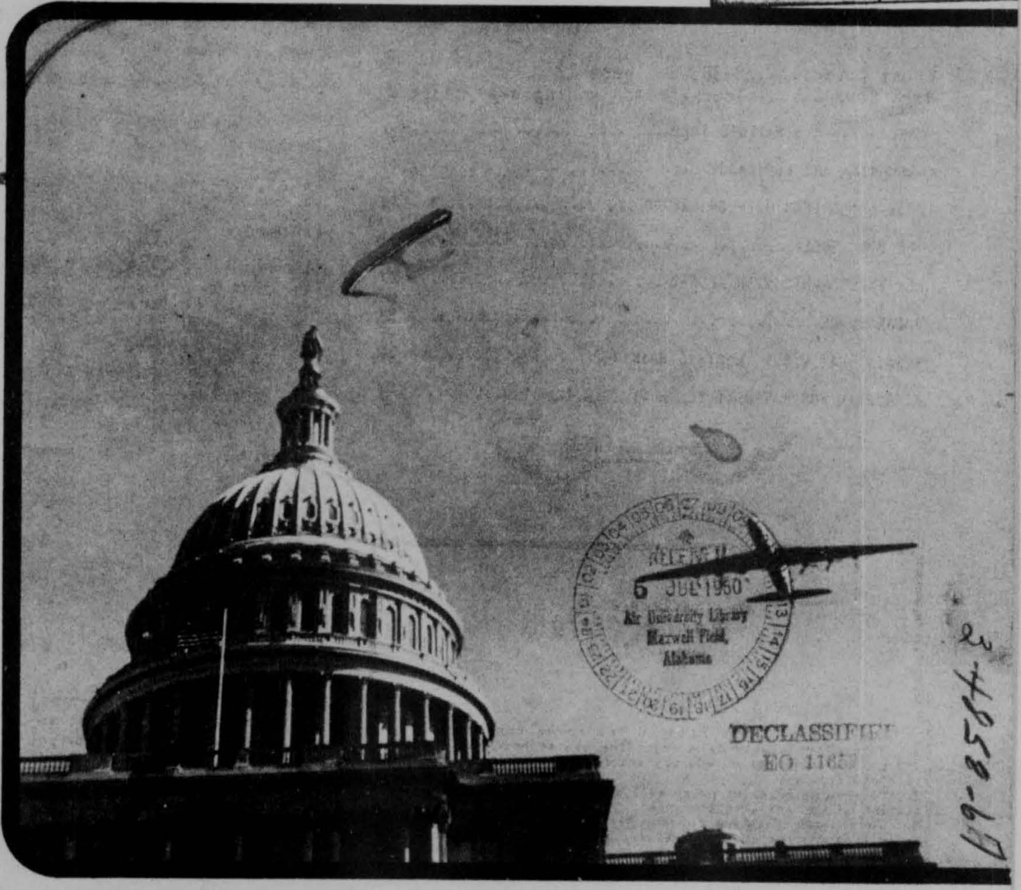

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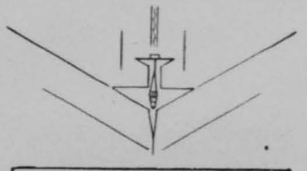

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2. To provide material which will afford all personnel an appreciation of the intelligence role.
3. To provide a medium whereby all intelligence personnel and activities may exchange viewpoints, problems and solutions.

Two types of material are solicited for publication:
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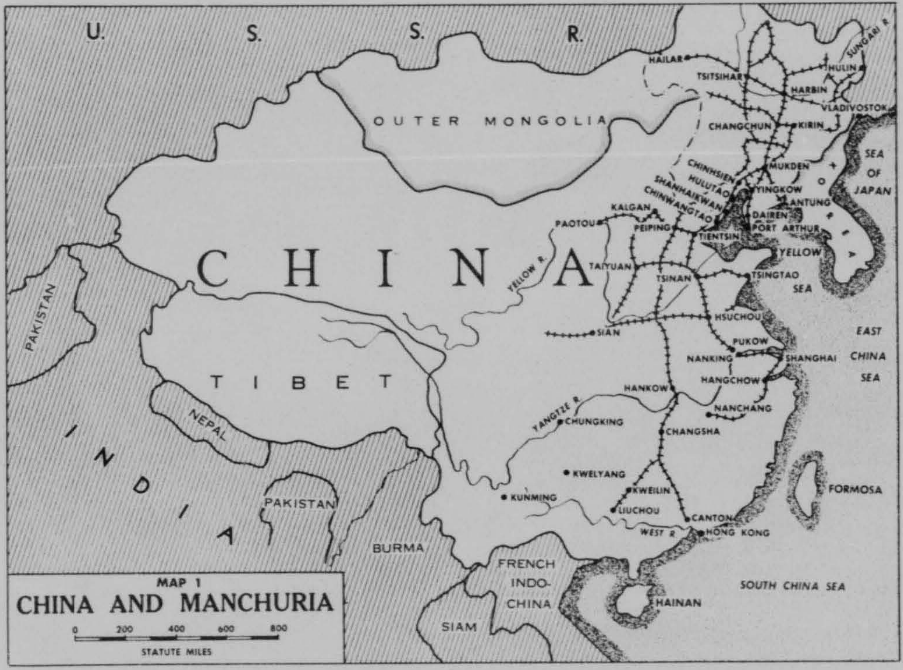
Manchuria,
A STRATEGIC TRAP

Major Martin F. Sullivan, Coast Artillery Corps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WEST R.
HONG KONG
SOUTH CHINA SEA
HAINAN
0 200 400 600 800
STATUTE MILES

MAP 1
CHINA AND MANCHURIA

Since the end of World War II, communism has demonstrated a powerful militancy that has commanded attention throughout the world. Particularly in Asia has a positive communist militancy been evidenced. In China, sweeping Communist military successes represent the culmination of large-scale offensives in which Chinese National Government forces have been dealt a series of resounding defeats.

There has been considerable comment on the reasons for the failures of the Chinese National Government in the civil war against the communists. Most comment centers on many diverse, although relevant, factors. Despite the intimate connection between the political, economic, and military factors, an almost universal observation in regard to the war in China charges the steady disintegration of the Government's position to mili-

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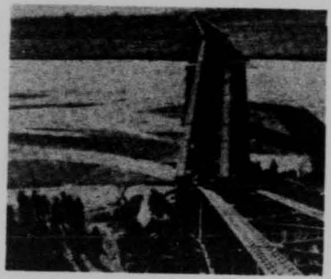


RAILWAY BRIDGE over the Shao Ling River, wrecked by the communists to delay the Government forces.

tary failures. In particular, reasons ascribed for the Nationalists' military debacle are: corrupt and incompetent leadership, ineffective tactics, and supply and transport deficiencies. Able observers and skilled reporters subscribe to these points of view. Writings by such individuals are often documented with specific charges. Facts so presented outline a progressive deterioration of Nationalist capabilities. This, in turn, had led to the establishing of the summer of 1947 as the point in time when the strategic initiative in China passed from Nationalists to communists.

INITIATIVE LOST IN 1945

While historians may have considered several aspects which deserve notice, exception to this viewpoint may be taken on military grounds. Militarily, the Chinese National Government forces never held the strategic initiative after the fall of 1945. Once committed to operations in Manchuria, it was impossible for Nationalist forces to resolve military aspects of the struggle for control which was then coming into sharp focus.

In China, a bitter political and military struggle between the Government and native communists had existed for nearly 20 years. This struggle was intensified by recurring military operations, and the Chinese communists maintained sizable ground forces that were organized, trained, and led by able commanders.

Overshadowed in a large measure by the Japanese war, this long-standing struggle was influenced by conditions resulting from the war in China and global events during World War II. Many influences could be explored: e.g., Yalta, the late General Stilwell, the Sino-Soviet pact of 1945, United States mediation in the civil war. Militarily, however, the fact remains that in 1945 the Nationalists could not accomplish required, concurrent missions, i.e., occupy, pacify, and consolidate simultaneously the vast areas of Japanese-held China and Manchuria.

Manchuria represented an enigma for the Chinese government. It was in Manchuria that the preliminary events to World War II may be said to have originated. It was over Manchuria that the Chinese ultimately fought the Japanese. The productive capacity and natural riches of the area were essential to rehabilitation of the war-damaged Chinese economy. Soviet occupation of the area, during the final week of the war, added to the complexity of the problems then facing the Chinese Government.

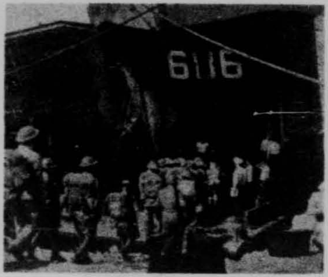
"CRADLE OF CONFLICT"

Manchuria has been called the "Cradle of Conflict" and the "Tinderbox of Asia." In fact, it had long been an arena in which the conflicting interests of Russia and Japan were pitted against each other. Historically, the area served as a battleground for those powers, despite nominal Chinese sovereignty. The vast majority of Manchuria's population is Chinese, and China apparently hoped for the area to become the base of a long-range industrial development. Reoccupation of Manchuria was essential to China's needs and important to the prestige of the Chinese Government.

The Sino-Soviet treaty of August 1945 gave to the Soviet Union a preferential position in Manchuria. It is interesting to note that at a time when extraterritorial privilege was bowing out in China, the preeminent position of the Soviet Union should be established by treaty. Among the provisions of the treaty, there was a stated recognition of Chinese Government sovereignty over Manchuria; a promise by each signatory of non-interference in the internal affairs of the other; establishment of Dairen as a free port; and designation of Port Arthur as a joint naval base. The treaty also provided that the USSR should share ownership in the Manchurian railroad system. A significant part of this treaty was that the USSR agreed to render physical aid and moral support to China, and that this aid and support was to be given only to the National Government.

JAPANESE HELD AREAS

In regard to the Japanese held areas of China proper, several considerations had bearing on the situation. Consequent upon the struggle between the Chinese Government and the communists, an effort had been made to contain the communists. Even during the war, sizable Nationalist forces were committed to a blockade of the communist base area, around Yenan. While this effort was effective in denying communist movements either to the west or the south, it impeded in no way an extensive communist infiltration east and north into Japanese-held areas. Actually, the Japanese generally controlled and held only the principal cities and main lines of communication in North and Central China. The communists were able to extend an effective military and political control throughout rural regions of those areas.



FIRST ARMY TROOPS boarding a landing ship which took them to Manchuria early in 1946.

When V-J-day arrived, the communists had forces that were disposed in the area of key cities, such as Peiping, Kalgan, Tsinan, Tientsin, Tsingtao, Nanking, and Shanghai. Government forces were located principally in South-Central and South-west China. When Japan was defeated, a vacuum threatened to replace the relative political and economic stability that she had established and maintained in the occupied areas of China. The Government and the communists entered into a race for control of vital areas in North and Central China. In this race, the Government was at a serious positional disadvantage.

Although, in 1937, the communist armies had been designated as part of the over-all Chinese forces in a "United Front" against the Japanese, they were, in fact, independent of Government control. In August 1945,

A NATIONALIST COMMANDER and troops arriving at Chinchow.

Chu Teh, top communist commander, ordered his troops to move on the key areas of China, to take the surrenders of the Japanese forces in those areas, and to resist any interference with communist operations.

NEW PHASE OF STRUGGLE

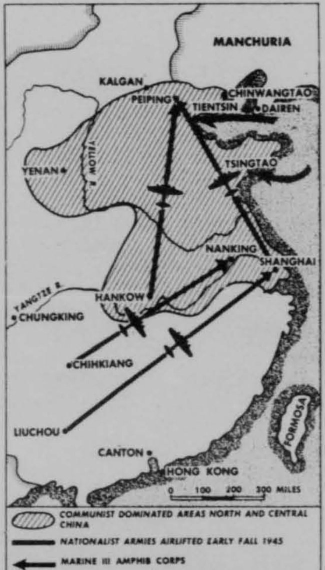
With that order, a new phase of the long-standing struggle between the Government and the communists was signalled. It was apparent that if the communists could receive the surrender of large Japanese forces, they would gain the arms that would enable them to hold the vital areas of North and Central China. In most instances, Japanese field commanders did not recognize the communists as authorized to accept surrenders, and they adhered literally to the surrender terms which provided for dealing with Chinese Government or other Allied representatives. The action of Japanese field commanders, coupled with United States airlift of Nationalist forces to Peiping, Nanking, and Shanghai, and the arrival of the US Marine III Amphibious Corps at Tientsin and Tsingtao, had the effect of denying communist control of certain key areas of North and Central China. During September and October 1945, Chinese Government forces moved by US air transport approximated 110,000 men. These forces included three Chinese armies, each consisting of three infantry divisions.

The Nationalists faced difficult military problems at this time. They were responsible for the occupation of vast areas; disarming the widespread and numerous Japanese forces disposed throughout China, Formosa, and northern French Indo-China; and for providing the basis of Government control of key areas within China, against which communist attacks were likely. Despite the numerical strength of the Nationalist forces, then approximately 4 million men, time and space factors, among other considerations, precluded an immediate, satisfactory redisposition of available troops to fulfill required missions. Under the most favorable circumstances, it would have required 5 months to accomplish necessary Chinese Army moves within China proper. Soviet occupation of Manchuria, and an expected orderly take-over of that area at a later date by Nationalist forces, were factors the Government had to consider.

SOVIET AIRBORNE troops on the airfield at Harbin.

NATIONALIST MOVES

Nationalist occupation movements and operations during the early fall of 1945 gave the Government control of the provinces south of the Yangtze River and the principal northern cities. The broad communist control of rural areas of North and Central China, mainly established during the period Japanese forces occupied those regions, remained firm. In addition, the communists occupied Kalgan, the Mongolian gateway through the Great Wall to North China. This city became military headquarters for Eighth Route Army operations in North China and Manchuria. Kalgan was an important and worthwhile base of operations. It afforded factories, machine shops, and railway facilities. There, at least, the communists did take over considerable quantities of Japanese arms and equipment, including a reported 60 tanks. From Kalgan, communist operations were afforded depth and strength because they were backed by a base of power that was established across Soviet-dominated Mongolia, Siberia, and Manchuria. The Chinese communists, in effect, were the van of that base of power.


MANCHURIA
KALGAN
PEIPING
TIENTSIN
CHINWANGTAO
DAIREN
TSINGTAO
YENAN
YELLOW R.
NANKING
SHANGHAI
YANGTZE R.
HANKOW
CHUNGKING
CHIHKIANG
LIUCHOU
CANTON
HONG KONG
FORMOSA
0 100 200 300 MILES
COMMUNIST DOMINATED AREAS NORTH AND CENTRAL CHINA
NATIONALIST ARMIES AIRLIFTED EARLY FALL 1945
MARINE III AMPHIB CORPS

MAP 2

Communist troops, with the apparent objective of securing additional Japanese stockpiles of arms, made a number of abortive attacks on principal cities of North and Central China during this period. The Nationalists made immediate efforts to open and maintain communication between key cities and areas held by Government forces. They were, accordingly, committed to garrisoning these cities and to holding the rail lines and communication centers. Communication between the key areas was essential to the country's economic rehabilitation, apart from the logistical requirements of the Government forces. Communist forces in North and Central China, not committed to holding territory, made good use of guerrilla tactics. By continued harassing, widespread demolitions, and raids on smaller garrisons, the communists exploited their available resources. While avoiding positional warfare, communist forces often attacked in strength in order to force Nationalist shifts and redisposition of forces. Throughout the area of North and Central China generally, the communists held the tactical initiative.

COMMUNIST TACTICS

The military clashes in North and Central China were staged against a large and varicolored backdrop of national and international political and economic considerations. Communist tactics and operations were generally obstructive, denying Government consolidation of these areas, and having the effect of a continuing attrition on Nationalist men, money, and material. Communist operations influenced strongly political and economic developments within China. However, communist movements and activities were of particular military significance. The extent and efficacy of communist operations frequently forced the commitment of Nationalist local reserves. Indicative of the relative dislocation of Nationalist forces in North China is the fact that approximately one-quarter million Japanese troops were still armed and guarding towns and communications there in November 1945. Generally, however, large stocks of Japanese arms and munitions were not available to the communists in North and Central China.

Reports of the arrival in Manchuria of elements of the Eighth Route Army, the main strength of regular communist organized field forces, were widespread during the fall of 1945. It was claimed that these troops were gaining large stocks of Japanese arms and equipment. Coupled with information concerning the large-scale looting of Manchurian industry by Soviet forces, the Government was faced with an increasingly serious and wider problem. The Government intended to recover the area of Manchuria both for its considerable essential industrial potential and its agricultural productivity.

SOVIET INFANTRY occupying Harbin to take the surrender of Japanese troops.

As a preliminary to taking over the area, Chinese government officials principally administrators and key technicians, had been sent to Manchuria. According to Chinese Government statements, they became virtual prisoners of the Russians. Soviet occupation forces were said to have warned such personnel they could not guarantee their protection. In one case, a group of Chinese officials which had gone to Manchuria with the consent of the Soviet commander was murdered near the Ashan mines. Soviet statements about the event were that "300 armed bandits" had murdered the Chinese officials. The Chinese Government claimed that only Soviet troops were in the vicinity and that Soviet guards were on the train in which they were killed. Thus, while Chinese military occupation of Manchuria had been a recognized requirement, based upon an eventual withdrawal by Soviet forces, such untoward events accelerated Nationalist efforts to enter the area.

SOVIET ACTIVITIES

Dairen, a principal port of the Far East, was the natural entry to Manchuria. Transported in United States ships, Nationalist forces were denied permission to land at Dairen by the Soviets, because of a narrow and literal interpretation of the Sino-Soviet treaty regarding the status of Dairen as a "free port." Following a hurried conference at Changchun between Chinese Government officials and the Soviet Far Eastern commanders, Marshals Vasilevsky and Malinovsky, it was announced that the Russians had guaranteed a landing in Manchuria. Dairen and Port Arthur were specifically excluded as landing places. The Soviets proposed Yingkow as the port to be used.

Ships of the US Seventh Fleet, under the command of Vice Admiral

Daniel E. Barbey, USN, were transporting Nationalist forces to Manchuria. A rapid movement from Dairen to Yingkow by this force had an interesting development. On arrival at the latter port, Soviet forces occupied the place. A parley between Chinese and local Soviet commanders resulted in agreement for a landing and take over by Nationalist forces the next morning. During the night, communist troops moved into the city and by daybreak were in entrenched positions ready to oppose the landing. Seeking to avoid intervention and involvement in what remained an undeclared civil war, the American ships withdrew and landed the Nationalists at Chinwangtao in North China. Denied the use of Manchurian ports by the Soviets, Nationalist troops faced strong communist forces grouped in North China and Manchuria across the remaining overland path of entry into the latter area.

TIME FACTOR

Time became a factor of increasing importance to the Government. It appeared necessary to consolidate and to pacify the areas of North and Central China. It was apparent that extensive military operations in those areas were required. However, reports persisted--some of them later substantiated--that the Soviets were permitting and probably assisting the entry of large bodies of communist troops into Manchuria.

While the communists had not gained appreciably large stocks of Japanese arms in North and Central China, the very considerable stockpiles of arms, ammunition and equipment of the Japanese Kwantung Army in Manchuria were reportedly becoming available to the communists with Soviet knowledge and consent. The communists were being given the opportunity or organizing a large military force in Manchuria and of establishing political and economic control there. Despite those developments, the priority of missions to be assigned Nationalist forces logically required first, that the areas of North and Central China be consolidated; and later, with their rear and flank secured, that Manchuria be occupied.

As a consequence, generally, only token forces were first allotted to the Nationalist occupation of Manchuria. These included the 13th and 52nd Armies landed at Chinwangtao, which fought north to Shankaikwan and Hulutao, giving two additional small ports of entry to the Nationalists. Newspaper reports at the time mentioned repeated Chinese attempts to negotiate with the Russians for flying Government troops into Manchuria.

Such reports referred to Soviet insistence on specific, narrow limitations regarding the time period during which Nationalist forces might be flown in before Soviet withdrawal. It was apparent that, under such arrangements, Government forces would be placed in unduly extended positions, and that troops so committed would exist as an island in an area fast becoming dominated by a growing communist troop strength. A New York Times correspondent in a dispatch from Chungking dated 20 November 1945, commented:

"The Russians seem to be following a policy of declining to hold Manchurian points until Chinese Government control can be consolidated and at the same time of taking no action to hamper the growing communist influence."

Although information was available that the Soviet forces then occupying Manchuria were systematically looting the area, the Chinese were, in effect, forced to request the Soviet on two occasions to postpone their withdrawal. In part, necessary operations in North China made this essential. Three Nationalist columns were in motion in North, Central, and East China at the time. In the east, troops were being landed at Tsingtao and Tientsin preparatory to moving against communist forces in Shantung and Hopeh provinces. A central column was set in motion north along the Tientsin-Pukow railroad. West of this force, another northward movement was begun from Hangkow, aimed to clear the railroad to Peiping.

Coinciding with the Nationalist moves to reopen communications in North China, the Soviets announced their intention to withdraw from Manchuria. Faced with an expanding communist influence and military strength in Manchuria that was ready to move into areas evacuated by the Soviets, the Government was in a difficult position. The required campaigns of North China were, in effect, foregone, and the Nationalists, still denied the use of the chief ports in Manchuria, prepared to fight their way into the key cities there. Following a series of scattered clashes enroute, the Nationalists moved the 250 miles north from Chinwangtao into Mukden, arriving there on 12 December, following agreement with the Soviets for the takeover of the city. On that same day, one division of the Nationalist 94th Army was air-lifted into Changchun, 170 miles northeast of Mukden.

US POLICY

Announcement at the time of United States policy towards China had important bearing on later events. Pledged to a strong, free, united and democratic China, the United States pointed out the threat to world peace that existed as a result of the war and unsettled conditions in China. An immediate end of hostilities between the National Government and the communists was made essential.

In late December 1945, the communists, with a steadily worsening military position in North China, urged an "unconditional, immediate, and nation-wide truce." The government proposed that "all hostilities shall cease and railway communications shall be restored." The truce was agreed upon effective 13 January 1946. A specific agreement of this truce provided that the "cessation of hostilities order does not prejudice military movements of forces of the National Army into or within Manchuria which are for the purpose of restoring Chinese sovereignty." In addition, the truce stipulated that:

1. All hostilities would cease immediately.

2. All troop movements would also cease, except as noted regarding Manchuria, and south of the Yangtze where Government sovereignty was unchallenged.

3. All lines of communication would be cleared.

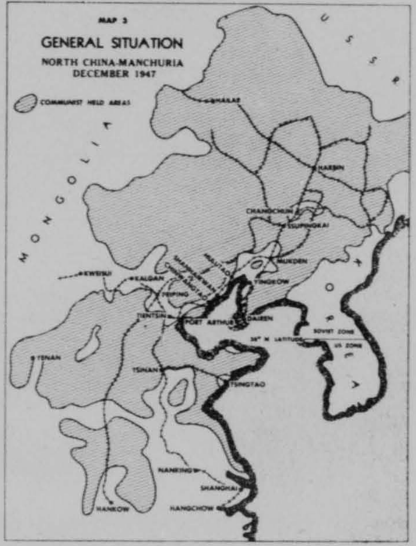
RESERVES COMMITTED

Based upon the provisions of the truce agreement and apparently reckoning that the "cease-fire" would guarantee the status quo in North and Central China, the Government then committed some of its best troops to Manchuria. From mid-January to mid-March 1946, the New Sixth Army and the New First Army, both US trained and equipped, were moved to Chinwangtao. Representing what is generally conceded to have been some of the most efficient fighting forces of the Chinese Army, these troops were, in effect, part of the Government's strategic reserves then available. Another reason that troops of the Nationalist strategic reserve were committed in Manchuria was occasioned by the eventual Soviet evacuation of the area, completed during the spring of 1946. The strategic position of communist forces in Manchuria, principally in the north and west-central regions, was such that efforts to occupy evacuated territory and regions would result in serious conflict.

In mid-April, heavy fighting broke out in Manchuria. As indicated above, one division of Nationalist troops had been airlifted to Changchun. This poorly equipped garrison of about 7,000 was attacked on 14 April by about 50,000 communist troops just as the last Soviet units withdrew from the city. Press reports stressed the communist use of Japanese artillery, machine guns, antitank guns, and mortars in the attack. At the same time, the Nationalist New First Army was driving north from Mukden area to relieve the Changchun garrison. This force was delayed by strong, prepared communist defenses in the area of Ssupingkai. With its relief held up in the south, the Changchun garrison was surrounded. Changchun fell to the communists on 18 April.

DANGER TO COMMUNICATIONS

Delayed for a month by strong communist defenses at Ssupingkai, the Nationalists had reason to ponder future moves, for communist operations in North China at that time threatened the main overland supply route to Manchuria. This route was tenuous. The available line of communication from China into Manchuria ran north along a narrow corridor between the mountains and the sea through Jehol province. Faced with the prospect of large-scale operations in Manchuria, this route was recognized as inadequate and particularly vulnerable. Strong communist forces were based throughout Jehol.


MAP 3
GENERAL SITUATION
NORTH CHINA-MANCHURIA
DECEMBER 1947
COMMUNIST HELD AREAS
U S S R
MONGOLIA
HAILAR
HARBIN
CHANGCHUN
SSUPINGKAI
MUKDEN
YINGKOW
HULUTAO
SHANHAIKWAN
CHINWANGTAO
KWEISUI
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TSINAN
TSINGTAO
NANKING
SHANGHAI
HANKOW
HANGCHOW

Dairen, the natural entry and base of operations for Manchuria, was denied to the Nationalists. The main north-south railroads of Manchuria had a terminal there. Utilization of Dairen as a port and a base for operations would have provided excellent facilities and enabled a systematic build-up of forces, with a phased, secure northward movement. To open and maintain additional routes from Peiping to Mukden indicated further campaigns against greatly strengthened communist forces. The strategic position of communist forces in Manchuria proper at the time dictated that the Nationalists could hope to occupy only a deep and exposed salient there. The psychological advantage of the communists, operating everywhere in Manchuria within no more than 200 miles of Soviet dominated areas, was of great importance.

Despite the announced truce in North China, fighting continued there. Widespread, large-scale operations remained likely in these areas. The decision had been made, however, and Manchuria continued to represent a steady drain on Nationalist strength. In June 1946, the Nationalists retook Changchun. Except for small bridgeheads established from time to time thereafter, they never moved north of the Sungari River. Nationalist military operations in the area were retarded by several truces during 1946. Limited activity was devoted to efforts at stabilizing a front along the Sungari and to consolidating the position in southern Manchuria. Even these efforts only extended further the Nationalists' limited strength. Successive communist offensives kept the Nationalists off balance during the winter of 1947. These increased in intensity. Casualties and a continuing attrition required that additional government forces be transferred from North China.

COMMUNIST STRATEGY

Such events demonstrated that it was communist strategy that was being successful. The Nationalists everywhere were reinforcing one area at the expense of another. Even in a "successful" defensive operation in Manchuria, the Nationalists lost men and equipment. US trained Government troops were committed to extended operations for which they were ill-suited. Taught to attack and experienced in offensive operations, they garrisoned cities and guarded rail lines. In continued defensive fighting, these units, lost well-trained officers and men as casualties. Ultimately, the US trained units lost their real identity through such attrition. A lack of replacements seriously depleted the strength of Nationalist units, and those which became available lacked training or experience.

The deterioration of Nationalist troop units in Manchuria was matched by a steady worsening of their military position. Communist interdiction of communications and isolation of the few cities held by Government forces progressed through 1948. Although events rushed to a climax during the early part of this year, the issue had been resolved about 3 years before.

Chinese Government forces, comitted to operations in Manchuria, were like an over-eager defensive tackle breaking into an opponent's backfield. The play calls for an easy entry. The tackle romps in and is set upon, hard. The Nationalists were in a similar position. It was necessary to do much with little. Despite the provisions of the Sino-Soviet pact of 1945, Soviet actions increased tremendously the Nationalists' problems. Soviet withdrawal from Manchuria precluded required operations in North China. Because of the operations of widespread and greatly strengthened communist forces and of Soviet actions coincident with Chinese communist moves, the Nationalists were forced to commit selected troops to Manchuria. A part of the Government's strategic reserve--likely never again reconstituted--these particular units deteriorated as a result of continuing attrition in purely defensive operations. Literally, "The Cradle of Conflict" and "Tinderbox of Asia" had become a "trap" into which a struggling Nationalist Government was inveigled and where its lot and fortune was largely lost.

Mil Rev May 1950 Unclas

COMMUNISM and ESPIONAGE

One of the real dangers of Communist-inspired espionage in the United States is this, in addition to the infiltration of paid espionage agents we must also steel ourselves to the ugly fact that espionage for the USSR is also carried out by men and women, who, though enjoying all the privileges and benefits of citizenship within the land of their birth or adoption, have still pledged their whole lives and their whole allegiance to Soviet Russia by their embracement of Communism, virtually as a form of secular religion.

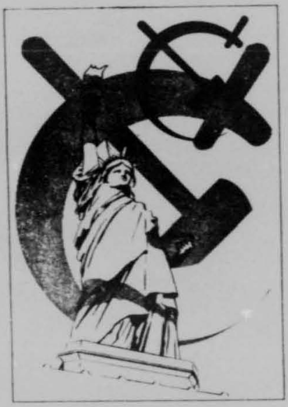
The most recent grim example, treacherously betraying the men, women, and children of both the United States and Great Britain, was Doctor Klaus Emil Julius Fuchs, brilliant scientist, and British subject by naturalization.

Eliminating personal financial gain, for it apparently was not one of the principal motivating factors in this case, what were some of the motives that made this quiet, scholarly, and brilliant atomic scientist betray, first, the nation that had given him sanctuary from Naziism, and, second, the United States--at that time the arsenal of Democracy—with both nations then engaged in a fight to the death against the Hitlerism that had driven Fuchs from the land of his birth?

What are some of the underlying drives that motivate other citizens of free nations, and formerly free nations, to become died-in-the-wool Communist espionage agents for the Kremlin against the land of their birth?

These motives can only be complex, varying in intensity and character, as human individuals differ from one another. All we do is to seek out some of the answers by studying the documented cases that have developed to date, and then examine the personal lives and the backgrounds of the individuals involved, such as Doctor Fuchs, arriving at our own conclusions.

The conclusions we reach should then impress



American Communists enjoy our privileges, yet give their allegiance to Soviet Russia.

J. Edgar Hoover says there are 55,000 Communists. Behind them stand a half million fellow travellers and sympathizers.

Communism is the opposite of Democracy.

upon each of us, again, the necessity for the absolute safeguarding of all classified USAF information from every possible weakling of the Doctor Fuchs, Alger Hiss variety. This discussion attempts such a study of Doctor Fuchs. The paragraphs in quotation marks are practically all from Fuchs' confession. The four counts under which Fuchs was indicted are underlined. The paragraphs in parentheses are a chronological account of Fuchs' activities. The discussions of possible drives and motivations are capitalized.

We must be eternally vigilant in safeguarding classified information.

"Fuchs originally joined the Communist Party in Germany before the rise of Hitler, leaving Germany for England in 1933 as a political refugee from Naziism."

Your alertness will weaken Communists.

(When Hitler came to power, Fuchs went underground in Germany, then went to France, and subsequently came to England.)

BECOMING IMPRESSED WITH AN IDEALISTIC VIEW OF COMMUNISM IN HIS YOUTH, FUCHS PROBABLY SAW IN RISE OF NAZIISM MANY EXTREMES OF SOCIAL ABUSE AGAINST WHICH HE REACTED VIOLENTLY. AS A MEMBER OF SUCH A MINORITY GROUP,THIS PROBABLY ENGENDERED A HATRED OF ALL POLITICAL ORDERS OPPOSED TO COMMUNISM,AMPLIFIED BY FACT THAT HE, PERSONALLY, WAS FORCED TO LEAVE HIS COUNTRY AND HIS ASSOCIATES, DUE TO HIS THEN-FORMING POLITICAL BELIEFS.

The first aim of Communism is overthrow of the government.

"From the time of his arrival in England,there was no evidence of an active association with the Communist Party."

Communists bore from within by getting agents into the government.

(Upon the outbreak of war he was classified as a refugee from Germany by one of the Tribunals which had been set up for the examination of aliens.)

IT IS COGENT TO REFER AT THIS TIME TO ONE OF THE TENETS OF COMMUNISM. IN POSSIBLE EXPLANATION OF FUCHS' APPARENT TEMPORARY RETIREMENT FROM ACTIVE COMMUNIST ACTIVITY UPON HIS ARRIVAL IN ENGLAND. IT NOT ONLY SUITED THE PURPOSE OF FACILITATING HIS "SCREENING" TO ESTABLISH A FIRM POSITION IN GREAT BRITAIN, BUT MORE IMPORTANT, IN THE WORDS OF LENIN, "WE MUST RESORT TO ALL SORTS OF STRATEGEMS, MANEUVERS, ILLEGAL METHODS, TO EVASIONS AND SUBTERFUGES...TO CARRY ON COMMUNIST WORK WITHIN...AT ALL COSTS." IN SHORT,

Be security conscious at all times, just as the Communists are revolution conscious.

AMONG COMMUNISTS, IT IS LEGAL TO LIE, CHEAT, OR STEAL, IF IT WILL SERVE THE PARTY'S ENDS OF THE MOMENT, AND FURTHER AS A BACKGROUND TO FUCHS' LATER ACTIVITIES, STALIN'S INJUNCTION TO WORLD COMMUNISTS IS, "TO STRENGTHEN OUR SOVIET INTELLIGENCE SERVE AND SYSTEMATICALLY HELP IT TO DEFEAT AND ERADICATE THE ENEMIES OF THE PEOPLE."

"In 1940, due to the threat of invasion, and because of his nationality, he was interned and sent to Canada."

"When the threat of invasion had passed, in 1942, he was returned to England and released from custody."

AT THIS TIME WE AGAIN FIND FUCHS AS THE CENTER OF AN UNPLEASANT PERSONAL EXPERIENCE. POSSIBLY INCULCATING EVEN MORE DEEPLY HIS RESENTMENT AGAINST ANY POLITICAL SYSTEM OR IDEOLOGY OTHER THAN THAT OF COMMUNISM.

"Shortly thereafter, a scientific group in Great Britain requested his assistance in the projects. Reporting for this assignment, he signed a security pledge guaranteeing to safeguard the military secrets of the United Kingdom."

(At approximately the same time this security pledge was signed, he made contact with Russia through agents in the United Kingdom and started passing information on his work. It was at this time that Fuchs also stated in his confession he had allegedly divided his mind into two compartments, one compartment reserved for his daily contacts, the other reserved for his Marxian philosophy. Fuchs stated further that he had no particular fear of betraying himself because of the control which the Marxian compartment exercised over the other; described as controlled schizophrenia.)

LENIN WROTE, "OPPORTUNISM MEANS SACRIFICING FUNDAMENTAL INTERESTS IN ORDER TO GAIN TEMPORARY AND PARTIAL ADVANTAGES." FUCHS, REALIZING THE NATURE OF HIS WORK, AND ITS IMPORTANCE IN THE ULTIMATE STRUGGLE, TAUGHT AS BEING INEVITABLE BETWEEN COMMUNISM AND CAPITALISM, WAS PROBABLY NOW MOTIVATED BY A SENSE OF PERVERTED IDEALISM--IN SHORT, IN HIS ATOMIC RESEARCH HE PROBABLY SAW A QUICK METHOD TO ACHIEVE A COMMUNIST VICTORY

Communist aims cannot succeed unless the U.S. Armed Forces are destroyed or weakened by disloyalty to the government.

Communists believe in combining legal and illegal work.

It is moral and legal for a Communist to lie, cheat, and steal if it serves his party's ends.

Don't be hoodwinked by Communist propaganda. Expose it with the truth.

Communism is a disease that can be quarantined by vigilance and a strong democracy.

OVER THE REST OF THE WORLD, THUS BRINGING OTHER NATIONS UNDER COMMUNISM AS AN APPROACH TO UTOPIA.

"In 1943, because of Fuchs' specialized knowledge, he was sent to the United States as a member of the British Atomic Energy Team. At this time he renewed his security pledge."

CHARGE ONE: In 1943, did in England disclose atomic energy information to a person unknown.

Communists have one goal --world revolution.

CHARGE TWO: Between December 1943 and 1 August 1944, in New York, again disclosed such information.

CHARGE THREE: Did likewise in Boston in 1945.

CHARGE FOUR: Disclosed such information again in England in 1947.

Communists say that seizure of government by bloody revolution must come.

(During this period, Fuchs continued his Russian contacts and made new contacts in the United States. During the period he was passing information to Russian agents, he accepted one hundred pounds but stated this could not be considered as reimbursement but was merely a token payment, the acceptance of which reaccented his allegiance to the Communist cause.)

THE ATOMIC BOMB WAS NOW A REALITY! FUCHS, THE DELUDED LIBERAL, WORKING IN AN IVORY TOWER OF THEORY-BECOME FACT, ALMOST INCOMPREHENSIBLE TO THE AVERAGE MAN, WAS NOW PROBABLY SUBJECTED TO MIXED MOTIVES OF VAIN SELF-IMPORTANCE--MADE EVEN MORE DANGEROUS BY HIS APPARENT INABILITY TO CONSIDER THE BROADER ASPECTS OF HUMAN RELATIONS.

Anyone may be a spy. Play it safe. Don't talk.

"In autumn of 1949, the United States advised Great Britain that there had been a leak of information through the British team and an investigation was started by the British. At about this time, Fuchs began to have some doubt about his course of conduct and informed British security authorities that his father in Germany anticipated going to the Soviet Zone of Germany to accept a position at the University of Leipzig."

Communists, body and soul, scorn the standards of American democracy.

"Fuchs was then confronted with the statement that there were certain allegations regarding his conduct in the United States and he was offered the opportunity of confessing. He decided to leave the project on which he was working, and then, later, gave a complete statement, freely and voluntarily, of his relations with the Soviets."

(At the closing of the proceedings in England, Fuchs stated he had had a fair trial. He further remarked that in addition to being guilty of the indictment that he had also by his actions committed crimes against the friends who had trusted him. He was then given the maximum sentence, fourteen years in prison.)

Conclusion: The secret, close-knit, Communist underground will continue to function against us. It will not only use paid agents to secure vital military information, but will also augment these with many misguided and perverted zealots of the Doctor Fuchs type. Eternal vigilance and the absolute safeguarding of all military information are the only antidotes.

If every American faced the reality of what the fulfillment of the Communist objectives would mean to him--he would be inspired to work harder to protect and preserve the individual liberty and freedom which is part of our American way of life.

Safeguard military information--Safeguard America.

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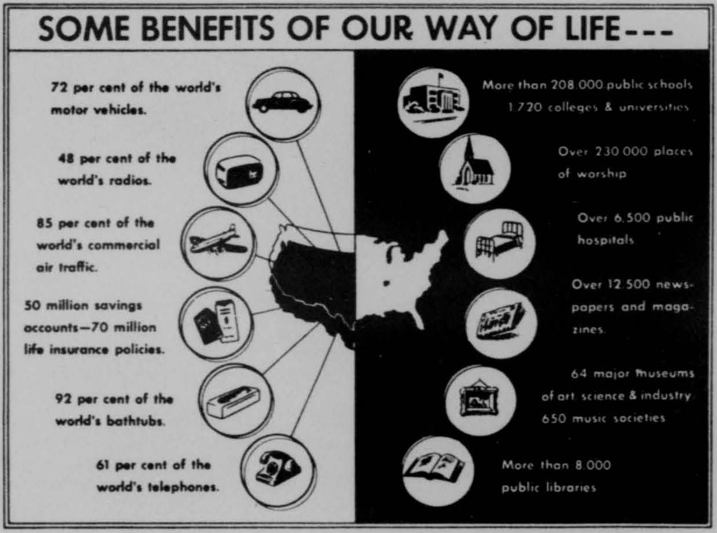

SOME BENEFITS OF OUR WAY OF LIFE---
72 per cent of the world's motor vehicles.
48 per cent of the world's radios.
85 per cent of the world's commercial air traffic.
50 million savings accounts—70 million life insurance policies.
92 per cent of the world's bathtubs.
61 per cent of the world's telephones.
More than 208,000 public schools 1,720 colleges & universities
Over 230,000 places of worship
Over 6,500 public hospitals
Over 12,500 newspapers and magazines.
64 major museums of art, science & industry, 650 music societies
More than 8,000 public libraries

--PROTECT THESE BENEFITS FROM THE INSIDIOUS ENEMIES OF OUR DEMOCRATIC WAY OF LIFE.

RUSSIA TIGHTENS GRIP ON BALTIC

U.S. and U.S.S.R. Exchange Notes on Baltic Incident

The portion of this article dealing with Russian Baltic fortification is reprinted from U.S. News and World Report, an independent weekly magazine on national and international affairs published at Washington. Copyright 1950, United States News Publishing Corporation. Further reproduction prohibited. The text dealing with the exchange of notes between the US and the USSR is from the Department of State Bulletin.

The Baltic Sea, where Hitler developed much of his wartime submarine fleet and perfected his rocket weapons, now is being turned into a Russian lake.

New Soviet restrictions against use of the Baltic by other nations are becoming evident. A U.S. naval aircraft has been shot down as a warning to foreign planes to keep well outside a 12-mile limit off Russian-controlled Baltic coasts. Fishing vessels of Sweden, Denmark and Britain have disappeared, some known to have been taken by Russian patrols. Ferry service from Germany to Denmark has been halted. Normal communications in the whole region are being restricted. Something, other nations conclude, is happening in that part of the world.

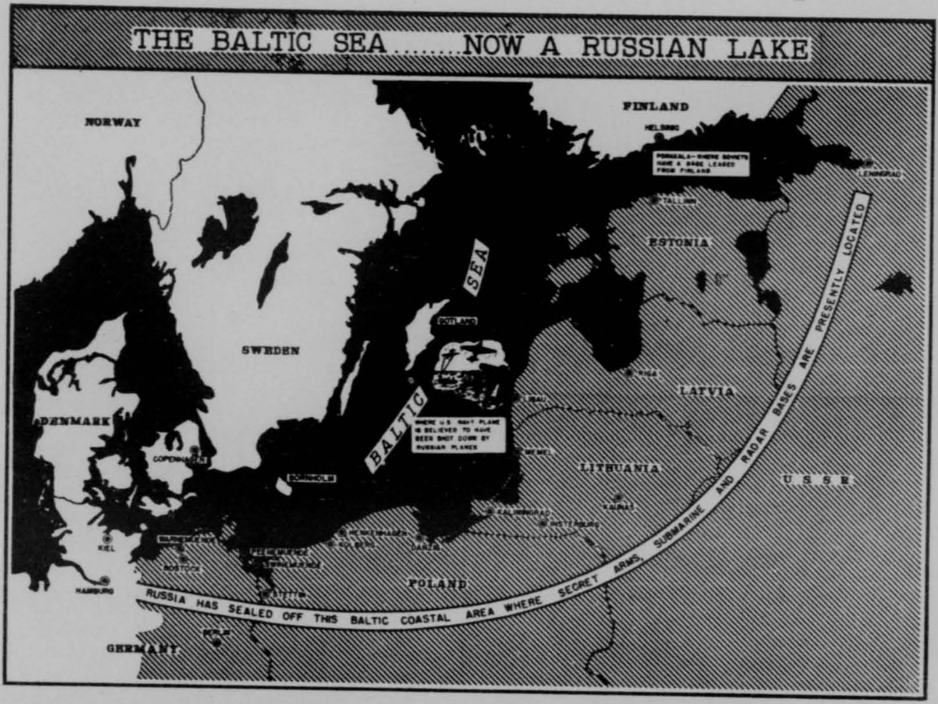
The facts about what Russia really is up to in the Baltic, as pieced together from authoritative reports reaching Stockholm, London and Washington, show in some detail just what is happening, what the Russians don't want U.S. fliers and other foreigners to see. The reported facts are these:

A "total defense zone," closely guarded, has been set up by Russia along the whole southern coast of the Baltic. That zone is shown in the map facing. Along this 1,100-mile coastal area, from just east of Hamburg up to Leningrad, the Russians have built a network of missile-testing stations, big submarine bases, radar centers, fortifications, specialized naval shipyards and naval bases.

Security measures, extreme even for Russia, show the importance attached to this zone by planners in Moscow. All foreigners, except those working in Soviet installations, are excluded by a special policing force, said to be composed entirely of Mongolians. From Swinemuende, a Russian coast-guard fleet keeps non-Soviet shipping in the Baltic sharply restricted. Airfields are set up and well equipped with fighter planes and radar to prevent aerial reconnaissance of the zone. In much of the Polish portion of the zone, even Poles are excluded. Thousands of natives along the coast and from nearby islands have been evacuated.

Weapons-testing centers within that zone are one prime reason for these tight security measures. At Insterburg, for example, the Russians have set up an experimental station for new types of weapons. At Peenemuende, where the German V-weapons were developed, Soviet engineers are testing rockets and guided missiles. At Kolberg, in Poland, is another missile-testing station.

Big submarine centers also are be-


THE BALTIC SEA........NOW A RUSSIAN LAKE
NORWAY
FINLAND
HELSINKI
PORKKALA—WHERE SOVIETS HAVE A BASE LEASED FROM FINLAND
LENINGRAD
TALLINN
ESTONIA
SEA
BALTIC
GOTLAND
SWEDEN
RIGA
LATVIA
LIBAU
DENMARK
WHERE U.S. NAVY PLANE IS BELIEVED TO HAVE BEEN SHOT DOWN BY RUSSIAN PLANES
COPENHAGEN
BORNHOLM
MEMEL
LITHUANIA
U S S R
KAUNAS
KALININGRAD
INSTERBURG
KIEL
WARNEMUENDE
HENKENHAGEN
KOLBERG
DANZIG
PEENEMUENDE
SWINEMUENDE
ROSTOCK
HAMBURG
STETTIN
POLAND
BERLIN
GERMANY
RUSSIA HAS SEALED OFF THIS BALTIC COASTAL AREA WHERE SECRET ARMS, SUBMARINE AND RADAR BASES ARE PRESENTLY LOCATED

ing established in the Baltic zone. Bomb-proof submarine bunkers equipped to berth a large number of Russian U-boats already have been constructed at Memel, on the Lithuanian coast. That base is protected, too, by underwater nets against sneak submarine attack. In addition, fast, snorkel-equipped submarines are being constructed at Warnemuende, once a German seaside resort, and at Stettin, huge shipbuilding center.

Radar centers are being set up, too. A big radar station with new-type equipment, for example, has been established at Deep, in Poland. This station and others appear to form a radar screen for Russia's Baltic flank.

Naval bases and shipyards abound in the area. At Rostock, several German vessels are being reconverted into Soviet troop transports. At Warnemuende, a number of 600-ton torpedo boats are under construction. At Swinemuende is located the headquarters of the growing Russian Baltic fleet. A seaplane base is situated at Henkenhagen, on the Polish coast. And a major Soviet naval base is being expanded at Porkkala, located on the southern coast of Finland and leased in 1944 from the Finnish Government.

It was in the middle of the large array of secret Russian installations now being developed in the Baltic that the U.S. Navy plane was shot down last April. The facts, thus, indicate strongly that Russia's motive in that case was fear of any American reconnaissance of an area that is fast becoming the center of Soviet sea power and of missile development.

EXCHANGE OF NOTES ON BALTIC INCIDENT

The following is the text of a note dated April 18, 1950, from Ambassador Alan G. Kirk to the Soviet Minister for Foreign Affairs.

The Ambassador of the United States of America presents his compliments to the Minister for Foreign Affairs of the Union of Soviet Socialist Republics and, with reference to the note of the Ministry of Foreign Affairs of April 11, 1950, has the honor to state that the only American military aircraft which was in the air in the Baltic area on April 8, 1950, was a United States Navy Privateer airplane which disappeared on that date and no trace of its crew has since been found.

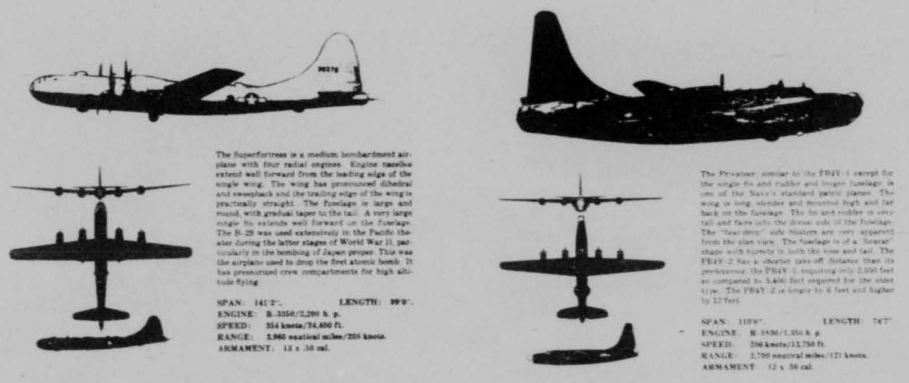
The United States Navy airplane carried ten persons. It was wholly unarmed. It left Wiesbaden at 10:31 a.m. Greenwich time for a flight over the Baltic Sea and two and one-half hours later reported by radio crossing the coast line of the British Zone of Germany. All American military aircraft operate under strict instructions to avoid flying over any foreign territory in the absence of express permission for such a flight from the appropriate foreign government. The investigation conducted by the United States Government had convinced it that the United States Navy airplane in question complied strictly with these instructions and did not fly over any Soviet or Soviet-occupied territory or territorial waters adjacent thereto.

In the Ministry's communication under reference the Soviet Government acknowledges that one of its fighter aircraft fired upon an American plane on April 8, 1950, at 5:30 p.m. Moscow time. In view of the fact that the only American military airplane which was in the air in the Baltic area on that date was the unarmed United States Navy airplane mentioned above and that this airplane was at no time after it crossed the coast line of Germany over any foreign territory or territorial waters, it must be concluded that Soviet military aircraft fired upon an unarmed American plane over the open sea, following which the American airplane was lost.

The Ambassador of the United States has been instructed to protest in the most solemn manner against this violation of international law and of the most elementary rules of peaceful conduct between nations. The United States Government demands that the Soviet Government institute a prompt and thorough investigation of this matter in order that the facts set forth above may be confirmed to its satisfaction. The United States Government further demands that the most strict and categorical instructions be issued to the Soviet Air Force that there be no repetition, under whatever pretext, of incidents of this kind which are so clearly calculated to magnify the difficulties of maintaining peaceful and correct international relationships.

The United States Government confidently expects, that, when its investigation is completed, the Soviet Government will express its regret for the unlawful and provocative behavior of its aviators, will see to it that those responsible for this action are promptly and severely punished, and will, in accordance with established custom among peace-loving nations, pay appropriate indemnity for the unprovoked destruction of American lives and property.

The following is a translation of a note handed on April 11, 1950, to



The Superfortress is a medium bombardment airplane with four radial engines. Engine nacelles extend well forward from the leading edge of the single wing. The wing has pronounced dihedral and sweepback and the trailing edge of the wing is practically straight. The fuselage is large and round, with gradual taper to the tail. A very large single fin extends well forward on the fuselage. The B-29 was used extensively in the Pacific theater during the latter stages of World War II, particularly in the bombing of Japan proper. This was the airplane used to drop the first atomic bomb. It has pressurized crew compartments for high altitude flying.

SPAN: 141'3". LENGTH: 99'0".
ENGINE: R-3350/2,200 h. p.
SPEED: 354 knots/34,400 ft.
RANGE: 3,960 nautical miles/205 knots.
ARMAMENT: 13 x .50 cal.

The Privateer, similar to the PB4Y-1 except for the single fin and rudder and longer fuselage, is one of the Navy's standard patrol planes. The wing is long, slender and mounted high and far back on the fuselage. The fin and rudder is very tall and fairs into the dorsal side of the fuselage. The "tear-drop" side blisters are very apparent from the plan view. The fuselage is of a "boxcar" shape with turrets in both the nose and tail. The PB4Y-2 has a shorter take-off distance than its predecessor, the PB4Y-1, requiring only 2,500 feet as compared to 3,400 feet required for the older type. The PB4Y-2 is longer by 6 feet and higher by 12 feet.

SPAN: 110'0". LENGTH: 74'7".
ENGINE: R-1830/1,350 h. p.
SPEED: 206 knots/13,750 ft.
RANGE: 2,700 nautical miles/121 knots.
ARMAMENT: 12 x .50 cal.

COMPARISON. The identification pictures above illustrate the difference between the B-29 (left) and the PB4Y-2 Privateer (right).

Ambassador Kirk from the Soviet Minister for Foreign Affairs, Andrei Vyshinsky.

The Government of the Union of Soviet Socialist Republics considers it necessary to state the following to the Government of the United States of America:

According to verified data, on 8 April this year at 17 hours 39 minutes, there was observed south of Libava (Libau) a four-motored military airplane B-29 (Flying Fortress) with American identification signs, which went into territory of the Soviet Union for 21 kilometers. As the American airplane continued going deeper into Soviet territory, a flight of Soviet fighters arose from a nearby airdrome, demanding that the American airplane follow them for landing at the airdrome. The American airplane not only did not submit to this demand but opened fire on the Soviet airplanes. In view of this, the leading Soviet fighter was compelled to return fire, after which the American airplane turned toward the sea and disappeared.

The Soviet Government states a resolute protest to the Government of the United States of America against the gross violation of the Soviet border by an American military airplane, which is at the same time an unheard of violation of elementary standards of International Law.

Moscow, 11 April 1950.

STATEMENT BY SECRETARY ACHESON

Ambassador Alan G. Kirk has notified us that he saw Foreign Minister Vyshinski at noon today at the latter's request, at which time the Foreign Minister handed him a note in reply to ours of April 18 concerning the loss of the American naval airplane in the Baltic area.

We have just received the full text of the note which is being studied. Until the full contents of the note are examined by Departmental officials, I cannot, of course, make any full statement with regard to this Government's future course of action.

A brief perusal of the note indicates, however, that the Soviet Government continues to defend its fictitious allegations that a B-29 airplane violated Soviet territory and fired at Soviet fighter aircraft. As you know, this Government had informed the Soviet Government that the only American military aircraft in the air in the Baltic area on April 8, 1950, was an unarmed United States Navy Privateer airplane.

It seems obvious that the Soviet Government has made no attempt to institute a real investigation of the matter in accordance with our request.

Until the Soviet note can be examined by the Department, I do not wish to make any further comment with regard to it except to say that there does not appear to be any new information in the note which would cause this Government to alter its position as set forth in its note of April 18.

STATEMENT BY MICHAEL J. McDERMOTT
CHIEF PRESS OFFICER

The American Ambassador at Moscow has presented to the Soviet Ministry of Foreign Affairs the United States Government's reply to the recent Soviet protest against an alleged violation of Soviet occupied territory by an American aircraft. The American reply corrects the distortions of fact which the Soviet Government has injected into the incident and puts the matter in its true light as an attack against unarmed Americans.

After investigation it has been determined that the facts of the matter are as follows: An unarmed American Navy plane with 10 persons aboard was shot down by Soviet fighter planes over the open waters of the Baltic Sea. No survivors have been found despite an extensive search.

The Scandinavian countries have been very helpful and cooperative in the humanitarian rescue work undertaken in connection with the disappearance of this plane. The American Government is deeply grateful for their assistance, which has rendered possible thorough search undertaken throughout the past week. By contrast, there has not been the slightest evidence of any concern on the part of the Soviet Government over the fate of our plane and its personnel. This seems an astonishing lack of common international courtesy and an unusual disregard for the loss of human life.

Moreover, the Soviet Government has thus far shown no sign of regret for its attack against an American aircraft. Instead, it has taken an aggressive tone and attempted to justify its action by impossible allegations. It has charged that the American aircraft fired first, when the American plane had nothing with which to shoot and was too slow a craft to attack fighters. Moreover, it has attempted further to confuse the issue with false propaganda claims and diatribes against the United States in the controlled Soviet press.

This attitude of the Soviet Government shows clearly the insincerity of its oft-proclaimed desire for peaceful relations with the United States and the non-Soviet world in general. The cause of peace is not furthered when the U.S.S.R. ostentatiously decorates Soviet airmen in a manner calculated to give the impression that they are being rewarded for shooting down a defenseless American plane.

Unclas

THE BOOK SHELF

RECOMMENDED READING
FOR YOUR OFF DUTY HOURS

TITLE: New Soviet Jet Fighter

AUTHOR: W. Green

SOURCE: Skyways, May 1950

ADDRESS: Henry Publishing Company
New York, N.Y.

High Air Force personages and officials have confirmed the existence of advance-design jets in Russia. Drawings based on telephotofilms are as accurate a reconstruction as is possible on the available evidence concerning the new Soviet jet fighter which has a lay-out as advanced as an American or British jet in service. This Soviet fighter is actually in large-scale production and is being delivered to crack Soviet air force fighter squadrons. Crux of the latest designs is that they not only embody in practical form the advanced ideas of German technicians now working for the Soviet, but are almost certainly powered by a new powerful range of turbojet engines, including copies of the Rolls-Royce Nene and Derwent jets imported from Britain. The new fighter is as advanced in lay-out as the F-86 Sabre, combining 40 swept-back wings with a sharply swept-back fin and "T positioned" tail plane. Maximum speed of the Soviet fighter is as high as 690 mph. At medium altitudes it might even match the F-86, and should be easily capable of reaching any fighting formations of B-36's and B-50's. Apparently with a combination of German airframe designing genius and the world-famed Rolls-Royce Nene turbojet, this Russian fighter would appear to be an extremely formidable opponent.

TITLE: Combat--8 Miles Up

AUTHOR: Colonel N.F. Silsbee

SOURCE: Skyways, February 1950

ADDRESS: Henry Publishing Company
New York, N.Y.

Combat at altitudes of eight miles and up is reviewed from the fighter and bomber pilot's viewpoint. Flying our improved jets or actually fighting with them at such altitudes are two entirely different things. Except for a few experimental models airplanes so far can only operate in the troposphere. For jet engines, the critical feature is the turbine temperature. Combustion efficiency becomes more difficult to achieve as the jets tend to "flame out" at the reduced throttle settings. The present advantage of the bomber may be summed up in the jet fighter's sluggishness at extreme altitudes, which gives the bomber a definite edge in maneuverability, and the greater range of the bomber's electronically fixed heavy guns. Present USA, British, and Soviet interceptor models are discussed, and the question of armament vs speed as defense for the bomber at high altitude is taken up.

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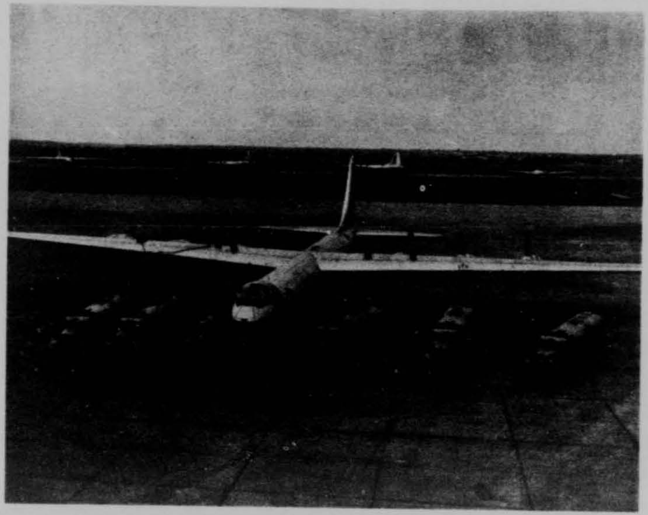

NEW EXPERIMENTS WITH A F B-36

The chart below graphically portrays the amazing comparisons between the B-36 and the former Air Force heavy bombers. Left, six trucks line up to deliver the 21,116 gallons of gasoline and 1200 gallons of oil required to fully load the B-36. This service alone points up the tremendous logistical problems involved in the upkeep of these huge craft.

Engineers are still experimenting to improve this giant, the tremendous size of which is illustrated when compared to the B-24 in the picture to the right. The remaining two pictures on these pages show an artists conception of jet pods on the plane in flight (lower left) and an actual jet-assist take-off (lower right).

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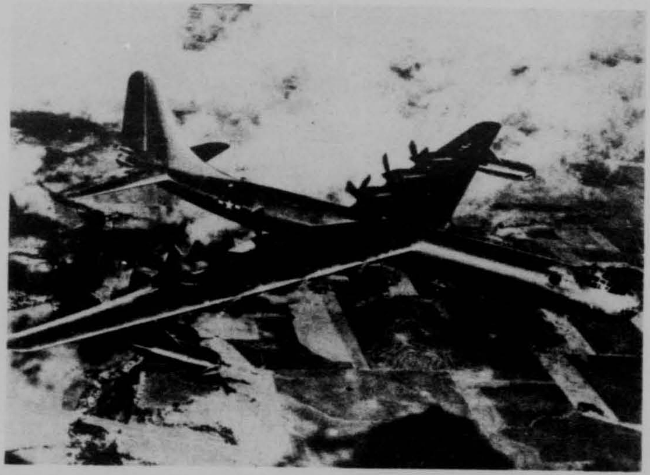
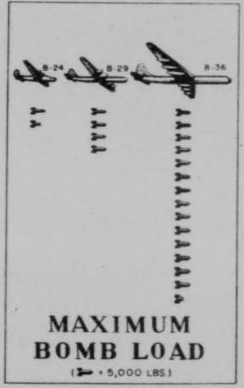
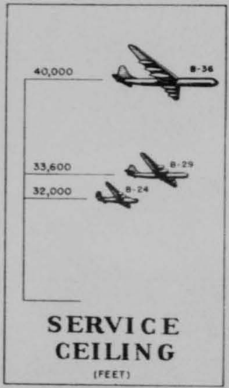
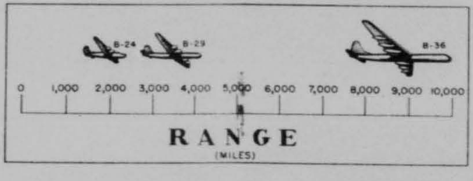




MAXIMUM BOMB LOAD
(= 5,000 LBS.)



SERVICE CEILING
(FEET)



RANGE
(MILES)

NEW EXPERIMENTS WITH A F B-36

The chart below graphically portrays the amazing comparisons between the B-36 and the former Air Force heavy bombers. Left, six trucks line up to deliver the 21,116 gallons of gasoline and 1200 gallons of oil required to fully load the B-36. This service alone points up the tremendous logistical problems involved in the upkeep of these huge craft.

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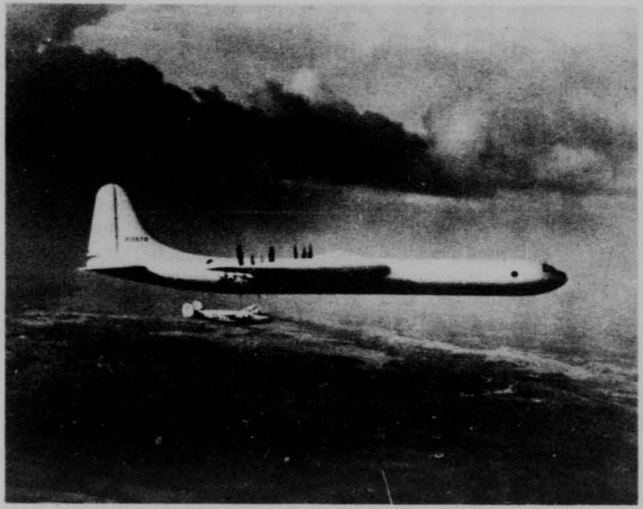

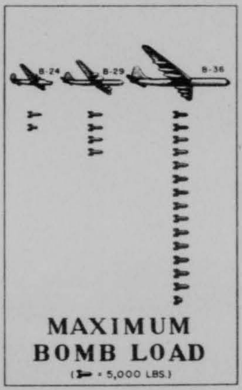

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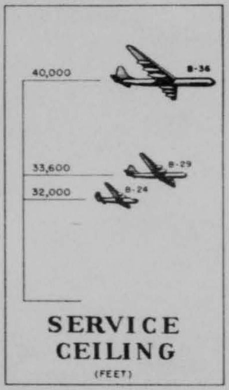

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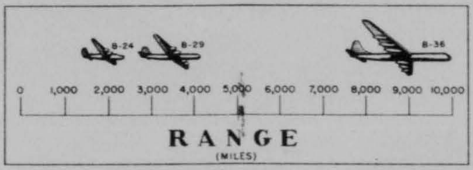
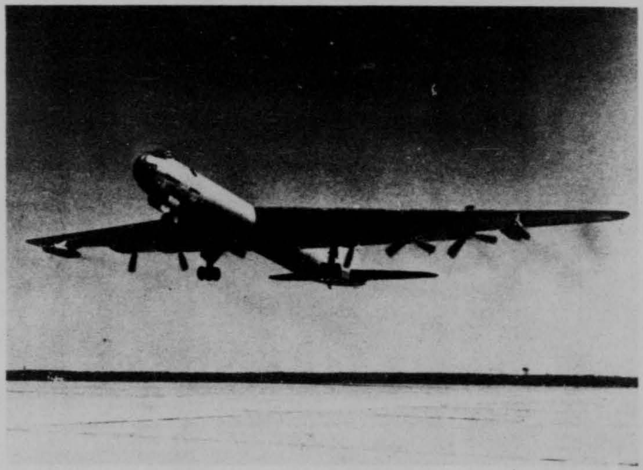


RANGE
(MILES)



POLAR GUIDE

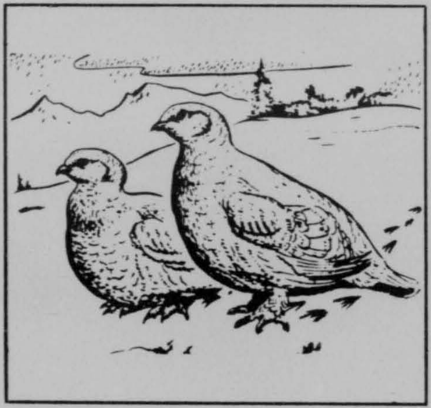
This is the thirteenth of a series of articles on Arctic Indoctrination

Chapter 18—Land Survival (continued)

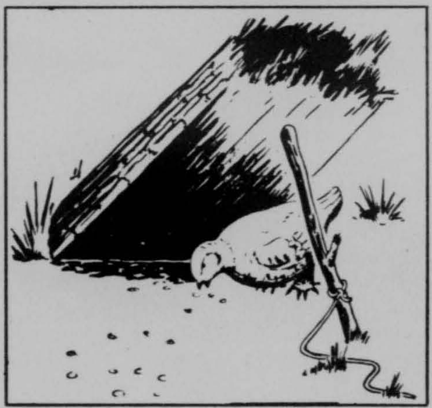
BIRDS

All polar birds are edible, as are their eggs. Many northern birds nest in colonies that run to thousands of pairs. Near such a colony a man can keep alive all summer—even without a gun.

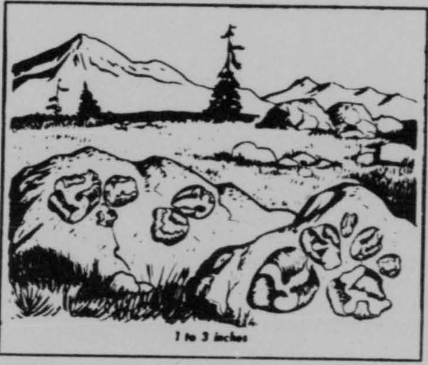
Ducks nest in grassy margins of ponds or on clumps of grass in marshes. If two of you are on the hunt, try dragging the ground with a rope to find the nests. When the rope passes over a nest, the sitting bird will fly off. You can also try catching the mother bird with a simple trap made of your mosquito headnet, parachute cloth, or any other cloth fastened over a firm frame. If no ready-made netting is available, you can make a net of parachute cord by one of the methods described in AF Manual 64-0-4, "Emergency Uses of the Parachute" which is in the pocket of every parachute pack. Fasten the netting or cloth to two curved pieces of wire hinged together with round eyes. To set the trap, fold the net back on itself, peg the bottom firmly into the ground, then prop up the top wire with a two inch stick; the net should lie in accordion folds. Then run a long, stout cord, fastened midway on the top wire, through a low, firmly planted wicket outside the spot where the net will fall when released. The cord should be long enough to allow you to lie concealed at some distance from the trap. When the bird takes the bait (placed at the back of the open trap), pull the cord quickly. With this trap you can get birds on the nest, birds hunting food, and ground squirrels. If large and strong enough, it will



Ptarmigan.



Deadfall.



Rock tripe.

also serve for hares, ptarmigan, large gulls, ducks, geese, and swans. A trap two feet in diameter at the hinge line serves for most birds and small mammals.

After you catch the mother duck, take the eggs—whether strictly fresh or not, duck eggs are a feast for a hungry man.

Gulls can be caught with a hook baited with fish liver, entrails, or meat. Float the bait on a piece of wood. You may be able to catch a gull on the tidal flats with a rock or log deadfall. Set up a flat rock or log on a prop and put bait underneath it. Scatter bits of bait around the rock but fasten the larger chunk well back so the gull will have to go under after it. When the gull comes up and reaches for the bait, pull the prop.

For about two weeks, during the midsummer molting season, all ducks, geese, and swans (as well as many other waterfowl), lose their flight feathers all at once and become flightless. Diving ducks (such as eiders and old squaws) usually spend this time at sea; these you must get with a gun. Young eiders, geese, and swans hatched on inland waters far from the coast usually grow up there and during the flightless period are easy quarry for your shotgun. You may even succeed in catching half-grown geese and swans by hand.

The nests of auks, puffins ("sea-parrots"), murres, and similar birds are on certain rocky inland or mainland cliffs in the polar regions. On Greenland's west coast, Eskimos catch the little auks with hand nets. You can take puffins at their nests dug in turf, but look out for their savage beaks. Murres are especially abundant in high cliffs such as those at Cape Wolstenholme and the eastern end of Coats Island in Hudson Bay. All these are good food because they are fat.

In summer, ptarmigan (polar grouse) are so well camouflaged with protective coloration that they are hard to see, even when they are running. In winter, they are white, with black tail feathers that show only in flight. Ptarmigan are found both in low country and on ridges. In late summer and early autumn, you may come on broods of unsuspicious young; these you can kill with stones. Willow clumps are good places for ptarmigan snares.

Slingshots are excellent for killing ptarmigan, other birds, and small game. A powerful and durable slingshot can be made of one of the two-foot metal rods from your plane's tie-down kit (or any similar metal bar), two twelve to fourteen-inch lengths of elastic shock cord, a piece of webbing or belting from the material in which the parachute is packaged, and some fine copper wire.

To obtain the greatest food value from birds, pluck rather than skin them. If you can, pluck geese and ducks while they are still warm.

FOOD PLANTS

Food plants are found throughout

WARNING

There are only a few polar plants that are poisonous. Learn to know them, for they are dangerous.

WATER HEMLOCK

This plant belongs to the parsnip or carrot family, as the leathery, toothed leaves, and small flowers arranged in clusters suggest. The leaves are streaked with purple and when crushed emit a disagreeable odor. Do not eat any part of this plant or plants similar to it, even though the parsnip-like roots look inviting.

BANEBERRY

You can easily recognize a baneberry by the cylindrical cluster of red or white berries borne at the tip of the stem. The berries may turn blue as they get older. The baneberry grows throughout the wooded areas of Alaska and Western Canada. Do not eat it.

DEATH-CUP AMANITA

This mushroom occurs in damp forests. Usually, it is completely white, but the cap may have tints of orange, purple or brown. When fully grown, the cap is four to six inches wide. When young, it is steeply convex on top, but later it flops downward from the center like an inverted saucer. The surface is sticky when moist. Beneath are white gills attached to the underside of the cap, but not to the stem. The stock is white and brittle and has a spherical base that is buried beneath the ground and that rests in a soft white cup which is not visible until the entire plant is exposed. This plant is poisonous.

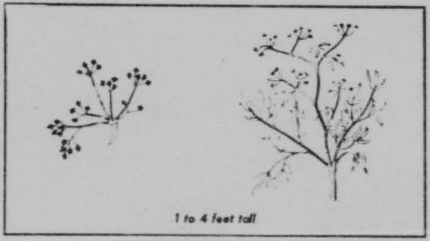
FLY AGARIC

This is a handsome mushroom with a yellow, orange, or red mottled cap, whitish or yellowish scales, and white gills. When these fungi are young, they may be mistaken for puff balls. However, breaking them discloses the gills.

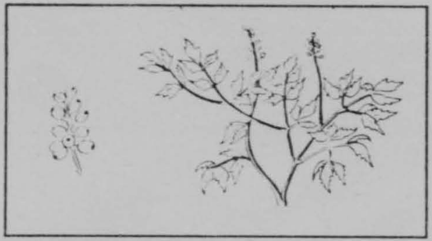
EMETIC RUSSULA

This mushroom usually grows in the woods. You can recognize it easily by the top of its "umbrella", which is pink or rosy when young, and red or yellowish when older. If you eat this mushroom, it will probably make you vomit; hence its ill effects are neither serious or lasting.

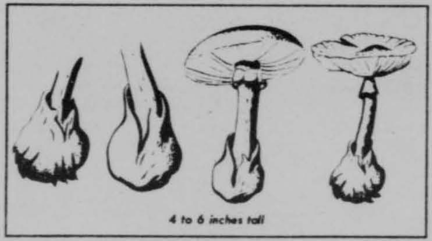
No plants of the polar or sub-polar regions are seriously poisonous to the touch. A few, however, such as *ladyslipper*, and *devil's club* are irritating to some people. So do not touch them.



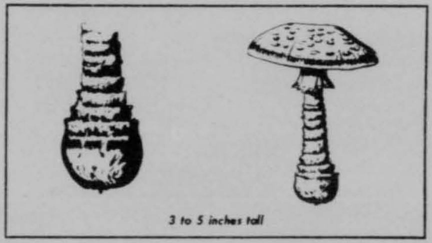
Water Hemlock.



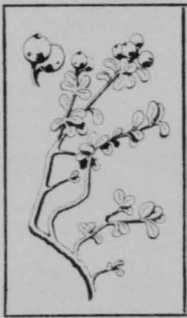
Baneberry.



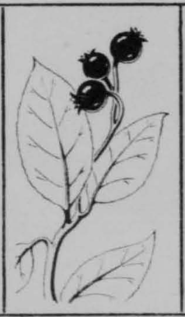
Death-Cup Amanita.



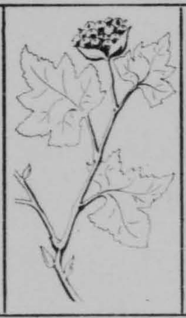
Fly Agaric.



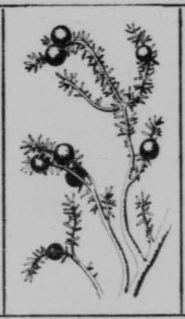
Mountain cranberry.



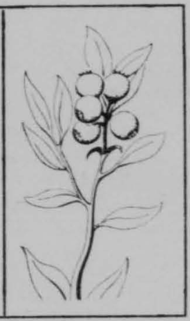
Blueberry.



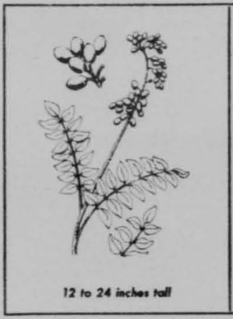
Cloudberry.



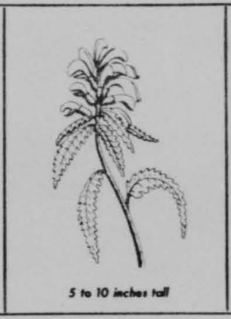
Crowberry.



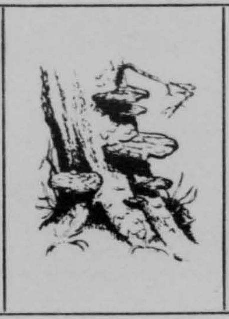
Alpine bearberry.


12 to 24 inches tall

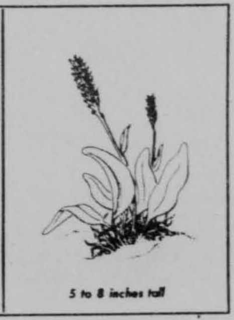
Sweet vetch.


5 to 10 inches tall

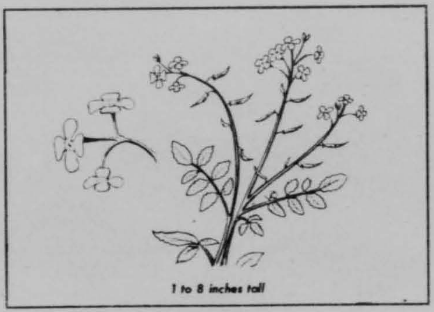
Lousewort.



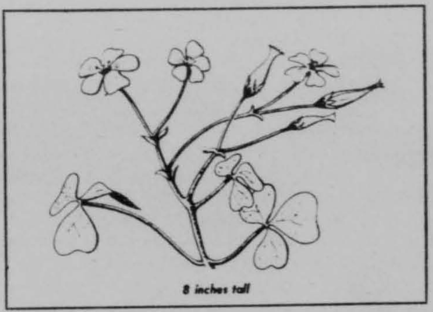
Fungi.


5 to 8 inches tall

Bistort.


1 to 8 inches tall

Scurvy grass.


8 inches tall

Sourgrass.

the polar regions. Lichens, particularly, are almost universal. Most of the plants in the polar region are edible. Certain kinds, however, have more food value than others. Once you have learned to recognize a good food plant, study its surroundings carefully, so that you will know where to look for it the next time you need it. Watch the animals, especially the birds. They will lead you to food sources you might otherwise overlook.

LICHENS

Though lichens lack flowers,leaves, stems and roots, they have possibly the greatest food value of all polar plants. Caribou live almost entirely on lichens for months at a time. Some lichens contain a bitter acid that may cause nausea and severe internal irritation and therefore should not be eaten raw. However, soaking or boiling the plants in water (if possible, with a pinch of soda) removes the acid. If you cannot cook them simply soak them overnight, pour off the water, and eat the residue. However, lichens taste better when boiled. Do not be repelled by the gelatinous appearance of boiled lichens.

Lichens are most palatable if prepared as a powder. Soak them overnight, then dry the lichens till they are brittle. You can make them crisp by roasting them slowly in a pan. Afterwards, powder the dried plants between your palms or pound them with a stone. Soak the powder a few hours, then boil it until it forms a jelly. Use this jelly to thicken soups and stewed vegetables, or cook it with meat, especially if meat is scarce, for the lichen jelly will stretch it out. A mixture of flour and lichen powder may be used as a base for nutritious biscuits.

Rock tripe is a lichen consisting of thin,leathery, irregularly shaped discs, one to several inches across, and black, brown or greenish in color. The discs are attached to rocks by very short central stalks. They are soft when wet but hard and brittle when dry. Iceland lichen is dark brown, bushy, coral-like plant with individual straplike "branches" that have hairy edges. It grows in dense colonies on sandy soil. When properly cooked, this lichen is palatable and nourishing. Reindeer lichen is a grayish, many-branched, coral-like plant that prefers hollows or slopes with winter snow cover. It is as nutritious as Iceland lichen. Northern hunters make a stimulating tea from it.

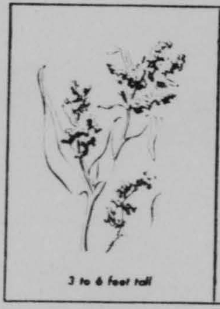
BERRIES

All berries except the baneberry are edible, and berry bushes are abundant. The bushes are low-growing; sometimes they form mats. Despite their small size, individual bushes are good producers. Frequently berries remain on a bush throughout the winter, and the following year are even sweeter than those of the current season. If you wish to preserve the berries, freeze them into bricks; freeze them quickly and thoroughly. Start the process right after you pick the berries in order to preserve maximum food value.

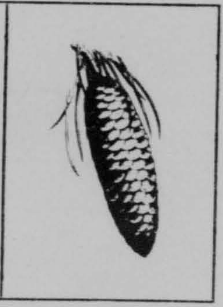
The mountain cranberry (lingon) is a low creeping shrub with leathery evergreen leaves. It grows best in open birch or willow thickets and has red berries that are high in vitamin content.

The blueberry is a low shrub with small oval leaves that drop off in winter. It grows in open places. The berries are blue to blue-black.

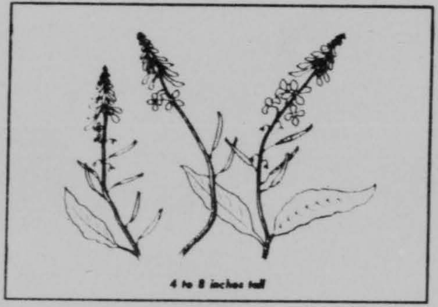
The cloudberry (salmonberry or baked-apple berry) has small maple leaves. Its berries, which resemble raspberries, are reddish when imma-



Wild rhubarb.



Spruce cone.



Willowweed.

ture but yellow when ripe. The raw berries are somewhat laxative. Their flavor is much improved by cooking.

The crowberry is one of the most abundant and widespread polar plants. Its slender leaves resemble fir needles, and its berries are shiny black. It grows along shelves on rocky ridges and hills where the snow is not deep, and therefore can be found even in winter.

The alpine bearberry is a trailing shrub with shreddy bark and round-tipped leaves that turn bright red in autumn. The berries are black or red and are rather tasteless. Related to this is the red bearberry (kinnikinick), with coral-red berries that are somewhat mealy and tasteless when raw but very nourishing and palatable when cooked. The dried and shredded leaves make a fairly good substitute for tobacco.

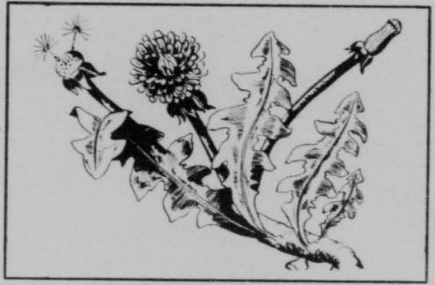
The cranberry occurs in similar marshy areas and on shaded upland ledges, particularly where peat moss (sphagnum) occurs. The berries are red and may be rather sour.

EDIBLE ROOTS

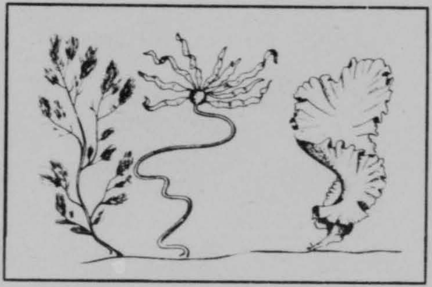
Several polar plants have roots that store energy-giving starches. All these roots are called masu by the Eskimos. To get the roots you will need a digging tool, unless you can succeed in stealing them from the underground runways near the surface, where they are stored by meadow mice. Eskimos use dogs to nose out the caches. Even though you have no dogs, try to spot these stores and save yourself a lot of digging.

The commonest root is northern sweetvetch (licorice root) which grows in clumps on sandy soil, especially on lake shores or along streams. It has pink flowers similar to pea or clover flowers, while its leaves resemble those of locust trees or the famous locoweed of our western states. Learn to recognize the leaves so you can find the roots when there are no flowers. The cooked root tastes like young carrot but is even more nourishing.

Another valuable root is that of the woolly lousewort which grows in dry tundra. Flowers of this plant are rose colored, resembling those of the licorice root in shape but arranged in denser clusters. The flower stalks are thick and strong and are visible long after the flowers have dropped off. During the winter, the leaves and flower stalks



Dandelion.



Seaweed.

may be visible above the snow. The sulphur-yellow root is large and sweet. It is edible either raw or cooked.

Bistort or knotweed, also common in dry tundra, has small white or pink flowers that form slender spikes. The elongated smooth-edged leaves come out from the stem near the level of the soil. The root is about the size of a pecan, and is rich in starch. The slightly acid taste of the raw root disappears when it is cooked. Soak it in water for several hours and then roast it.

Kamchatka lily (saranna) grows in meadows and among low shrubs along the Pacific coast of Alaska and on the Aleutian Islands. Its flowers are shaped like other lily flowers. The stem rests in a large bulb surrounded by small bulblets about the size of rice grains. The bulbs serve as potatoes for the natives of Kamchatka because they contain large amounts of carbohydrates. People have lived solely on this bulb for long periods. Roast the bulbs in coals or boil them. Dried and powdered bulbs make good bread, soup, or porridge.

ANTISCURVY PLANTS

Scurvy has taken its toll of men in the polar regions. This dread disease results from vitamin C deficiency and may be brought on by prolonged diet of canned or lean meat and no vegetables. Most plants yield some vitamin C, but several are notably rich in this antiscurvy vitamin. Among these is "scurvy grass" which occurs along sea beaches. It has small white flowers and globular fruits; the lower leaves, borne on short stalks, are kidney-shaped. All parts of the plant are somewhat fleshy. The leaves, stems, and fruit, eaten raw, are valuable antiscurvy food.

Spruce twigs and leaves are also rich in vitamin C. Black and white spruce occur throughout the sub-polar forest and, in general, reach farther north than any other evergreen trees. They have short stiff needles borne individually, not in clusters as are pine needles. The cones are only one or two inches long and have thin scales. Black spruce cones are globular, while those of white spruce are slightly elongated. A strong infusion prepared by boiling young twigs and leaves in a covered pot, prevents and cures scurvy. The buds, needles, and stems, have a strong resin taste, but give some antiscurvy vitamin C when chewed raw.

The fresh green leaves and inner

bark of the dwarf polar birch also are high in vitamin C. You can distinguish the birch from its companion shrub, the willow, by its thinner leaves and peeling bark.

GREENS

Several polar plants are fairly good substitutes for the leafy vegetables of our civilized diet. Some of these plants contain vitamins and minerals, and all of them give bulk to your diet.

An important green is wild rhubarb (alpine fleece-flower) which grows on open river banks and recent landslides. The stems are reddish and, like cultivated rhubarb, bear pointed leaves with wrinkled edges. The flowers form scraggly clusters. The young stems are bright red and juicy. When cooked,they resemble rhubarb in flavor.

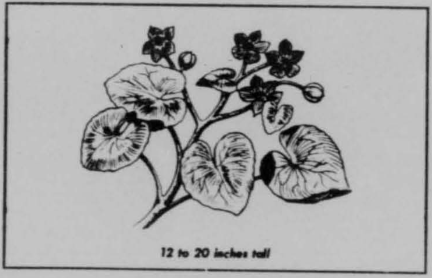
Another green is sourgrass (mountain sorrel), which lives on moist, shady slopes and in ravines. Its fleshy, kidney-shaped leaves are borne on long, slender stalks, and its red or green flowers are arranged in plumelike branching clusters. The leaves and stems taste somewhat acid when raw but are very refreshing. When cooked, they resemble spinach in both flavor and appearance. New leaves are produced all summer, thus supplying fresh greens in any summer month.

Still another leafy plant is the willowweed (fireweed) which grows on sandy or gravelly soil along rivers and on beaches. It has purple flowers and fleshy, slender leaves. The leaves resemble spinach when cooked.

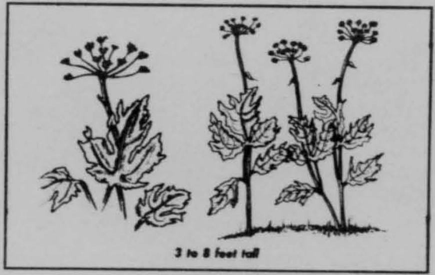
A woody plant in this list is the willow. This is the "tree" of the polar region, yet it often looks anything but tree-like because it grows close to the ground and spreads out like a cushion. Its cottony seeds are conspicuous during the spring when they are ripening and blowing around. The young, tender willow shoots contain a large amount of vitamin C and may be eaten as greens. They have a decidedly sour flavor.

Dandelion, a weed pest in the United States, is a potential lifesaver to anyone stranded in the polar regions. The young leaves make fine greens. Cook them only a short time, and bear with their bitter taste. Both leaves and roots can be eaten raw.

Marsh marigold is found in swamps



Marsh marigold.



Cow parsnip.

and along streams and is one of the earliest plants to come out in the spring. The leaves and stems, particularly of young plants, are delicious when boiled.

Cow parsnip is abundant on the Pacific coast of Alaska and on the Aleutian Islands. Its large size and characteristic flower cluster make it conspicuous. The entire plant dies down to the ground each winter. Cow parsnip resembles the poisonous water hemlock of the subpolar forest. Both plants belong to the same family and have very similar flower clusters. The leaves, however, are entirely different. Learn the difference so that you can tell the plants apart. The young shoots and leaf stalks of the cow parsnip are edible either cooked or raw. Leaf stalks that have rusty or reddish spots or streaks are better than solid green ones. If there is no fresh water available, chew the leaf stalks of the cow parsnip. They will quench your thirst because they contain much water.

SEAWEEDS

Seaweeds should be on your menu whenever possible, especially if you eat much fish. They contain valuable vitamins and give bulk to your diet. In fact, they do the same thing for your emergency rations that lettuce, cabbage, and many other foods of little food value do for your normal diet. The bulk they give helps prevent constipation. The gelatinous consistency of cooked seaweed may offend your senses of sight and taste, but it is just what you need to round out your diet. Indians, Philippinos, Hawaiians, Chinese and many other peoples have eaten seaweeds for centuries.

Three kinds of seaweed are common:

Brown ribbons, several inches wide and amazingly long, which float in the surf, anchored by a `slender stalk.

A profusion of small, brown, branched forms which make a jumbled mass on the rocks exposed at low tide.

Very thin green, wrinkled sheets of "sea lettuce" which grow on rocks, driftwood, other seaweeds, and on mud flats in quiet bays.

Take care in the selection of seaweeds for your stew pot. Fresh, healthy specimens have no marked odor or flavor and are firm and smooth to the touch. If the plant is wilted and slimy and has a fishy smell, it is decaying and should not be eaten. The large, brown, ribbon-like seaweeds can be either minced and eaten raw, or dried, shredded and scattered over other food. Discard the stalk and other tough parts; eat only the tender portions. The coarser red seaweeds are best if cooked; they are gelatinous and are most palatable if used with fish to make a stew. The broad-leaved "sea-lettuce" is good chopped and can be eaten raw or stewed. Do not eat the threadlike or slender branched forms. They are not poisonous but may contain irritating free acid. You can detect disagreeable acids by crushing a batch with your hands. The released acid causes the plant to decay so rapidly that within five minutes it gives off an offensive odor.

MUSHROOMS

It's a good idea not to eat mushrooms. In the first place, a number of them are toxic. In the second place, they don't have much food value.

1943

RUSSIA BEAT U.S.? WEST IS GAINING

The following article, a reprint from U.S. News and World Report, is reprinted here because of its timely interest. Whereas no grave issue is taken with the general summary presented, it seems pertinent to observe that optimistic projections under present delicate and highly uncertain circumstances must be tempered with a certain measure of caution. To make such accomodations and reservations, of course, does not imply rejection or prejudice to the validity of the thesis as presented. On the other hand, however, a realistic estimate of the situation, as a continuing reappraisal of the military strength of a potential enemy, must place its major emphasis upon current capabilities. It provides but small comfort for a commander to know that he is favored by time when he is also aware that time is of the greatest essence. The vital question to be answered is--will the enemy strike while he has preponderate advantages in so many departments, or will he wait, knowing full well that any hesitation on his part works to his infinite detriment? Given time, the West will undoubtedly be in a position to accept any challenge, but--will the West be given time? (The Editor)

Stalin's chances of winning an early war are slipping away. Russia's fighting power is great, but West is overtaking her.

Trouble in the satellites, weakness in industry, raw materials, food, transport, all put checks on Moscow's strength.

West, meanwhile, is getting stronger, sharpening defenses. A shooting war, as things stand, means a stalemate nobody wants.

A shift is occurring in the military balance of power between Russia and the West. The atom bomb, in Russia's hands tilted the balance her way for a time. Now the swing is back, a little toward the side of the West.

War plans of a firmer sort backed by big arms shipments to Europe; new weapons that discount Russia's edge in tanks and man power; time, improved morale, all account for the rising military confidence of nations in the bloc U.S. leads.

Distrust of satellites, suspicion of political ambitions of top generals, weaknesses in transport and industry, at the same time, are lowering the confidence of Russia's dictators.

Russian power, on paper, still ap-

STAKHANOVITE FOREMAN. Skilled workers are not too plentiful.

pears overwhelming in Europe. Russia's divisions outnumber those that could be put against her by 4 to 1 or more. She has tanks in superabundance. Russia's plane numbers exceed the combined total of the West. Her atom bombers are only one or two hours from Europe's big cities; barely 12 hours from the U.S. West coast, 18 hours from the industrial centers of the Midwest, 16 hours from the East coast.

Military leaders of the West are well aware of all that and more too. Yet the assessment they are making of war potentials and the chance of victory in any future war shows a sharp shift to optimism. The hopeless feeling that ruled not long ago is giving way to a degree of confidence. Given time--one year more, two years at most--Russia's chance of winning a war in Europe will be much reduced, or gone.

Behind this new confidence are strong indications that Western means of defense are catching up with Soviet means of attack. New weapons that are deadly against tanks are appearing. "Baby" atom bombs soon will be available as multiple-purpose tactical weapons against Russian land forces. New devices to combat the serious threat of Soviet submarines are in sight. Radical new antiaircraft weapons that can shoot down enemy planes before they come into sight are near production. And divisions of well-armed troops are starting to emerge in Europe. Moreover, joint defense plans are drawn up in Europe, ready for practical use on a moment's notice if the West is attacked.

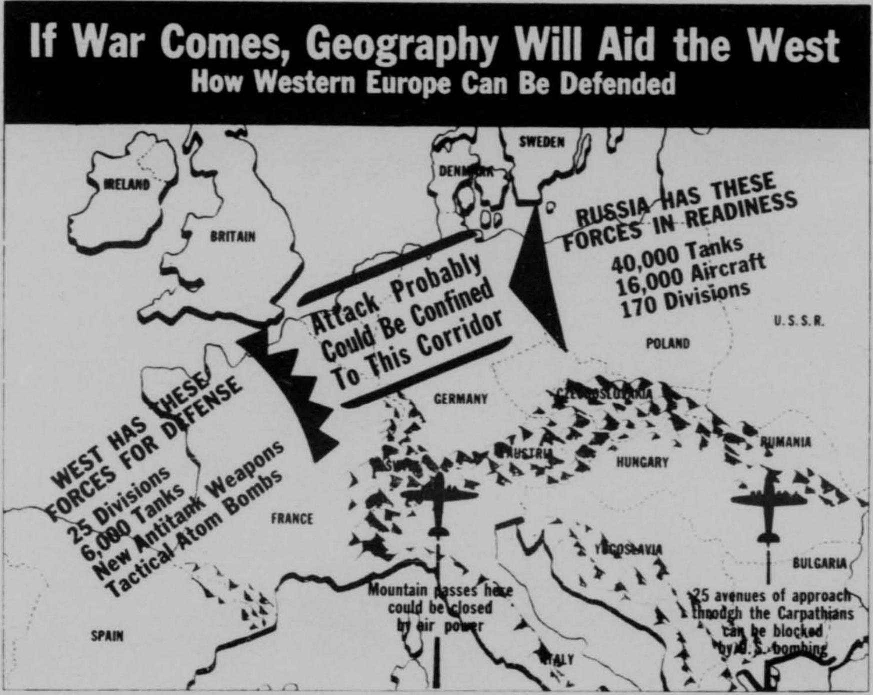
Thus, the base is being laid for a powerful offset to Russia's immense strength on land. That strength is being reassessed by the military and economic analysts in the light of all this, and is found to be wanting in many elements that would be required to assure victory at this time in war that would involve the United States. Russia, on the basis of conclusions being reached, could not conquer U.S.

Cold facts and figures out of which that conclusion by military planners grows are provided in what follows. There is a report on Russia's existing military power, her potential power, the industrial base that must support this power. And there is a progress report on Western strength in men and machines for war. In these facts and figures, together with knowledge of new weapons for defense, are found the reasons for much of the growing confidence on the part of military leaders in the West.

Military strength of Russia, in men and equipment, appears overpowering. Yet the appraisers are finding weak spots and serious limitations in that strength.

Divisions. In Army man power, trained, experienced, Russia cannot be challenged. In readiness now are a minimum of 170 divisions. These are smaller in size, but equal to most Western divisions in armor, artillery, heavy equipment. They are opposed by 43 Western divisions, of which only about 25 can be used in Western Europe.

There are questions about the effectiveness of this Russian man power in an offensive war. Satellite troops are not trusted by the Russians. Soviet troops, in an attack on the West, are expected to lack the incentive they had in World War II when they defended their homeland.



If War Comes, Geography Will Aid the West

How Western Europe Can Be Defended

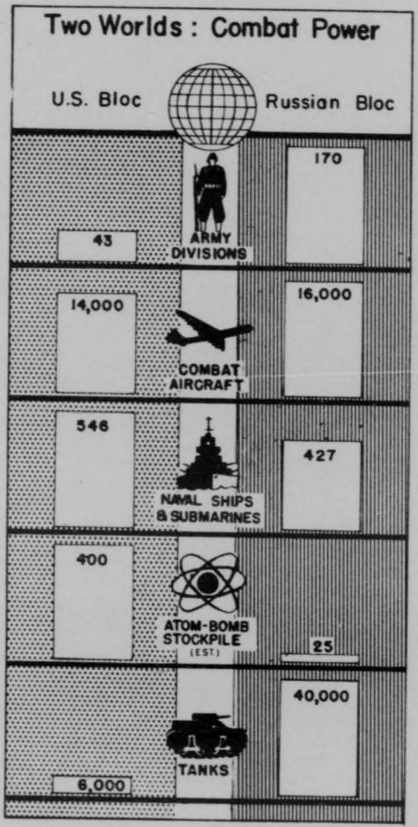
IRELAND
BRITAIN
DENMARK
SWEDEN
RUSSIA HAS THESE FORCES IN READINESS
40,000 Tanks
16,000 Aircraft
170 Divisions
U.S.S.R.
POLAND
Attack Probably Could Be Confined To This Corridor
WEST HAS THESE FORCES FOR DEFENSE
25 Divisions
6,000 Tanks
New Antitank Weapons
Tactical Atom Bombs
GERMANY
CZECHOSLOVAKIA
RUMANIA
AUSTRIA
HUNGARY
FRANCE
SWISS
YUGOSLAVIA
BULGARIA
SPAIN
ITALY
Mountain passes here could be closed by air power
25 avenues of approach through the Carpathians can be blocked by U.S. bombing

Moreover, their transport is poor, unsuited for long offensive thrusts. And, if fighting is confined to a narrow front in Europe, mere numbers are less important than they appear.

If military strength depended solely on the number of divisions and men under arms, Russia nonetheless would have little trouble overrunning Europe and defeating U.S.

Tanks. Here, too, Russian superiority in numbers is overwhelming. Soviet divisions are equipped with 40,000 tanks, many of them far bigger than anything the West has now. They are opposed by only 6,000 Western tanks. If each side used half of its tanks in Western Europe, for example, the Soviet advantage would be more than 6 to 1. That advantage, however, is being reduced by development of a "radical" new U.S. antitank weapon, described by Gen. J. Lawton Collins, Army Chief of Staff, as being able to revolutionize tank warfare. In other words, a defense against vast numbers of tanks--the Russian's biggest threat in a land assault—is in sight.

Air support. In combat planes, again, Soviet forces have a numerical edge on the West, with about 16,000 planes in readiness compared to about 14,000 combat aircraft



available now to the U.S. bloc. Most of these Russian aircraft, moreover, are fighters or fighter-bombers of postwar design, for use in supporting the big infantry-tank teams in land assault. That makes for a powerful air cover for Russian attacks, giving air superiority that would be difficult for the West to overcome.

Soviet bombers, in addition, now can strike anywhere in U.S. with atom bombs. Russia is known to have about 300 bombers of the B-29 variety, plus a jet bomber in production, and a B-36 model in the blueprint stage. Moreover, new bomber bases are being constructed on the Chukotsky Peninsula opposite Alaska and in the Murmansk region near Finland, the two areas of Russia that are closest to the United States.

But, as in tank warfare, the defense is catching up to these means of attack. Antiaircraft rockets able to knock down any bomber flying as high as 60,000 feet already are in "advanced development" in U.S. Also, new antiaircraft missiles, guided electronically, are promised soon and indicate a sure defense against conventional aircraft.

Russia's combination of more divisions, more tanks and more planes gives her an unquestioned advantage in offensive power, despite weak points. But military strength includes other things too.

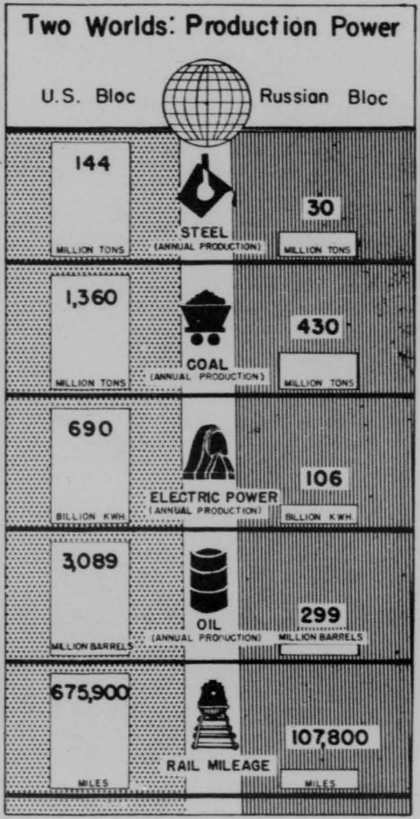
Geography. The area over which any big Russian attack would have to go, for one thing, favors the defense. An invasion of the United States would be greatly complicated by intervening oceans. Assault on Western Europe, as the map on page 35 shows, must be confined to a relatively narrow corridor across the northern plains unless it is attempted through easily defended mountain passes. In that corridor, a small number of well-equipped divisions could hold off a far larger force. To the south, Russia is hemmed in by a long wall of mountain ranges, so that a small force also can hold an attack in that direction.

In other words, a Russian sweep across Europe—where any future war is expected to center—must go through bottlenecks in which small Western forces can use new antitank, antiaircraft and other defensive weapons with telling effect, while long Russian lines of communication are subject to bombing and mass sabotage that could wreck a poor transport system.

Atomic weapons. But the big trump card for the West is its stockpile of atom bombs, large and small. While Russia's stockpile, eight months after her first atomic explosion, is certain to be less than 25 bombs, U.S. is believed to have at least 400 bombs on hand at this time. With U.S. bombers able to deliver wholesale atomic retaliation for any attack on the West, this provides a big deterrent to Soviet aggression that will be good until the Soviet stockpile, too, is large. It is expected to be at least another two years of time for Western preparation.

And, equally important, U.S. production of "baby" atom bombs for tactical use gives the West an unequaled defensive weapon for stopping Soviet land assaults and destroying Soviet communication lines. That coupled with geography, means the West is getting the means to stop Russian attacks on necessarily narrow fronts, as high defense officials see it, without the need for hundreds of divisions and more thousands of tanks.

Naval power. The same thing is happening at sea, where the defense also is catching up. Russia has a big edge in submarines, the offensive weapons of any new war at sea. About 300 of her 427 combat ships are submarines, designed to cut Western life lines in war. Yet new weapons and techniques for detecting and destroying these underwater craft are being revealed by Western naval forces, with 546 combat ships available now.



Result is that sea defenses are being strengthened, and the seas are likely to remain under control of the West, not Russia. That, in effect, keeps U.S. strength in Europe, prevents an invasion of this country by sea, keeps Western supply lanes open.

What it all adds up to, from a military viewpoint, is this: Russia clearly has the edge in offensive strength. She has the masses of men under arms, the advantage in tanks, the fighter planes to support offensive land action, the ability to bomb both Western Europe and U.S., and a large fleet of submarines to attack Western life lines. The West has relatively little offensive strength, but a growing amount of defensive power. It has the weapons to stop vast numbers of tanks, and a growing number of divisions equipped to use them. It has weapons in sight that can cut the effectiveness of Soviet air power, maybe stop it cold. It is getting the means of destroying enemy submarines. And it is aided by geography that tends to prevent Russia from invading U.S. and hinders Soviet forces in offensive action to the south or west.

But military strength is only part of the war strength of each side. Back of military power is economic power. Unless one side or the other wins any war at the outset, economic power will decide.

Economic potential of the Russian bloc, as the chart on page 36 indicates, is much less than that of the West. Since 1945, Russia has restored her output to prewar levels and has rebuilt many factories, power plants and other facilities destroyed in World War II. She still suffers from grave weaknesses, however. In a war, if she could not win quickly, they would handicap her more and more.

Steel production, by past Russian standards, is high. In territory under Soviet control, output reached 30 million tons last year, may rise further to 35 million tons in 1950. That exceeds the 27 million tons Hitler had available for war preparation in 1938 from Germany, Austria and Czechoslovakia. Yet it is less than one fourth of the production of the U.S. bloc, and thus could prove a weakness in a wartime production race.

Other metals, such as magnesium, lead, zinc, copper, aluminim and tin, are in ample supply in Russia. For war purposes, she would be self-sufficient in those materials.

Coal output in Russia, too, is believed great enough to sustain a war economy. Output last year of Russia and satellites was about 430 million tons. A goal of 600 million tons is in sight. The West, however, already turns out twice that.

Electric-power capacity, vital for Soviet war production, is being steadily increased from last year's level of 106 billion kilowatt-hours, but needs already are outrunning available supplies. Western output, in contrast, totals 690 billion kilowatt-hours yearly, more than six times that of Russia.

Equipment of various kinds required by Russia to back up her war production is being turned out in factories of Czechoslovakia, Poland and Eastern Germany. This output, including machinery, machine tools, trucks and tractors, is subject to widespread sabotage. In items such as precision instruments needed in war, there is a pronounced shortage.

In all those war essentials--steel, coal, power, machinery, trucks and tractors--Russia is at a big disadvantage compared with the Western nations. Her handicap is still more serious in other fields, however.

Greatest weaknesses of Russia's economy are her shortages of oil and rubber, her scant supply of food, her poor transportation system, and her lack of skilled workers.

Oil produced by Russia and her satellites is only one tenth of the amount of production to which U.S. and the other Western powers have access. Russia is especially short of facilities for making high-octane gasoline, needed for airplanes. In a war of movement, Russia would need great quantities of oil to operate her tanks and trucks. If she managed to overrun Europe, she might find that, without oil, she would not make Western Europe's economy function.

Rubber is even scarcer in Russia. Her needs have greatly increased, as the numbers of trucks, tanks, planes and motorized guns have multiplied. Besides, her rough roads wear out tires at a rapid rate. She is known to have imported about 160,000 tons of rubber last year, but she goes to great lengths to conceal the amount of her synthetic production. The high priority given to rubber imports by Russia is indicated by her payment in gold for heavy purchases of rubber from Malaya. Last year she tried to buy Ceylon's entire crop, but that move was blocked by U.S.

Food supplies in Russia, chronically short, would be cut still further if war comes. Without lend-lease supplies this time, lack of adequate food could become a major weakness in a future war effort. Production now, for example is only back to prewar levels, while Russia's population has increased more than 20 million.

Transport problems, in turn, keep Russia's economy basically weak, hold back the industrial growth needed to support a major war. City-to-city highways, of the type known in U.S. and Western Europe, are almost nonexistent. Railroad mileage in Russia's world, despite vast distances to be covered, is only one sixth that of countries in the U.S. bloc. Train speeds are slow. Railroad routes are roundabout. What makes the problem worse is the fact that the various elements of Russia's production system—coal, iron, grain and population—are badly placed in relation to one another.

INSIDE A SOVIET SUBMARINE. The life-line cutter is losing its edge.

Engineering problems also play a big part in retarding Russia's industrial growth and war preparation. Ever since the late 1920's, her drive for increased production has been slowed by lack of skilled workers and trained engineers. For a long time, during World War II, U.S. made up the lack through lend-lease, by supplying Russia with many complex machines of advanced type.

Now, Russia is thrown back on her own resources. Making matters worse, from her standpoint, is the fact that among the refugees who have escaped to the West since the war are thousands of engineers. The reason is that, in Russia, where errors of judgment often bring a death sentence, an engineer is always in danger. Partly offsetting this loss, Russia has acquired many German engineers. But the lack of skilled workers and administrators remains a drag on production.

These economic handicaps, in a long war, are certain to limit Russia's military strength, in spite of the basic advantages of large area, varied resources and big population.

What Russia can do, then, on the basis of her present military strength and economic potential, is being assessed by Western defense officials this way:

Against U.S., Soviet capabilities now are limited to bombing and sabotage. Without control of the seas, the planners agree, no large-scale invasion of the United States is possible, even with large numbers of transport planes and submarines. Atom bombing, to which the industrial U.S. is highly vulnerable, is likely to be limited by a growing warning system and the use of potent new antiaircraft weapons. U.S. can be badly hurt with atomic weapons, but, even though bombing is severe, the strategists insist, Russia cannot reach and defeat U.S. in armed conflict at this time.

BLAST FURNACE AT MAGNITOGORSK.
By past Russian standards, steel production is high.

Against the Near East, Russian capabilities are greater. A determined force, with adequate air cover, might push down through the Caucasus, in the Near East oil area, even across North Africa. But, with the aid of mountain terrain and tactical atom bombs, a relatively small Western force including the Turkish Army probably could stop such an offensive.

Against Western Europe, however, the main Soviet assault is expected, if war comes. This is considered the No. 1 prize of a World War III. Yet the Western generals now are convinced that, with their new defensive weapons, that area could be held by only about 30 divisions. This strength, under the new 12-power organization, is rapidly being approached. Then, with a line held in Europe, the West's superior economic strength is counted on to win out in the build-up of forces that would follow.

Outlook, with the Western means of defense thus gradually overtaking the Soviet means of waging an offensive war, is for a stalemate of long duration, rather than a quick victory for Russia, if war comes. Each side now is getting into position to inflict heavy damage on the other. Yet neither side, at this time, has the edge in offensive strength needed to win.

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A PROGRAM FOR NATIONAL SECURITY

**Report of the Advisory Commission on Universal Training--
with an Introduction by Air Training Command**

This is the first installment of a series.

Intelligence, in its broadest sense, is the function of accurate and factual presentation of the more realistic probabilities regarding the means, and the methods of dangers to the security of our nation. The ambiguous and often overly imaginative "possibilities" are only an alternative choice. This, in its broadest and yet basic essence, is the "know your enemy" essentialized over a score of centuries ago by soldier-philosopher Sun-Tzu.

From this knowledge of the "capabilities" of one's enemies, it becomes possible to assess what one's own safeguards and capabilities should be to curb and repel eventual face-to-face military attack.

Since that philosophy of Sun-Tzu became words long ago, many are the successively great nations and great powers that arose and fell to form the history of this civilization.

To bring these thoughts to date, one problem individually and collectively faces us of the Air Force, the Defense Establishment, and the United States as a nation--the security and protection of which is our military structure's sole reason for existence. This problem is the knowing of our enemy (Communist Russia and World Communism) and adjunctively the knowing of ourselves (and our place as the backbone of the free world). From this realization must come the molding of a superior total capability able to repel and defeat the military aggression so easily an offshoot of prolonged "political" aggression.

A gross understatement is the statement that much confusion exists in the world and in these United States today. Witness the daily assertions and counter-assertions: "which-way-and-why-ism", peace or re-armament, etc., of various public proclamations. Some serve a need and a purpose in molding public thought. Many serve no other purpose than to create confusion, fear, distortion and vacillation. Many are made by well-meaning personalities. Others are fed into the hopper of public consumption by either ill-meaning, shallow-thinking or just plain misguided souls who know not what they do.

Like Mr. and Mrs. America the individual officer and airman finds himself be-deviled by these multi-faceted public utterances. Like Mr. and Mrs. America the individual officer and airman must arrive at definite conclusions--or picture definite even though distant goals of what must be done to hold him on a constant course and prevent his falling individually and collectively a victim to the welter of expoundings. In short we must, individually and collectively become able to keep "both feet on the ground."

With this essential need in mind the following study is presented. In itself an extract from a study undertaken and compiled by a select, unbiased, non-politico group of our nation's leading citizens for our nation's President, it gives all a clearly defined picture necessary to maintain mental equilibrium. It separates itself into four broad areas:

(1) A picture of the motivations and the devious methods utilized by our nation's enemy, short of war. (Not stated as such, but Russia by process of elimination.)

(2) A picture of the probable vicious forms of attack that will probably be utilized by our enemy when, and if, actual military attack begins.

(3) A picture of the necessary internal health we as a nation must retain to prevent inner crumbling—i.e. individual and collective mental, physical and economic health. This is combined with our place of prime responsibility in leading the free world.

(4) A picture of what we as a nation will require for minimum military security if war should come—i.e., what Air Force, Army, and Naval capabilities industrial production and dispersal, civilian defense, etc.

In all--although only the forepages of a complete study basically intended and slanted to the pros and cons of universal military training—it is believed a clear-cut document which fulfills the broadest essence of intelligence. In its portrayal of what our enemy is doing short of war and what vicious methods of attack to expect when war should break—balanced by what we must do to counterbalance both of these exigencies--it is believed must reading for all.

Against this picture the Air Force individual can weigh the daily portions of confusion and counter-confusion, rejecting those pronouncements that do not intelligently fit into the picture of these goals and accepting as reassurance those that do.

To sustain the weight of soundness which the following program in process would possess, the following is offered.

George F. Kennan, counsellor for our State Department and a veteran of 23 years in our Foreign Service, has rapidly become recognized and respected as one of the Western world's most able "Russian experts."

Writing under the anonymity of "Mr. X" he first attained widespread public acclaim in 1947 for a clear-cut, revealing expose of Soviet inner machinations and motives in a discourse entitled "The Sources of Soviet Conduct." (July 1947 issue of "Foreign Affairs"--Quarterly Review) His, also, are one of the credited "brains" behind the conception and creation of the Marshall Plan. (How close to home his analytical revelations of the Soviet inner sanctum have been is proven by the constant tirade and defamation directed again-his name by the Soviets in profuse propaganda denunciations—always most violently directed against those who endanger their plans for world conquest).

Writing for the March 1950 issue of the Reader's Digest ("Is War With Russia Inevitable?"), Mr. Kennan closed his analysis with four essentials necessary for our national security. These four fit in near total exactness with the essentials listed in the Advisory Commission Report. (Secretary of State Acheson reiterated this thesis in his address, "Total Diplomacy," February 1949)

A PROGRAM FOR NATIONAL SECURITY

Foreword

The members of this Commission

have been asked by the President to determine whether the security of this Nation and the preservation of world peace require the establishment of a system of universal training. The President has further charged this Commission with the responsibility of recommending, if such a system is deemed necessary, how it can be carried out to give the country the largest measure of protection; make maximum allowance for the spiritual, mental, and physical development of the young men in training; and keep costs at the lowest level consistent with attainment of its security goal.

The Commission has approached its task with a recognition of the fateful character of the problem before it. Its members started with a considerable disparity of viewpoint on the degree to which universal military training would contribute to our own readiness for war or to the advancement of world amity. The one point on which there was complete agreement was that the Commission should undertake its inquiry with open minds and in an atmosphere wholly free of outside interference or influence from any source, public or private, civilian or military.

We are pleased to report that this aim of the Commission has been carried out successfully. The conclusions contained in this report represent the free, reasoned, and unanimous judgment of the members based on nearly 6 months of intensive study. In the course of our investigation, we heard approximately 200 witnesses representing every shade and variety of opinion. These included the men directly charged with the conduct of our military and foreign affairs, as well as those who have been most active in opposing military training and the foreign policies of our Government. We have studied previous testimony and published opinions, as well as voluminous correspondence, and have held scores of personal interviews in many parts of the country.

We have given close attention to the objections that have been raised to universal military training by those who feel it has no important place in a sound program of national defense, by those who fear it will inflict lasting damage on the lives of American youth, and by those who believe that it will be harmful to the continued operation of the United Nations. We have taken careful stock of the dangers now confronting this country and the United Nations. We have sought from leaders in the field of science and of military tactics the most expert guidance on the probable character of future warfare.

The Commission considered first whether a program of universal training could be supported solely on the basis of its possible contribution to the nation's health, education, and spiritual development. It has been our judgment that, if these were the only benefits to be derived from such a program, they could be secured more surely and more appropriately through a strengthening of existing public and private agencies in these fields rather than by a separate system of universal training.

The only basis on which universal training should be accepted, in our opinion, is a demonstration that it is needed to insure our safety in a world in which peace is not yet secure. We are convinced that such training is an essential element in an integrated program of national security designed to protect the United Stated against possible aggression, to perpetuate the freedoms for which millions shed their blood, and to hasten the advent of universal disarmament and peace through the United Nations. While as we hereinafter point out, universal training is not our first line of defense, we are convinced that without universal training the Nation's defense would be incomplete and inadequate.

In arriving at the conclusion that universal military training is a matter of urgent military necessity and in recommending that it be approved by the Congress and the people, we have attempted to lay down a program through which the military objectives of the training can be achieved under circumstances that will strengthen the spirit of democracy and prove of lasting value from a physical, mental, and moral standpoint to the youths in training. Our chief aim, however, and our principal justification for the program are military security and peace for ourselves and for the rest of the world. The other benefits which we envisage from such a program are by-products of a project which is made necessary by the state of the world today.

THE WORLD SITUATION AND THE PRESERVATION OF PEACE

At the root of all the Commission's thinking is the conviction that the only real security for this country or any other country lies in the abolition of war through the establishment of the reign of law among nations. The United Nations is the embodiment of our hopes for a durable peace based on justice and cooperation, rather than violence and death. The United States has committed itself to a position of leadership in building the United Nations into an effective instrument for banishing the use of armed might in the settlement of international conflicts.

Unfortunately, at the very time that we have assumed this commitment and before we have achieved it, we have allowed our military strength to fall away from us. The Army that fought with such power against Germany and Japan has been dismantled. Virtually all of what is left is assigned to occupation duty in the defeated countries. At a time when war can strike without warning and with devasting force, our Ground Forces have only 2 1/3 full combat divisions available for duty. Our air and sea strength is somewhat more formidable, but it is dwindling so rapidly that it cannot long be considered a shield against possible attack.

For a few years our monopoly of the atomic bomb and the availability in our civilian population of millions of battle-tested veterans of World War II may serve as insurance against a direct assault on the American homeland. But the precipitate drop in our state of military readiness will have the inevitable effect of encouraging those to whom weakness on the part of the peace-loving nations is a passport to aggression.

By the same token, the lands that share our democratic ideals but lack our resources of men and material will lose faith in our will or our ability to make real the principles for which we stand. Their industries demolished and their people demoralized, they will succumb the more readily to the blandishments or the threats of competing ideologies. The mantle of totalitarianism will spread over still larger sections of the earth, increasing the peril to us and narrowing the company of those on whose aid we can count in the search for lasting peace.

AIR FORCE LETTER)
NO. 205-25)

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 30 MARCH 1949

SECURITY

Disclosure of Classified Information to Reserve Forces Personnel

(Effective until 30 September 1950 unless sooner rescinded or superseded.)

Paragraph
Purpose 1
Scope 2
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1. Purpose. To provide uniformity, this Letter outlines the policy of the Air Force with respect to the dissemination of classified military information to Reserve Forces personnel.

2. Scope. This Letter applies to the Air Force Reserve and the Air National Guard, and in addition, its provisions will be followed in connection with activities concerning the Air Reserve Officers' Training Corps and the Senior Division of the Civil Air Patrol. This Letter does not apply, however, to personnel on extended active duty.

3. Policy. In compliance with the provisions of AFR 205-1 regarding security of military information, Reserve Forces personnel may be entrusted with classified information as follows:

a. RESTRICTED information may be disseminated for official military purposes to any Reserve Forces personnel.

b. Except as authorized in c below, information classified no higher than CONFIDENTIAL may be disclosed to Reserve Forces personnel not on active duty who are actively participating in official training activities, provided that possession of the information is essential to the training course or program.

c. SECRET information may be disclosed to Reserve Forces personnel on active duty for training purposes and personnel not on active duty who have a mobilization assignment, provided that possession of the information is necessary in the performance of official assigned duties.

d. TOP SECRET material will not be used for training purposes in connection with Reserve Forces training programs. As authorized by paragraph 7, AFR 205-1, 14 March 1949, however, individuals serving on short periods of active duty whose assignments require it may be given access to the TOP SECRET information essential for the performance of their assigned duties.

e. Documents containing information classified higher than RESTRICTED will not be disseminated for retention by individuals. Such documents will be stored in military files only.

f. Reserve Forces personnel not on active duty who receive classified information will be informed that the information affects the National defense of the United States within the meaning of the Espionage Laws and that its revelation or transmission to an unauthorized person is prohibited.

g. Upon termination of active duty training, personnel will be briefed on the necessity for maintaining security of their professional knowledge while on inactive status.

4. Investigation and Clearance. Commanders concerned are responsible for requesting personnel security investigations and clearing personnel referred to in this Letter whenever required or necessary in accordance with separate Regulations.

5. Residents of Foreign Countries and Foreign Nationals. The provisions of AFL 182-4 and 8f, AFR 205-1, 14 March 1949, will be observed regarding dissemination of military information to persons residing in foreign countries, or to foreign nationals as defined in paragraph 2i, AFR 205-1.

6. Requirements. Although it is the desire of the Air Force to make available to Reserve Forces personnel such classified information as is required for training purposes within established training programs and courses, it is of primary concern that no breach of security will result from this policy. Commanders concerned will review continuously all classified material required by or of direct value to Reserve Forces activities, and whenever appropriate, will initiate down-grading action thereon in accordance with paragraph 27, AFR 205-1, 14 March 1949.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

- - - - - -

*This Letter supersedes AFL 205-25 (formerly 46-7), 31 March 1948.
This Letter has been coordinated with and approved by the Chief, National Guard Bureau, as being applicable to the Air National Guard.

MC-30274-1-R
Vol. 3 No. 12

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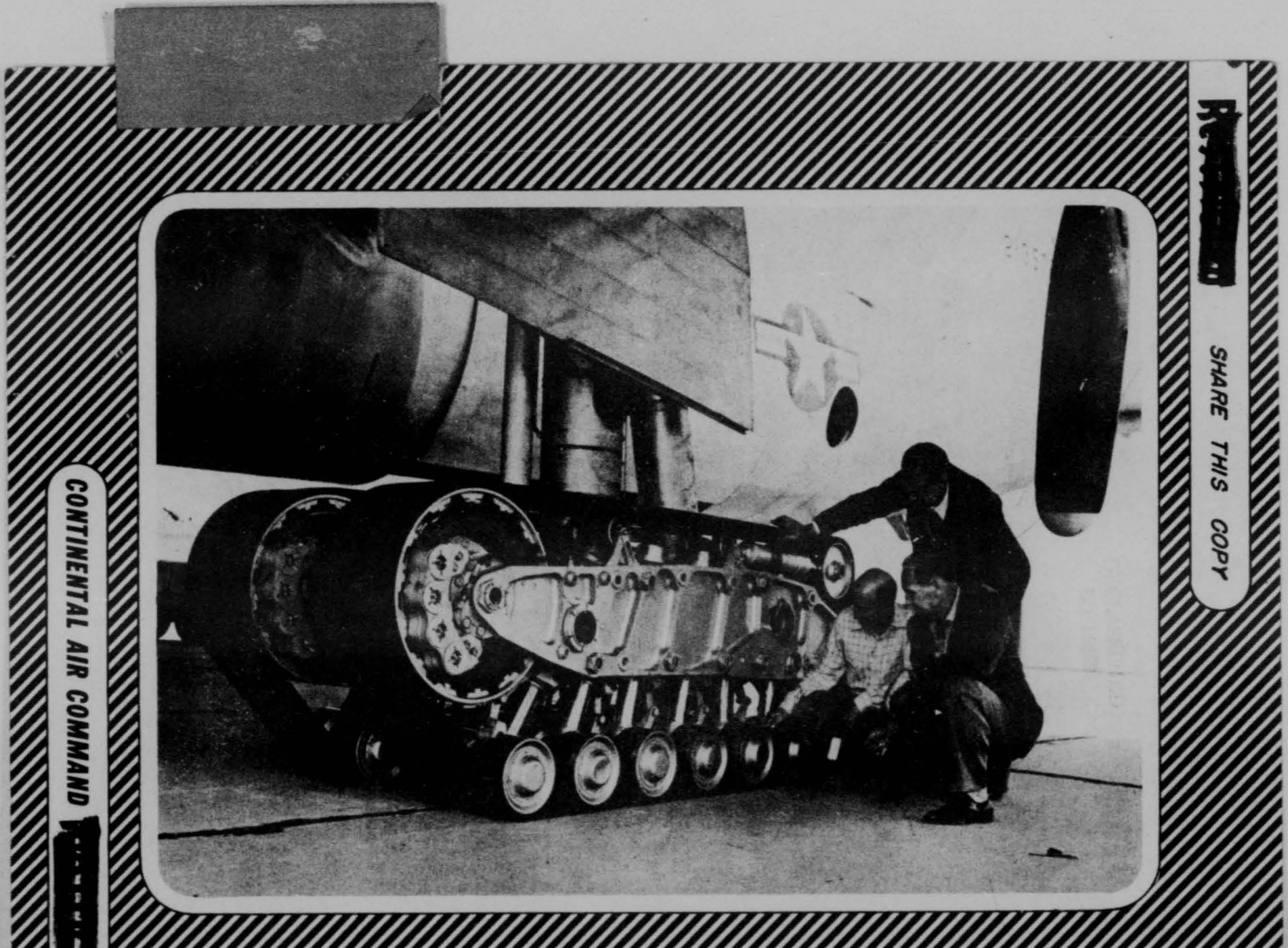
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WEAPONS AND TACTICS OF THE USSR

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By authority of CG,
Continental Air Command
20 Oct, 1949 E J H.

WARNING This document contains information affecting the national defense of the United states within the meaning of the Espionage Laws, Title 18 U.S.C., Sections 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

THE COMMANDING GENERAL
CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

The information herein was compiled by personnel ssigned to the Office of the Director of Intelligence, Headquarters, Tactical Air Command, with the aim of presenting in one volume a study on the organization, tactics and equipment of the Armed Forces of the Union of Soviet Socialist Republics. This information has, heretofore, been available only in many publications.

The sources of the information include the general publications of the Intelligence Division, General Staff, United States Army; the Director of Intelligence, Headquarters, United States Air Force; the Central Intelligence Agency; and the Intelligence Center, Atlantic Command and United States Atlantic Fleet. In addition, assistance was obtained by personal contact with the Intelligence personnel of the Army Field Forces, Fort Monroe, Virginia, and the Atlantic Command and United States Atlantic Fleet at Norfolk, Virginia.

In order that this volume may continue to be both comprehensive and up-to-date, supplements containing additions and corrections will be published. These supplements will be published in uniformity with this original volume so that they can be bound into the same cover.

Every officer should not only have a ready comprehension of international issues but he should also keep himself fully informed on all current tactical and technical trends and developments. This volume on tactical and technical trends and developments is far from definitive, and represents only an introduction to the general field. It must be supplemented by appropriate Intelligence appraisals, by newspaper and periodical reports, and by relevant military literature.

Ennis C Whitehead
ENNIS C. WHITEHEAD
Lieutenant General, U. S. Air Force
Commanding

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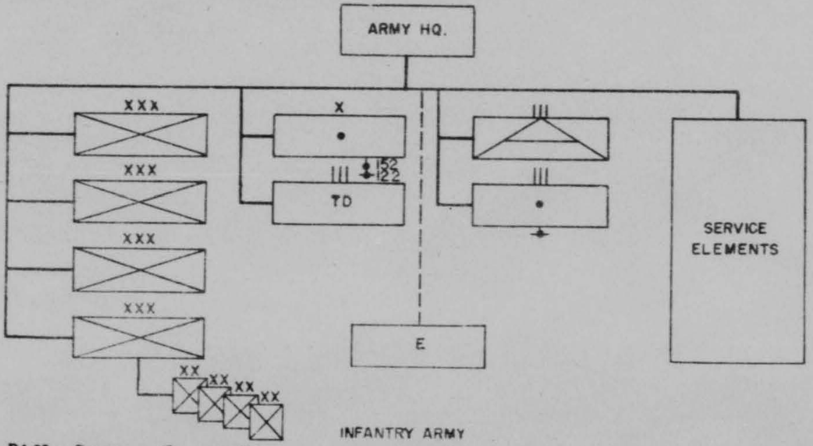
SMALL ARMS

ORGANIZATION OF THE INFANTRY - TACTICS

Infantry Army - The army is the basic strategic organization of combined arms, including air. The army plans, coordinates, and maintains all phases of a continuing operation.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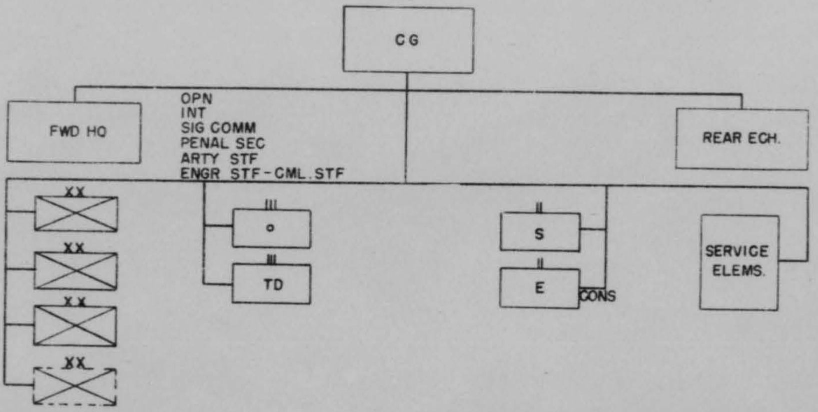
SERVICE ELEMENTS

INFANTRY ARMY

Rifle Corps - The rifle corps is primarily a forward headquarters, with attached supporting troops, for tactical control of two to four rifle divisions.

The service elements of a rifle corps service only the corps headquarters and attached corps troops.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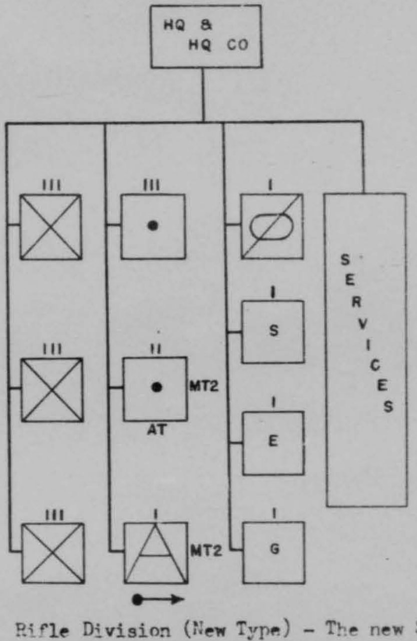
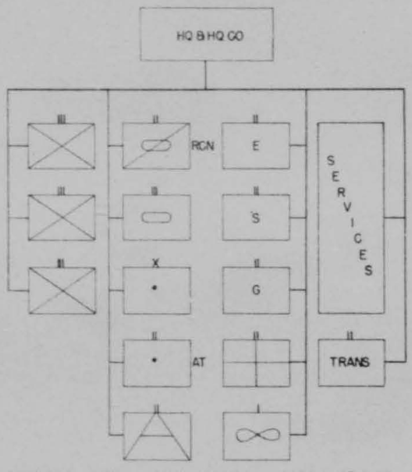
SERVICE ELEMS.

Rifle Division (World War II) - The wartime division, with but little artillery, and that chiefly horse-drawn, was light and maneuverable, but it lacked strategic mobility and organic support. For offensive operations it served usually as the basis of specially tailored infantry-tank-artillery assault groups. For pursuit operations the rifle divisions was sometimes temporarily motorized for support of large armored units in rapid advances.

It is not unlikely that all Soviet rifle divisions will eventually conform to the new division T/O&E. Some are organized as mountain units, and a number may retain their horse-drawn transportation, suitable for operations in roadless terrain.





PERSONNEL- 11,000
EQUIPMENT-
52 MEDIUM TANKS
18 76.2mm SP GUNS
36 122mm HOWITZERS
16 100mm SP GUNS
12 160mm MORTARS
18 120mm MORTARS
24 76.2mm GUNS
12 85mm AT GUNS
36 57 mm AT GUNS
18 37mm AA GUNS
54 12.7mm AA MG's
3 LIASON AIRCRAFT

RIFLE DIVISION NEW TYPE

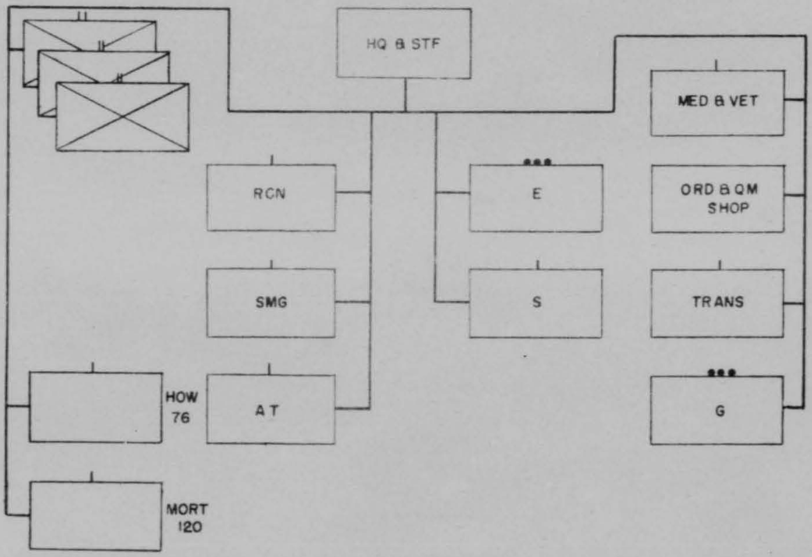
Rifle Division (New Type) - The new Soviet rifle division, developed since VJ-day, has more offensive shocking-power on a man-for-man basis that the U.S. infantry division, although it is inferior to the latter in staying power. The Soviets, with over 100 rifle divisions in peacetime, need not plane for prolonged commitment of their divisions; in World War II they employed rifle divisions on a rotational basis in the line. Since VJ-day, the Soviet High Command has strengthened the rifle division organization by increasing its mobility, logistical endurance, and firepower.

The new-type Soviet rifle division is a well-balanced unit with formidable firepower.

Rifle Regiment - The Soviet rifle regiment is an organization which contains the arms and minimum services necessary for the execution of independent combat missions. In contrast with 3,257 officers and enlisted men of the U.S. infantry regiment, it appears small. The difference is due mainly to smaller weapons, crews and service elements. The Soviet rifle regiment is stronger than the U.S. infantry regiment in automatic weapons, especially submachine guns, and in medium and heavy mortars. But it is weaker in regimental artillery and anti-tank guns. Outstanding feature of the organization of the rifle regiment is the submachine gun company of 100 men, all armed with submachine guns.

With the exception of heavy mortars and signal equipment, which are motorized, all of the regimental weapons and transport are horse-drawn. The regiment is free to maneuver in all kinds of weather and terrain. It is not road-bound. The regiment is, however, incapable of extended independent combat, because the supply and maintenance capabilities of its organic transport are low. Even moderate casualties greatly reduce its effectiveness. The regiment is easily maneuverable. It requires only three 50-car trains for movement by rail.

The Guards Rifle Regiment differs from the standard rifle regiment in that it is upgraded in personnel, and made stronger in light and heavy automatic weapons. A Guards Rifle Regiment is able to put more men in the forward line, and is capable of more extended action than is the standard rifle regiment.



RIFLE REGIMENT

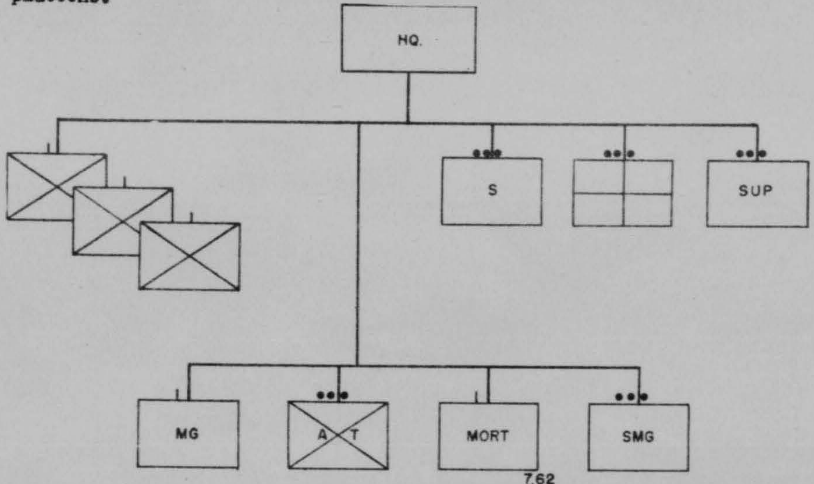
1973

Rifle Battalion - Basic organizational element of the infantry arm is the rifle battalion. The battalion is the lowest administrative and housekeeping unit of the infantry arm maintaining a kitchen, a repair shop, a medical unit, and a pharmacy for its subordinate units. With its light transport, organic supporting mortars, and light artillery, it is well suited for outflanking and infiltrating tactics in any terrain.

In comparison with the U.S. infantry battalion, the Soviet rifle battalion is weaker in personnel and weapons, except light automatic weapons and medium mortars. The outstanding feature of the armament of the rifle battalion is its large number of submachine guns.

Supply and maintenance capabilities of the rifle battalion are small. For more than a day of light combat it must be assisted by regimental or divisional services. A rifle battalion can be easily moved.

Two variations of the rifle battalion - - the motorized rifle battalion and the motorized submachine gun battalion - - constitute the infantry element of the motorized and the tank brigade respectively. The motorized rifle battalion differs from the standard battalion in that it has additional antitank rifle, antitank gun, and submachine gun platoons. It has six instead of nine 82mm mortars. The motorized submachine gun battalion, a part of the tank brigade, is smaller than the standard rifle battalion. It lacks the machine gun company, and has six instead of nine 82mm mortars. But, like the motorized rifle battalion, it has additional antitank rifle and antitank gun platoons.



RIFLE BATTALION

Rifle Company - The rifle company is stripped of all personnel not immediately essential to the combat mission. Company headquarters consists of the company commander, first sergeant, cooks, and first-aid man. Each of the three 30-man rifle platoons is organized into three squads, with three men in platoon headquarters.

The squad consists of nine men, although its T/O strength has varied in the last eight years from 8 to 12. Its fire base is the DP light machine gun - - a weapon generally similar to the Browning Automatic Rifle - - or, in some cases, the Company Light Machine Gun, a newer and more effective weapon. Five riflemen equipped with bolt action rifles or carbines complement the machine gun firepower. Despite their predilection for the submachine gun, the Soviets emphasize the value of individual armed fire, and one rifleman in each squad is usually qualified as a sniper and is issued a rifle with telescopic sight. A postwar innovation is the panzerfaust which is now allotted to each squad. The panzerfaust is a recoilless grenade-launcher, firing a hollow-charge projectile against tanks.

ILLUSTRATION NOT AVAILABLE

PISTOLS AND REVOLVERS

General - As in other armies these weapons are of minor importance in the Soviet Army. They are issued to tank crews, officers, etc., for personal defense, but have been replaced by submachine guns to a great extent for combat use.

The principal defect of the Soviet hand guns is their small caliber (7.62mm or .30 cal). This limits bullet weight, which in turn results in insufficient shocking power in spite of high velocity.

Possible development may be a pistol with selective full and semi-automatic fire. shoulder stock holster and a large caliber.

Characteristics

1. Nagant M1895 Revolver....At left.
Caliber...........7.62mm (.30 cal)
Effective Range......... 50 yards
Capacity of Feed Device......7 rds in cylinder
Practical Rate of Fire.......7 rds in 15-20 seconds

Remarks Obsolescent, but still in use. This revolver is hand-operated. There are single and double action models.

2. Tokarev "TT 1930" Automatic Pistol....................At right
Calibre.........7.62mm (.30 cal.)
Effective Range..........50 yards
Capacity of Feed Device.....8 rds in clip magazine
Practical Rate of Fire......8 rds in 10-15 seconds

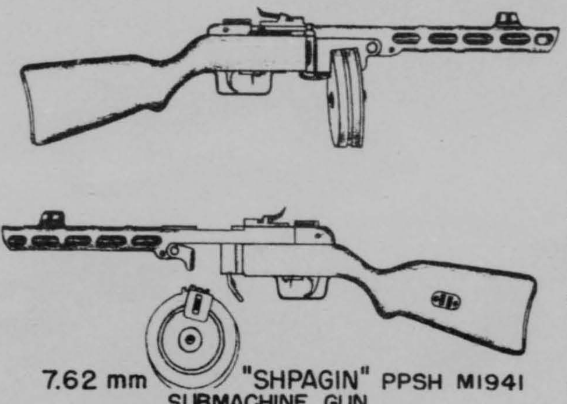
Remarks -Also has been designated as TT 1933. This recoil operated semiautomatic pistol is of Colt-Browning design and is a simplified version of the U. S. pistol .45 cal. M1911 or M1911A1.

SUBMACHINE GUNS

General - The Soviet Army has developed four submachine guns, three of which have been developed since 1940. Two of these, Model 1934/38 and "Degtyarev" PPD 1940 are obsolete. There is wide distribution throughout the Army of submachine guns.

There are comparatively few basic changes to be expected in Soviet submachine guns except for the possible adoption of a more powerful cartridge in a weapon along the lines of the German MP 44 automatic carbine.

Characteristics



7.62 mm "SHPAGIN" PPSH M1941 SUBMACHINE GUN

1. "Shpagin" PPSH
M1941........At left

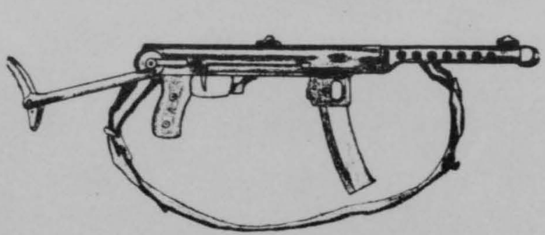
Calibre.......7.62mm
(.30 cal.)
Effective Range.....
325 yards

Capacity of Feed -
Device......71 rd in
Drum magazine; 35
rd in clip magazine
Practical Rate of
Fire (RPM).......

Semiauto - 30
Short Bursts- 70
Long Bursts- 100

Remarks - Believed to be limited standard, but still the model in widest use. Has wooden stock. Has selective auto and semi-auto fire.

2. "Sudarev" PPS -
M1943...........At right
Calibre..7.62mm(.30 cal)
Effective Range.........
Short bursts-220 yards
Long bursts -110 yards
Capacity of Feed Device-
35 rd in box magazine
Practical Rate of Fire..
(RPM).............100



Remarks - There was great need for a submachine gun which could be easily mass-produced; the result was the PPS 1943. This weapon fires a 7.62mm (.30 cal.) high-velocity, light weight ball round, and an armor-piercing incendiary round for use against lightly armored targets. Believed to be the current standard submachine gun. It is distinguished by the folding skeleton metal stock.

CARBINES AND RIFLES - CHARACTERISTICS

7.62mm M1938 Carbine

Calibre........................7.62mm (.30 cal.)
Effective Range...............Up to 440 yards
Capacity of Feed Device.......5 rds clip-fed in magazine
Practical Rate of Fire (RPM)..10

Remarks - Believed limited standard. Has no provision for bayonet. Believed being converted to M1944 carbine. Is a shoulder version of the M1891/30 rifle.

ILLUSTRATION NOT AVAILABLE

ILLUSTRATION NOT AVAILABLE

7.62mm M1944 Carbine

Calibre........................7.62mm (.30 cal.)
Effective Range...............Up to 440 yards
Capacity of Feed Device.......5 rds clip fed in magazine
Practical Rate of Fire (RPM)..10

Remarks - The standard shoulder arm for troops whose duty does not require a rifle or submachine gun. Differs from the M1938 carbine only in the permanently attached, folding bayonet.

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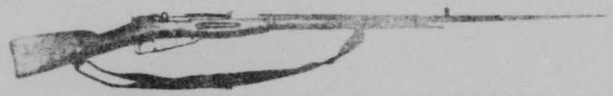
M1891/30 Mossin-Nagent Rifle



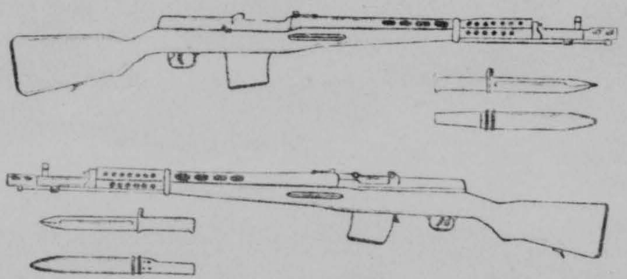
Calibre	7.62mm (.30 cal.)
Effective Range	Up to 440 yards-with telescopic sight, approximately 880 yards
Capacity of Feed Device	5 rds clip-fed in magazine
Practical Rate of Fire (RPM)	10

Remarks - The basic rifle of the Soviet Infantry, the manually operated, bolt action M1891/30 and improved later versions have been the mainstay of their infantry since 1891. Sniper versions are in the service. The earlier sniper versions had a 4-power telescopic sight, but later versions have a simpler 3.5-power telescopic sight on a mount fastened to a base on the left side of the receiver. A silencer used in conjunction with ball ammunition loaded below the velocity of sound was used in partisan operations during World War II. The M1891/30 has given satisfaction except for its slow rate of fire (10 rpm) and awkward length.

There are two carbine versions of the bolt action M1891/30 rifle. These differ only in that the latter-M1944-version has a permanently attached folding bayonet.

Tokarev Semi-Automatic Rifle (SVT) M1940

Calibre.....7.62mm (.30 cal)



Remarks -Currently in service in limited numbers in the infantry, this is a gas-operated, air cooled magazine fed, shoulder weapon. Some are capable of fire on full automatic, as a light anti-aircraft weapon, using a 15-round magazine instead of the regular 10-round magazine. Workmanship is good but lacks ruggedness.

Effective rates of fire are considered to be 20-25 rounds per minute in semi-automatic fire, and 70-80 rounds per minute when the rifle is fired on full automatic.

The weapon develops a muzzle velocity of 2,720 ft/sec when M1908 ball ammunition is used. Maximum effective range is considered to be 440 yards against ground targets and 500 yards against strafing planes. Over-all length is 48.2 inches. With the inclusion of a

3.5 X telescope that is easily mounted with a horseshoe type mount, the rifle may be used for sniping.

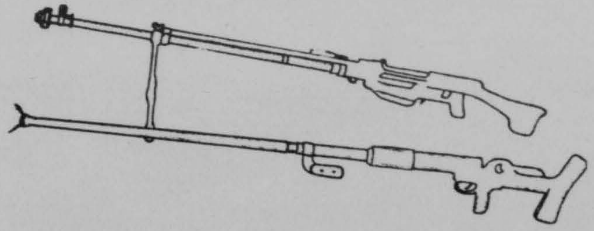
A six baffle combination muzzle brake compensator is permanently mounted on the muzzle. This helps keep the muzzle down and lessens the recoil, but the back blast from the gases produces a very bad effect on the firer in a short time. It is reported that this weapon is not well liked in the infantry, despite its sufficiently rapid rate of fire, because it is regarded as very complicated and sensitive.

This weapon employs a fluted chamber throat, which tends to equalize the forces on the inside of the cartridge, thus reducing the adhesion of the cartridge case to the chamber walls. The cartridge, then being less tight in the chamber, may be extracted with less effort and in smoother action. Lighter extractors may be used, and broken extractors and jammed empty cartridge cases are less frequent.

Antitank Rifles - General

The Soviet Army is equipped with two calibre .57 antitank rifles; one is single-shot, bolt action, and the other is gas-operated, semi-automatic in action. Both weapons were standardized early in World War II when armored vehicles carried much less thicknesses of armor than were used at later periods. Accordingly, these weapons have lost a good measure of their effectiveness. Although still effective against armored cars, half-tracks, and light tanks, they are relatively ineffective against modern medium and heavy tanks. It is believed that these weapons are not limited standard and indications are that they are being replaced by a recoilless antitank weapon of the German Panzerfaust type.

The German Panzerfaust is a one-man recoilless grenade launcher. Panzerfaust-type weapons do not possess either the range or the accuracy of the United States recoilless or rocket launchers. However, for close-in fighting at a range of 50 yards or less, they are extremely effective and, once a hit is obtained, able to penetrate any modern armor.



1. 14.5mm Siminov PTRS-1941 Antitank Rifle - Top left.
2. 14.5mm Degtyarev PTRD-1941 Anti-tank Rifle Top bottom.

Calibre...1.& 2. 14.5mm

Remarks - The PTRS is a gas-operated, semi-automatic rifle with a 5 rd clip magazine, while the PTRD is a manually operated bolt-action, single-shot rifle. The BS-41 round, having a tungsten-carbide core, is the most effective ammunition for use with these rifles. The BS-41 round will penetrate 1.18 inch of armor at 110 yards; 1.08 inch at 330 yards; .98 inch at 550 yards, at 30 degrees angle of impact.

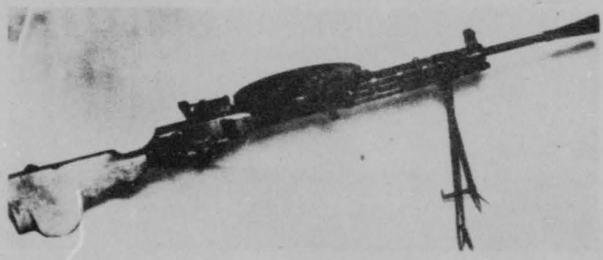
MACHINE GUNS

General - The Soviet machine guns in current use are in the majority of cases designs developed and standardized prior to World War II.

However, after fighting a major war, the Soviet Army has become aware that its combat infantrymen have worthwhile ideas on the everyday weapons with which they fought, and the Soviet Ordnance Department has taken action on the criticisms of the "DP" Light Machine Gun, the basic light machine gun of the Soviets infantry throughout World War II. As a result, the M1946, Company Light Machine Gun, technically far superior to the DP, has been developed.

Characteristics

1. 7.62mm Model DP (Degtyarev)

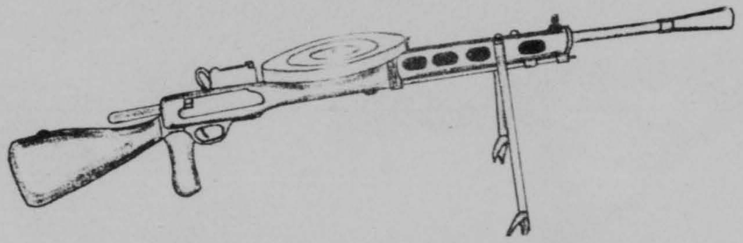


Calibre....................7.62mm (.30 cal)
Effective Range...........Ground - 880 yards AA - 550
Capacity of Feed Device...47 rd in drum magazine
Rate of Fire (RPM)........80

Remarks - Developed in 1926, the Model DP Light Machine Gun proved to be the work-horse of the Soviet Infantryman until VJ-day. The "DP" is a light, gas-operated, air-cooled, magazine fed, and bipod mouthed machine gun. It is basically of very simple design and easily manufactured, and, besides the basic version, variations of the "DP" came into service as standard tank and aircraft flexible machine guns well before World War II.

After their experience during the Spanish Civil War of 1936-38, the Soviets entered the war with this as their standard weapon, knowing that: (1) the drum magazine caused numerous stoppages; (2) the driving spring, positioned around the gas pistol in a cylinder underneath the barrel, gave trouble when the gun became heated; (3) the weapon had a very marked comparable effective rate of fire. However, production was more important than accomplishing major modification. A few minor modifications that would not materially affect production were made during the war.

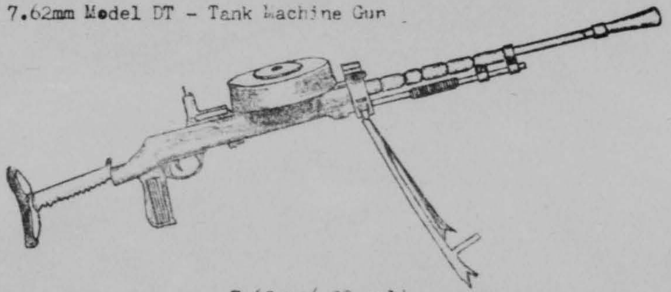
2. 7.62mm Model DPM - Company Light Machine Gun



Calibre....................7.62mm (.30 cal.)
Effective Range............Ground - 880 yards, AA - 550 yards
Capacity of Feed Device...47 rd in drum magazine
Rate of Fire (RPM)........80

Remarks - Late in 1944, the Soviets redesigned the "DP" to eliminate some of the faults made apparent by three years of combat use. The most important change made at this time was to remove the driving spring from its position around the gas piston- where it was exposed to the heat of the propellant gases and the hot barrel - to a position in the rear of the receiver. Some of these redesigned "DP's", known as the "DPM" (Degtyarev Infantry, Modernized), were in service at the close of World War II. Some "DP's" also had a modified flash-hider added which served as a muzzle brake and lessened the dispersion of fire inherent in a light automatic weapon fired from a bipod mount.

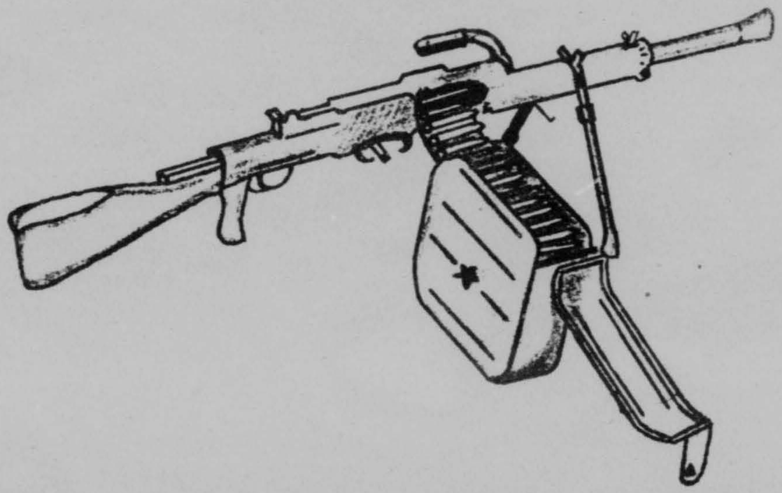
3. 7.62mm Model DT - Tank Machine Gun



Calibre....................7.62mm (.30 cal)
Effective Range............875 yards from halted vehicle
330 yards from moving vehicle
Capacity of Feed Device...60 rd in drum magazine
Rate of Fire (RPM)........100 (estimated)

Remarks - This is a tank-mounted version of the "DP". It is used as a coaxial and hull gun in armored combat vehicles. It has a pantograph, skeleton stock and aperture sights. The bipod mount is carried in the vehicle for emergency off-the-vehicle use.

4. 7.62mm Model 1946 - Company Light Machine Gun



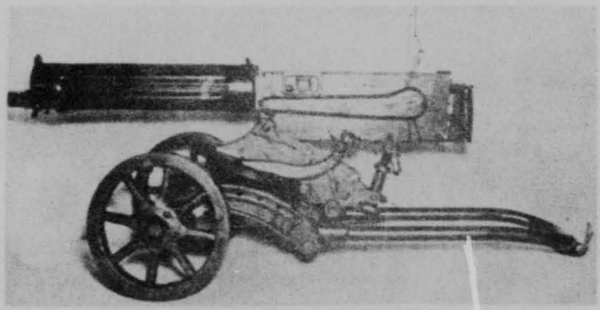
Caliber...............7.62mm - Model 1946 (.30 cal.)
Effective Range......1,100 yards; most effective up to 668 yards

Remarks - By 1947, development had standardized the 7.62mm Model 1946 Company Light Machine Gun. This gun is basically the "DPM" with extensive modifications. The most important change provides for a belt-fed mechanism which handles the 50-round sections of metallic link belts used in the 7.62mm M1943 Coryunov Heavy Machine Gun. Those, like the German link belts, are capable of being joined to give any capacity desired, but are usually packed five sections (250 rounds) to a belt box. This belt-fed mechanism is made detachable so that the 47-round drum magazine may be used.

Since the new weapon has a higher (250 rpm) effective rate of fire than its predecessor, the DP/DPM, with its 80 rpm, it has been necessary to increase the barrel weight. The barrel lock has been improved so that barrel change is accomplished much faster than in the DP/DPM, and the weak bipod of the older guns has been strengthened.

The M1946 weighs 5.51 pounds more than the basic "DP", but this added weight is negated by the fact that it weighs 22 pounds less than the "DP" when 500 rounds of ammunition are computed in the total weight, owing to the lesser weight of the belts compared to that of the drum magazines.

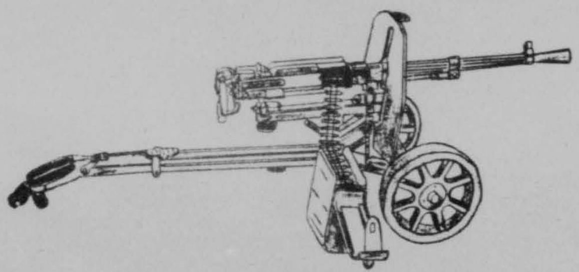
5. 7.62mm M1910 Maxim - Heavy Machine Gun



Caliber.........................7.62mm (.30 cal.)
Effective Range................Ground-1,650 yards,AA-1,100 yards
Capacity of Feed Device........250 rd in fabric belt
Practical Rate of Fire (RPM)...250 - 300

Remarks - This is a heavy, clumsy, but reliable water-cooled gun. It is now apparently limited standard and probably being replaced by the Guryonov M1943 or an improvised version of the Guryonov. Used as light AA on single, dual and quad AA mounts. Well liked in the Soviet Army. M1908 light ball ammunition giving maximum range of 3,300 yards can be fired although M1930 heavy ball is the present standard.

6. 7.62mm M1943 - Guryonov - Heavy Machine Gun



Caliber............7.62mm (.30 cal.)
Effective Range....1,100 yards - ground
                    550 yards - AA
                  1,100 yards - AA (with special sight)

Remarks - This gun or an improvised version believed to be replacing the M1910 Maxim heavy machine gun. Mount inverts for AA fire. M1908 light ball ammunition giving maximum range of 3,300 yards can be fired although M1930 heavy ball is the present standard.

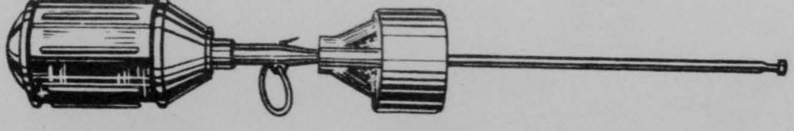
GRENADES

General - Soviet hand grenades include offensive, combination offensive and defensive, defensive, shaped-charge antitank, and chemical types.

In general, Soviet grenades are simple in operation but somewhat complicated in design. Hand antitank grenades, especially of the shaped-charge variety, are emphasized. The absence of a known HE rifle grenade during World War II may be explained by the use of the 50mm light mortar. Since the 50mm mortars are believed to be obselescent, an HE rifle grenade may be expected to come into service. Due to Soviet emphasis during World War II on close combat antitank work, it is to be expected that development of hand shaped-charge antitank grenades will continue in conjunction with recoilless weapons firing shaped-charge antitank projectiles.

Characteristics

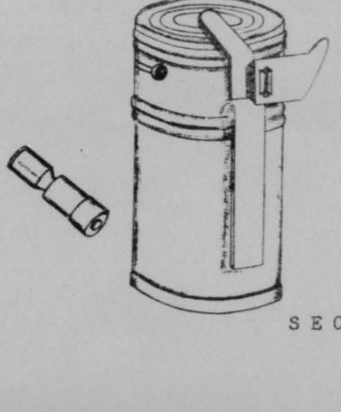
1. VPG-S 1941 HEAT Rifle Grenade



Average Range - 55-85 yards.

Remarks - Present status not known but used in World War II; utilizes shaped charge principle, penetrates 1.18 inches of armor at 60°; no launcher used as grenade is of the rodded type in which the rod is inserted in the rifle barrel and a blank cartridge used.

2. RG-42 Offensive Hand Grenade (M 1942 HE)

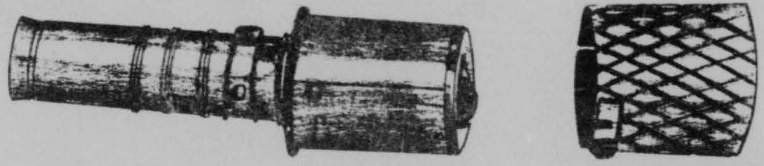


Average Range...........
........35-45 yards.

Effective Radius of Fragmentation................
........17-25 yards.

Remarks -
Believed standard, depends on light of fragmentation.

3. RGD-33 Offensive/Defensive Hand Grenade (M 1933 HE)

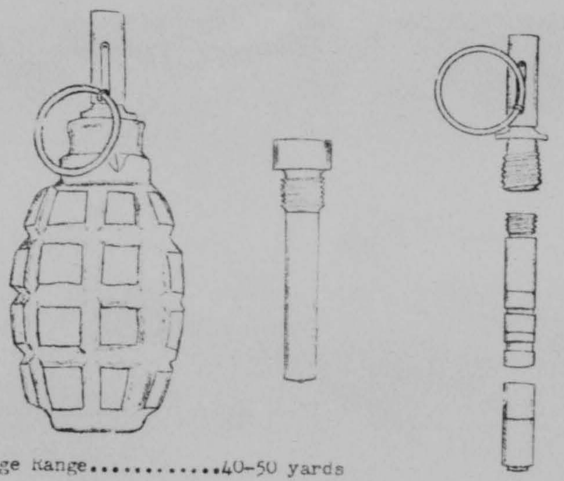


Average Range.............35-45 yards.

Effective Radius of Fragmentation- Without fragmentation jacket, 6 yards. With Fragmentation jacket, 30 yards.

Remarks - Believed current standard; used without fragmentation jacket as offensive grenade and with fragmentation jacket as defensive grenade. Must be thrown from cover when fragmentation jacket is used.

4. F-1 Defensive Hand Grenade (Koveschnikov)

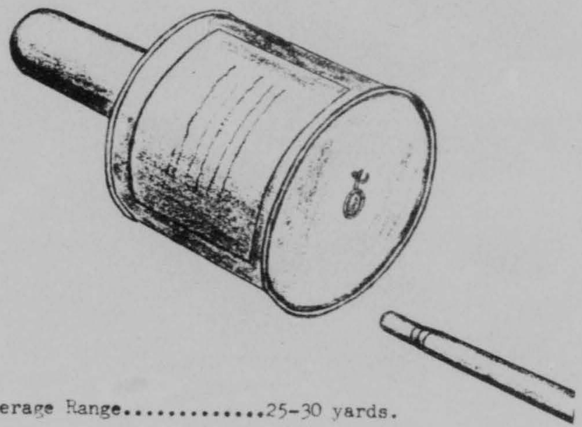


Average Range............40-50 yards

Effective Radius of Fragmentation - 220 yards.

Remarks - Similar to U. S. Fragmentation Grenade MK II. Must be thrown from cover.

5. RPG-40 HE Antitank Hand Grenade (M 1940)

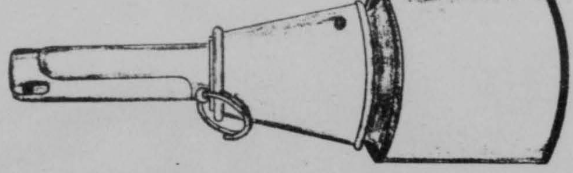


Average Range.............25-30 yards.

Effective Radius of Fragmentation - 25 yards.

Remarks - Believed still standard. Depends on comparatively heavy HE charge for effect against tracks, running gear, top of engine compartment and turret top of light tanks and armored cars. Also used versus personnel. Thrown from cover. Penetrates .78 - .98 inch armor.

6. RPG-43 HEAT Hand Grenade (M 1943)

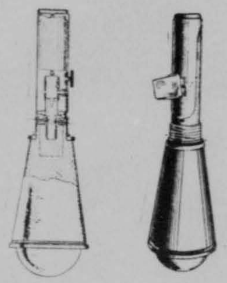


Average Range...............17-25 yards.

Effective Radius of Fragmentation - 25 yards.

Remarks - Believed standard. Utilizes shaped-charged principle to penetrate from 2.75-2.95 inches of armor. Thrown from cover. Weight-2.7 lbs.

7. RPG-6 HEAT Hand Grenade

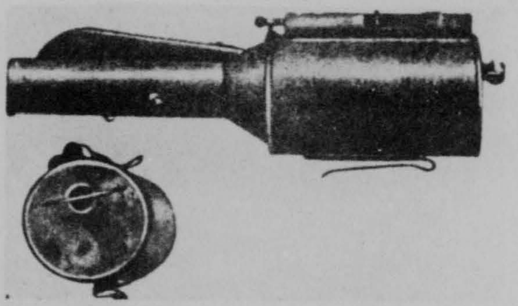


Average Range.................17 - 25 yards

Effective Radius of Fragmentation-25 yards

Remarks - Utilizes shaped charge principle to penetrate up to 3.94 inches of armor. Thrown from cover.

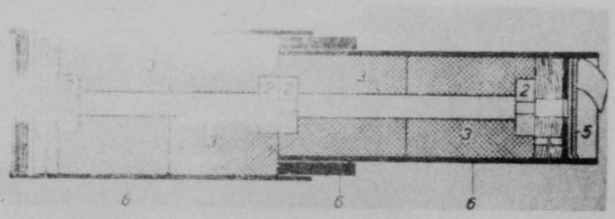
8. M1917 Chemical Hand Grenade



Filling..................Chloropicrin
Average Range............30 - 50 yards

Remarks - Current status not known; was used during World War II to force evacuation of enclosed spaces.

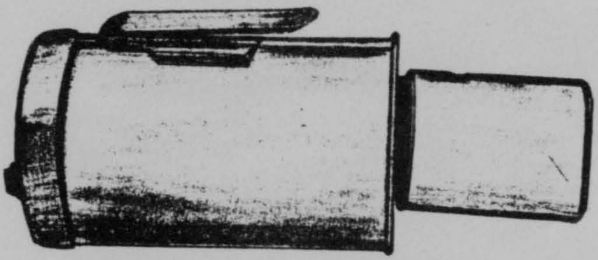
9. RGD-1 Smoke Hand Grenade



Filling...................Anthracene
Average Range.............30 - 40 yards.

Remarks - Current status not known; makes a smoke screen 27 - 33 yards long and lasting about 1.5 minutes.

10. "S" Smoke Hand Grenade



Filling...............Tar

Remarks - Current status unknown. No information available on this grenade.

11. Frangible Incendiary Hand/Rifle Grenade

ILLUSTRATION NOT AVAILABLE

Average Range............Hand - 25 yards.
Rifle- 200 yards.

Remarks - Current status unknown; uses various commercial glass bottles filled with KS incendiary mixture of benzine. Used with and without igniters. Hand-thrown or launched from a simple cup launcher on the M1891/30 rifle; used versus pillboxes, buildings and armored vehicles.

MORTARS

GENERAL

On the whole, Red Army mortar technique is very similar to that of the U. S. Army. However, the Soviets seem to place greater emphasis on the role of the mortar as a support weapon. This emphasis becomes apparent in the greater stress laid on officer supervision and centralized control of mortar units than will be found in equivalent units of the U.S.; and also in the greater number of medium and heavy mortars found in a Soviet rifle division. The resulting striking power of a Soviet rifle division by weight of projectile is two and one-half times that of an American infantry division.

TACTICAL EMPLOYMENT

The fundamental principle of mortar employment in the Soviet Army is the use of massed mortar fire as an independent striking weapon. This is achieved by combining mortar units under one commander. In operation, requirements are set by the infantry commander, while technical control and coordination are the responsibility of the artillery commander. Constant coordination and liaison between mortar units, artillery command, and the rifle units is a strict rule. The result is a closely knit fire plan wherein a single system of terrain reference is maintained by all troops. This, in turn, facilitates requests for, and delivery of, fire support.

Fundamentally, mortar fire, like field artillery, is used to neutralize and destroy the enemy system of fire throughout all operational phases, thus enabling Soviet infantry to encircle and destroy enemy personnel.

DEVELOPMENT AND TRENDS

The characteristics of modern Soviet mortars, brought about as a result of World War II experience, are simplicity of design, light weight, and high mobility. Up until now, emphasis has been placed on fire power rather than accuracy. However, the Soviets have now developed their 160mm mortar, and, as this appears to be the optimum for a field mortar as to caliber and weight, they are likely now to concentrate on the improvement of accuracy and greater mobility.

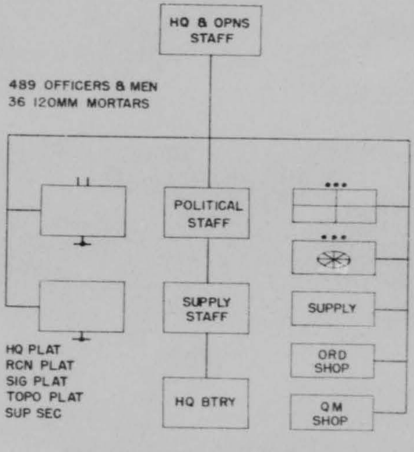
In this regard, it is expected that high priority will be allotted to the development of better mortar fire control, ammunition, and means of more rapidly concentrating the fire of massed units.

A possible development is that of a mortar that would be readily convertible to a recoilless weapon for flat trajectory use. Another is a self-propelled heavy mortar or multiple mortar.

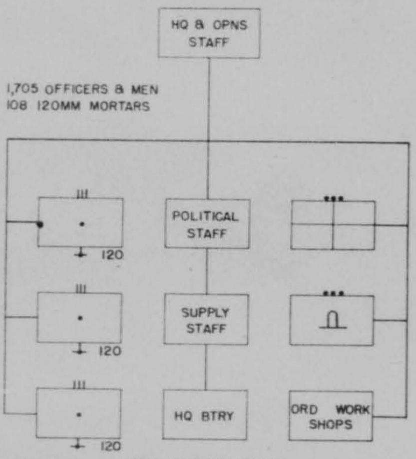
ORGANIZATION

120mm Mortar Brigade

Every artillery division has a mortar brigade. Mortar brigades, however, also may be independent. A mortar brigade has good tactical and strategic mobility. Primary missions of the mortar brigade include: Destruction of personnel in the open and in light shelters; destruction of light field fortifications and wire barriers; destruction or neutralization of artillery, mortar, and infantry firing positions; accompanying and defensive barrages and concentrations; and smoke screens. A heavy mortar brigade is especially useful in woods and swamps in direct support of infantry or cavalry.


HQ & OPNS STAFF
489 OFFICERS & MEN
36 120MM MORTARS
POLITICAL STAFF
SUPPLY STAFF
HQ BTRY
SUPPLY
ORD SHOP
QM SHOP
HQ PLAT
RCN PLAT
SIG PLAT
TOPO PLAT
SUP SEC

120MM MORTAR REGIMENT


HQ & OPNS STAFF
1,705 OFFICERS & MEN
108 120MM MORTARS
120
120
120
POLITICAL STAFF
SUPPLY STAFF
HQ BTRY
ORD WORK SHOPS

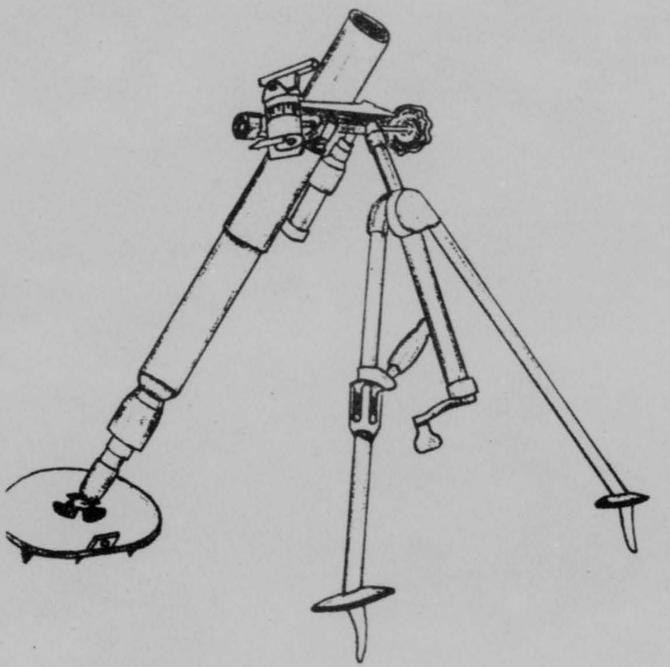
120MM MORTAR BRIGADE

120mm Mortar Regiment

A heavy mortar regiment forms a part of a mortar brigade, or it may be independent. It is used for destruction of personnel and materiel in open positions and in open trenches, for destruction of wire entanglements, neutralization of machine guns and mortars, and for the establishment of stationary and moving barrages. During artillery preparation for an offensive operation, the mortar regiment is often reinforced by a 122mm howitzer regiment to form a counter-mortar groupment.

CHARACTERISTICS

50mm M1938 Company Mortar



Caliber........................50mm

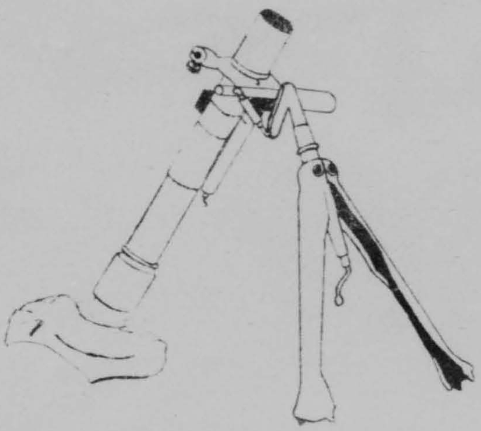
Maximum Range.................875 yards

Maximum Rate of Fire (rpm)....30

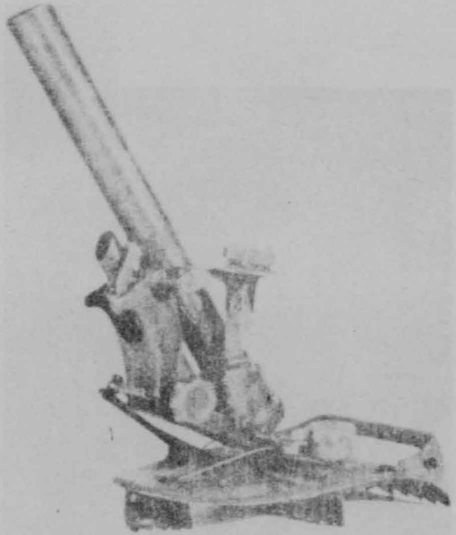
Elevation.....................45° to 75°

Remarks - Believed limited standard - one man load. This light mortar is equivalent to the U. S. 60mm mortar, and is the standard weapon of the rifle company (2 mortar platoons in each company). It may support its own company or all the mortars may be combined into a six piece provisional company in support of a whole battalion. In this case a fire direction center is usually employed.

50mm M1940 Company Mortar

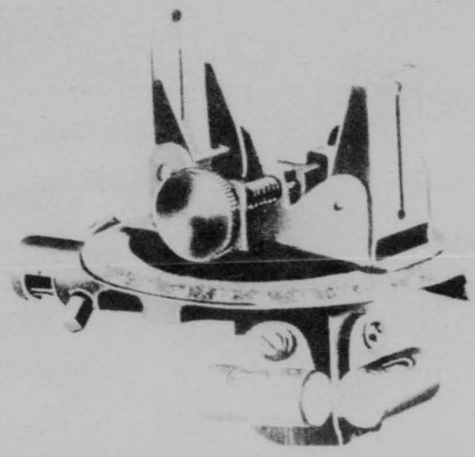


50mm M1941 Company Mortar

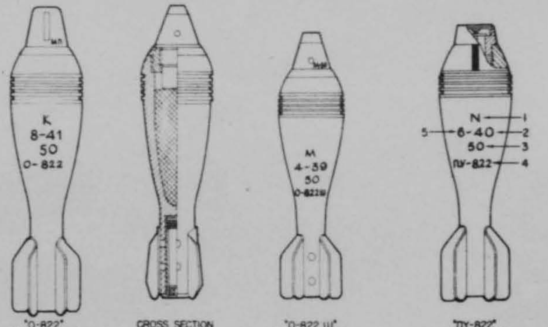


Remarks - The above two mortars have the same capabilities as does the 50mm M1938 Company Mortar described on the preceding page.

Auxiliary 50mm Company Mortar Equipment



1. 50mm Mortar Sight (Type 1)


K
8-41
50
0-822
M
4-59
50
0-822Ш
N
6-40
50
ПУ-822
1
2
3
4
5

"0-822" FRAGMENTATION SHELL

CROSS SECTION OF 50-mm MORTAR SHELL

"0-822 Ш" FRAGMENTATION SHELL

"ПУ-822" PRACTICE SHELL

2. Soviet 50mm Mortar Shells

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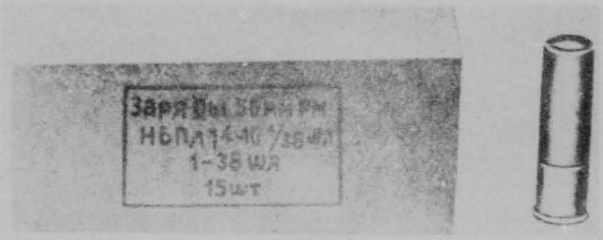
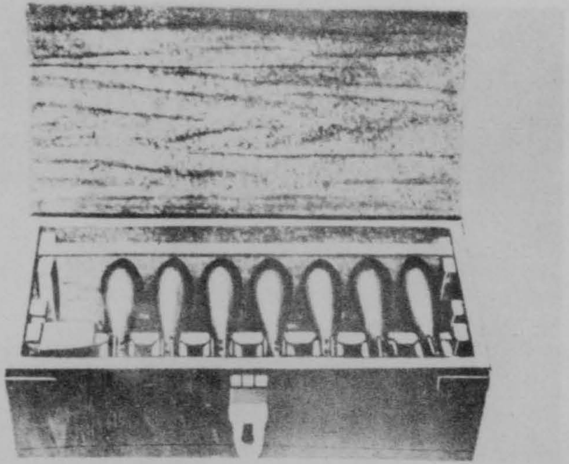

Заряды 50мм РМ
НБПЛ 14-10
1-38 ШЯ
15шт

3. Propellant Cartridge and 15 Round Container for Soviet 50mm Mortar



4. Bulk Container for Soviet 50mm Mortar Ammunition

82mm M1937 Battalion Mortar

Caliber..........................82mm
Maximum range....................3,325 yards
Maximum rate of fire (rpm).......25
Elevation........................45° to 85°

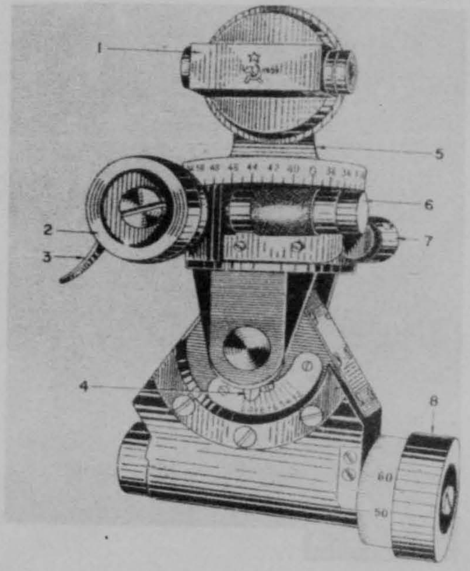
Remarks - Each battalion 82mm mortar company, with nine pieces, may fire in support of its own rifle battalion. On defense, or static situation, it is normal to combine the three medium mortar companies of a rifle regiment into a provisional battalion commanded by the regimental heavy mortar battery commander who operates jointly with the three mortar companies. This provisional mortar battalion establishes a fire direction center with wire communication to observation posts. Parellel and unit observation posts are numerous in this set-up.

82mm M1941 Battalion Mortar, and 82mm M1943 Battalion Mortar

Caliber..........................82mm
Maximum Range....................3,325 yards
Maximum Rate of Fire (rpm).......25
Elevation........................45° to 85°

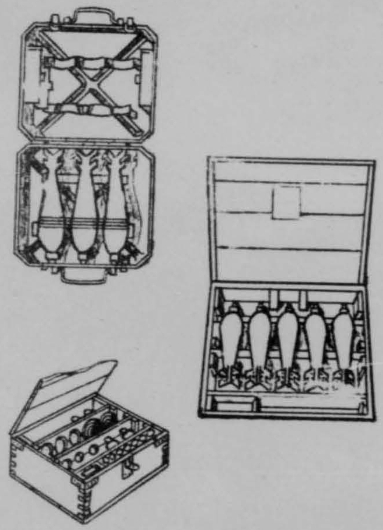
Remarks - There are only minor differences, not affecting performance, between the two models. The M1943 is believed to be the current standard weapon with the M1941 being modified to M1943. Has wheeled mount and can be hand-thrown by two men.

Auxiliary 82mm Mortar Equipment

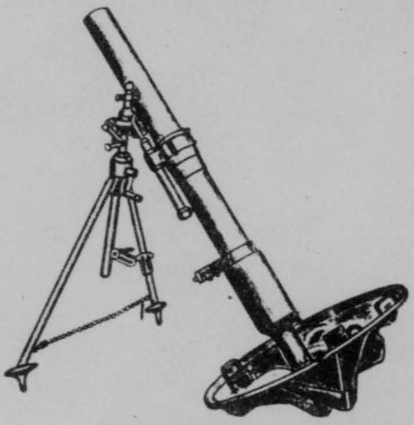


82mm Mortar Sight
MP-82-YC

Soviet 82mm Mortar
Ammunition Packing



1997



107mm M1943 Mountain Mortar

Caliber......................107mm

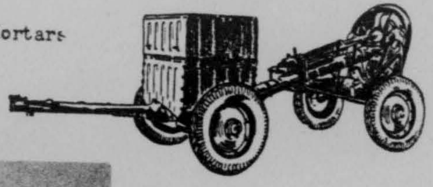
Maximum Range,.........6,900 yards

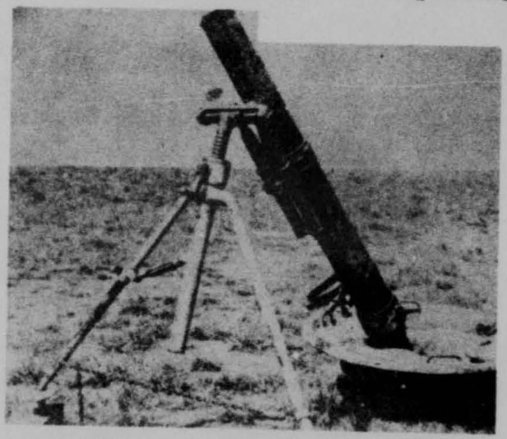
Maximum Rate of Fire (rpm)......15

Elevation...............45° to 80°

Remarks - This weapon was in use in mountain units during World War II. Not known whether it is still standard. This weapon fires gas and smoke rounds. Mortar, limber, and caisson drawn by four horses or packed on nine animals.

120mm M1938 and M1943 Regimental Mortars





Caliber...........120mm

Maximum Range..........
.......6,240 yards.

Maximum Rate of Fire(rpm)
.......12.

Elevation.....45°to 80°

Remarks - The Soviet standard heavy mortar is the 120mm, there being seven of them in the regimental mortar battery. There is no equivalent organization or weapon in the U. S. Army infantry regiment.

The M1938 is believed limited standard and the M1943 standard. There is no performance difference between the two models.

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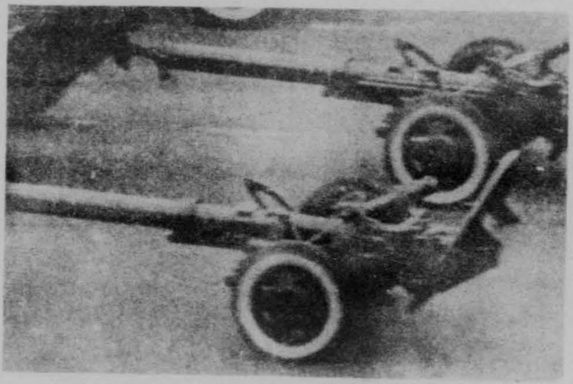
Mortar, limber, and caisson are horse or truck drawn, also sometimes carried on trucks or packed on animals.

This mortar so impressed the Germans that they not only used captured mortars of the type but proceeded to manufacture a very close copy which they used extensively.

The 120mm along with the 160mm are actually regarded as artillery according to Soviet concepts and, during World War II, were massed in regiments and brigades for barrage fire against area targets.

The 120mm mortars are characterized by high rate of fire, great maneuverability and good radius of burst.

160mm Model 1943 Mortar



Caliber.....................160mm

Maximum Range................5,500 yards

Maximum Rate of Fire (rpm)...3

Remarks - Latest known mortar, believed standard. Method of loading not certain. Mount believed integral with limber used to transport mortar; truck drawn. This mortar and the 120mm are regarded as artillery by the Soviets and, during World War II, were massed in regiments and brigades for barrage fire against area targets. The 160mm appears to be the optimum for a field mortar as to caliber and weight.

ARTILLERY

GENERAL

The importance of massed supporting fire, both in the initial and subsequent phases of armored operations, is stressed by the Soviet Army in its employment of large balanced armored forces in independent operations.

One notable difference from U. S. practice is the Soviet use of large quantities of heavy mortars, rockets, and towed tank-destroyer artillery. In addition, the Soviets employ heavy caliber self-propelled artillery both for centralized and decentralized assault-gun type support.

The Soviets employ six main types of ammunition: HE, for general use; AP (solid) and sub-caliber, arrow type for penetration of armor; concrete piercing (HEAP), against concrete and armor; shrapnel against personnel up to three kilometers; incendiary, and smoke.

NOTE: Sub-caliber ammunition should not be confused with that used in the familiar U. S. Army materiel, which consists of a smaller gun mounted either inside or on top of the tube of a larger gun for the purpose of firing the standard projectile of the smaller weapon. On the other hand, sub-caliber ammunition is designed to enable a smaller projectile to be fired from a larger caliber gun for one or more of three purposes: (1) To increase the muzzle velocity; (2) to decrease the time of flight; and (3) to increase the penetrative powers. For the purposes listed above sub-caliber ammunition increases the efficiency of the weapons in which it is used. Discussion of the characteristics, advantages, and limitations of sub-caliber ammunition will not be made here, but can be found in regular Ordnance publications.

Four types of fuzes are in general use by the Soviets: (1) Superquick, used against personnel when ricochet or time fire cannot be used; (2) quick, used when maximum shallow blast is required, as in neutralizing field fortification; (3) delayed, used for maximum penetration and deep blast action or for ricochet; and (4) time, used for air bursts in registration and against personnel.

The Soviet rifle division has a total of 114 pieces of artillery, besides twenty self-propelled guns. The Soviet rifle army is likely to have an artillery division of some twenty battalions, and an anti-tank brigade. Much of this artillery is parceled out to corps and divisions.

FUTURE TRENDS

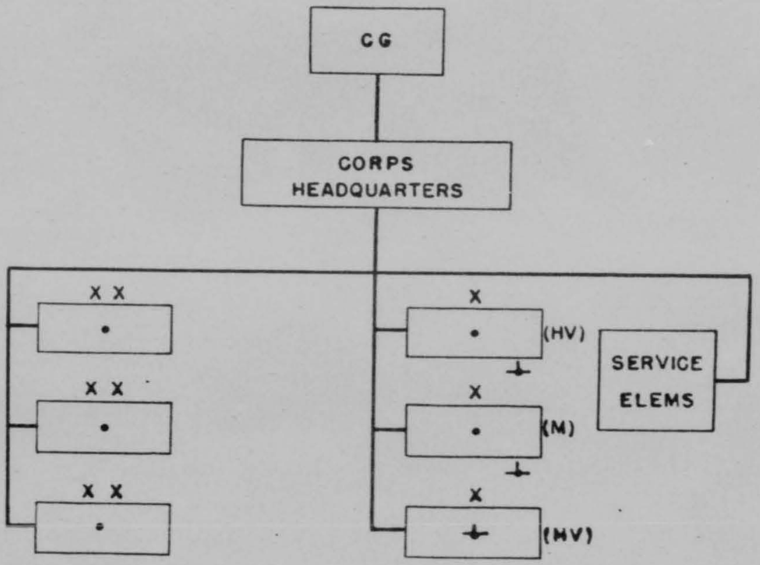
Possibly the most significant single contribution to the design of future Soviet artillery has been the acquisition of German materiel and design personnel. Although no German artillery has been reported to date as employed by the Soviets, it is believed that several outstanding German weapons are actually in use. These may include the German 17cm Gun on a mortar carriage, the German 10.5cm Flak 38 and 39, and the German 12.8cm Flak 40 and 41.

Based upon the known standards of Soviet research and development, plus the acquisition of expert German personnel, there is little doubt that the Soviets are capable of producing, if time permits, some of the most outstanding artillery weapons in the World. Certainly, future Soviet artillery materiel should be, in all classes, on a par with the similar weapons of the United States and of the United Kingdom. In addition, the Soviets cannot be expected to relinquish their present lead in several classes of materiel.

ORGANIZATION

Artillery Corps

The Artillery Corps is a forward artillery headquarters with a balanced staff. It controls two or more artillery divisions and other GHQ artillery units which are assigned to it for a specific operation, or series of operations. Because the artillery corps is primarily a task force, there is considerable variation between corps, and within the artillery corps itself.

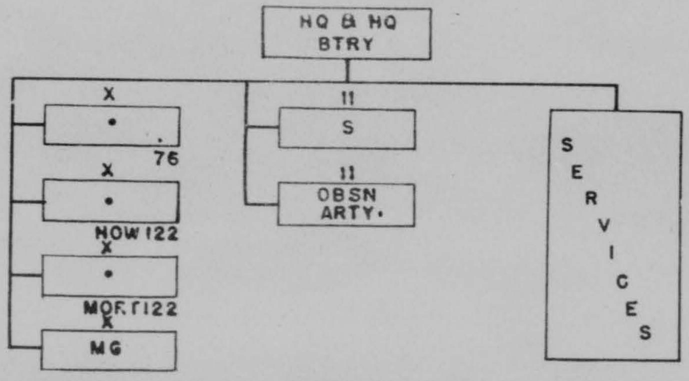


ARTILLERY CORPS

Artillery Division

The artillery division is a base of fire for major offensive and counter-offensive operations. It is essentially a task force headquarters with permanent planning, fire control, reconnaissance, intelligence and liaison staffs. It has adequate technical and service personnel for effective employment of 24 to 36 firing battalions. The number, type, and caliber of its component units depend primarily on its mission. It may be reinforced by GHQ heavy artillery regiments, aviation units, antiaircraft artillery and rocket regiments, army transport, and service units.

Tactically and strategically, the artillery division is not highly mobile. It requires extensive engineer assistance for road and bridge maintenance, preparation of firing positions, camouflage, and construction of shelters for personnel. Much of its equipment is tracked. Single units of the equipment weigh up to 35,000 pounds. There are also specialized weapons-artillery divisions, including the heavy gun division, and the antiaircraft artillery division. Little is known of the heavy gun divisions. Presumably, they consist of several heavy artillery brigades.



ARTILLERY DIVISION

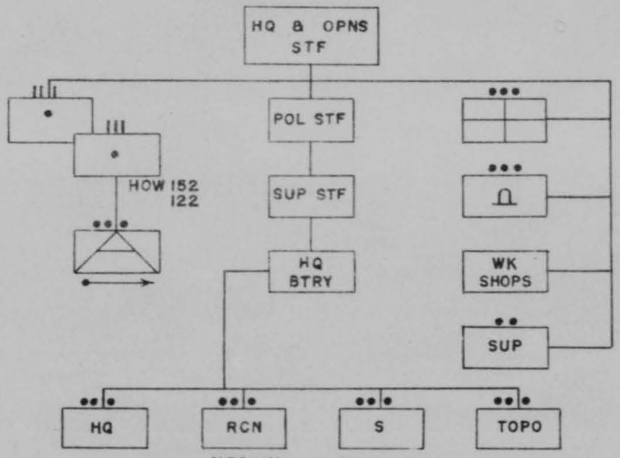
Artillery Brigades

An artillery brigade is a permanent tactical unit comprising of a headquarters and a headquarters battery, two or three artillery regiments, and a service train. The headquarters battery has reconnaissance, survey, fire control, signal, and service platoons aggregating between 70 and 85 officers and enlisted men. An artillery brigade may be independent or a part of an artillery division.

Light Artillery Brigade - A light artillery brigade generally forms a part of an artillery division. It is armed with seventy-two 76mm guns. It is employed in close support of infantry and tanks, especially for direct fire. Its primary missions are destruction of personnel, infantry, light artillery weapons, and light field fortifications. The independent tank destroyer brigade is a variation of the light artillery brigade in which the firing batteries are controlled by the regimental headquarters. Battalion headquarters are eliminated.

Light Howitzer Brigade - A light howitzer brigade may be either independent or a part of an artillery division. It is armed with 122mm howitzers and their companion pieces, the 152mm howitzers. The brigade may be used for any mission except destruction of strong fortifications, or long-range fire. Its primary missions include destruction of personnel in the open and in shelters; accompanying and anti-personnel barrages and concentrations; neutralization of light fortifications, mortars, and light artillery weapons; and fire reconnaissance. Additional missions include destruction of mine fields, antitank ditches, and medium field fortifications. A light howitzer brigade consists of two howitzer regiments, and brigade troops.

Medium Gun Brigade - The medium gun brigade consists of two medium gun regiments, and brigade troops. It is armed with 152mm gun-howitzers and their companion pieces, the 122mm guns. The brigade is used against targets which are beyond the range and capabilities of the light howitzer brigade. Its primary missions are destruction or neutralization of artillery and armored trains, neutralization or interdiction of distant targets, destruction of field fortifications, fire reconnaissance of important or exceptionally resistant targets, and destruction of distant minefields. It is likely that the new high-velocity 100mm guns are replacing some of the 122mm guns in the brigade.



MEDIUM GUN BRIGADE

Heavy Howitzer Brigade - The heavy howitzer, and, possibly, the heavy gun brigade, armed with 203mm howitzers and 152mm guns respectively, consist of brigade headquarters and headquarters battery, four firing battalions, and brigade services. Primary missions of these brigades include destruction of permanent fortifications, bridges, railroads, and buildings. In tactical groupments, the 203mm howitzer is combined with its companion piece, the 152mm gun.

120mm Mortar Brigade - Every artillery division has a mortar brigade. Mortar brigades, however, also may be independent. A mortar brigade has good tactical and strategic mobility. It is armed with one hundred and eight 120mm mortars. Primary missions of the mortar brigade include: Destruction of personnel in the open and in light shelters; destruction of light field fortifications and wire barriers; destruction or neutralization of artillery, mortar, and infantry firing positions; accompanying and defensive barrages and concentrations; and smoke screens. A heavy mortar brigade is especially useful in woods. and swamps in direct support of infantry or cavalry. The brigade consists of three mortar regiments and brigade troops.

Artillery Regiments

Artillery regiments may be independent or may be parts of artillery brigades and artillery divisions, and organic to formations of combined arms. An artillery regiment generally consists of headquarters and headquarters battery aggregating between 75 and 100 officers and enlisted men, three firing battalions, and service troops.

Independent artillery regiments carry a full unit of fire for their subordinate units. Regiments which are parts of larger artillery units or of formations of combined arms carry one-third of a unit of fire. Regiments are the lowest housekeeping and administrative units of the artillery arm.

Artillery regiments may be homogeneous or heterogeneous. Homogeneous regiments include the light artillery regiment, the mortar regiment, and the rocket regiment. A light artillery regiment generally forms a part of a light artillery brigade. This regiment is often combined with a tank destroyer regiment to form an antitank groupment.

A heavy mortar regiment forms a part of a mortar brigade or it may be independent. It is used for destruction of personnel and materiel in open positions and in open trenches, for destruction of wire entanglements, neutralization of machine guns and mortars, and for the establishment of stationary and moving barrages. During artillery preparation for an offensive operation, the mortar regiment is often reinforced by a 122mm howitzer regiment to form a counter-mortar groupment.

The rocket regiment may be a part of a rocket brigade, or it may be independent. This regiment is used aginst area targets.

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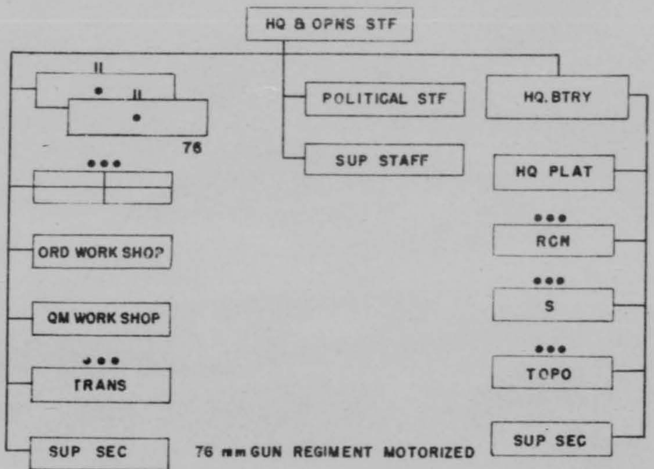
The medium and light antiaircraft artillery regiments are also homogeneous. In addition to its primary mission of antiaircraft protection of ground troops and installations, it is employed for direct fire against ground fortifications, antitank defense, and, less often, for indirect fire against ground targets.

Heterogeneous artillery regiments include the divisional artillery regiment, the howitzer regiment, and the medium gun regiment. Missions of these regiments are the same as for the corresponding brigades.

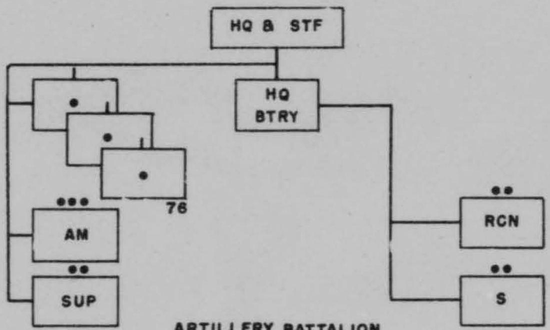


76 mm GUN REGIMENT MOTORIZED

Artillery Battalion

The basic organizational and tactical element of the artillery arm is the battalion. Independent artillery battalions have sufficient maintenance, repair, and service personnel to effect first and second echelon repairs and to carry one unit of fire and one refill of fuel for its subordinate units. Artillery battalions which form a part of larger artillery units (regiments and brigades) do not have maintenance and repair personnel. Their supply train carries one-half of a unit of fire. Artillery battalions which form a part of a formation of combined arms also have no service and maintenance personnel. Their ammunition platoon carries only one-third of a unit of fire.

There are two basic types of artillery battalions: The 12-piece, and the 6-piece battalion. The light guns and light and medium howitzers are organized into 12-piece battalions. The medium guns, medium gun-howitzers, and heavy guns and howitzers are organized into 6-piece battalions.



ARTILLERY BATTALION

CHARACTERISTICS

76mm Regimental Gun M1927

ILLUSTRATION NOT AVAILABLE

Caliber......................76.2mm

Horizontal Range.............9,350 yards

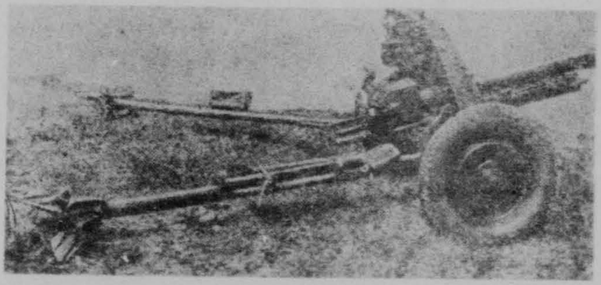
Rate of Fire (rpm)...........12

Muzzle Velocity..............1,378 feet per second

Elevation Limits.............6° to +25°

Remarks - While this weapon is obselescent, it is still employed in considerable quantity.

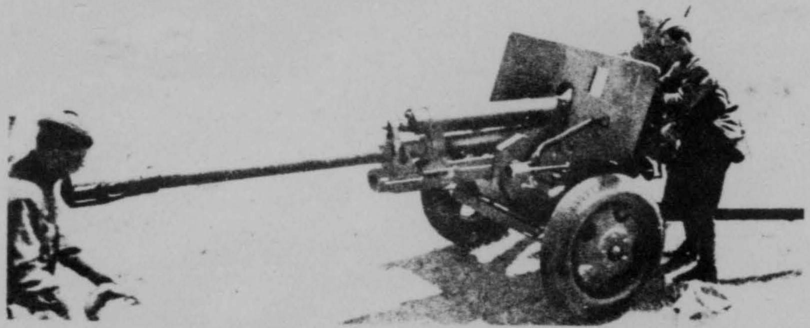
76mm Regimental Gun M1943



Caliber	76.2mm
Horizontal Range	4,620 yards
Rate of Fire (rpm)	12
Muzzle Velocity	860 feet per second
Elevation Limits	8° to +25°

Remarks - Although the M43 Infantry Gun was produced to replace the M27, the actual results obtained have not been favorable. The Soviets admit that the M43 has not answered its design purpose, and when used with hollow-charge ammunition, it is incapable of dealing effectively with modern armor.

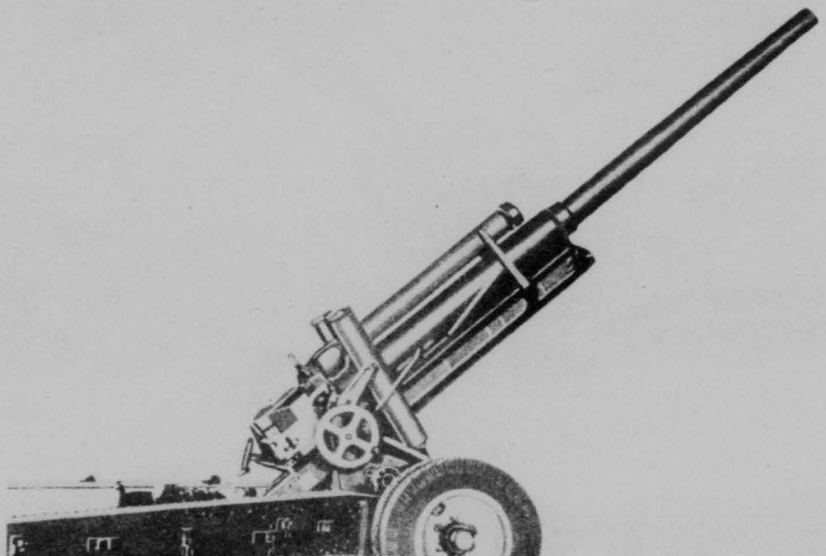
76mm Gun M1939 and M1942



Caliber	76.2mm
Horizontal Range	14,300 yards
Rate of Fire (rpm)	25
Muzzle Velocity	2,230 feet per second
Elevation Limits	6° to +45°

Remarks - The 76.2 gun M1939 and M1942 (ZIS-3) are basically identical and are characterised by a high rate of fire, good muzzle velocity and great maneuverability, are employed in close support of infantry (tanks) and especially for direct fire. Their primary missions are destruction of personnel and neutralization of infantry weapons in the open; anti-personnel barrages, destruction of tanks, vehicles, embrasures, and dragon's teeth by direct fire; and harassing fire. Secondary missions are: Accompanying barrages and concentrations; neutralization of artillery and mortars; establishment of smoke screens; and destruction of wire. Exceptional missions are fire reconnaissance, destruction of light materiel with indirect fire, and destruction of minefields. Division artillery.

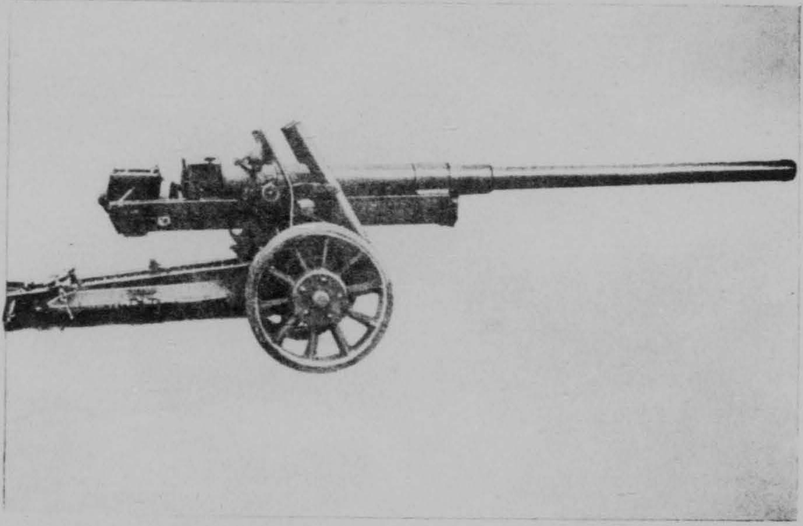
107mm Gun M1940 M60



Caliber.......................107mm
Horizontal Range..............19,100 yards
Rate of Fire (rpm)...........6
Muzzle Velocity..............2,362 feet per second
Elevation Limits.............6° to +43°

Remarks - Corps Artillery.

122mm Gun M1931/37



Caliber......................121.92mm

Horizontal Range.............22,400 yards

Rate of Fire (rpm)...........5 to 6

Muzzle Velocity..............2,625 feet per second

Elevation Limits.............2° to +65°

Remarks - The 122mm guns (M31/37), the basic long range weapons of Soviet field artillery, have high muzzle velocity, great penetration and range, good rate of fire, but only moderate maneuverability. (They are replaced by 107mm guns M40 or 10/30 in difficult terrain or for rapid movement). They are employed against distant targets and for destruction of materiel. Their primary missions are: Neutralization or destruction of artillery and armored trains; neutralization, interdiction, or harassment of distant targets; destruction of moderately strong permanent fortifications by flat trajectory fire; and fire reconnaissance against distant targets. Secondary missions are : Destruction of tanks and vehicles by direct fire; destruction of elevated targets; and destruction or neutralization of field fortifications, trench mortars, infantry weapons, and infantry in the open. Exceptional missions are anti-personnel and accompanying barrages and destruction of mine fields. Corps Artillery.

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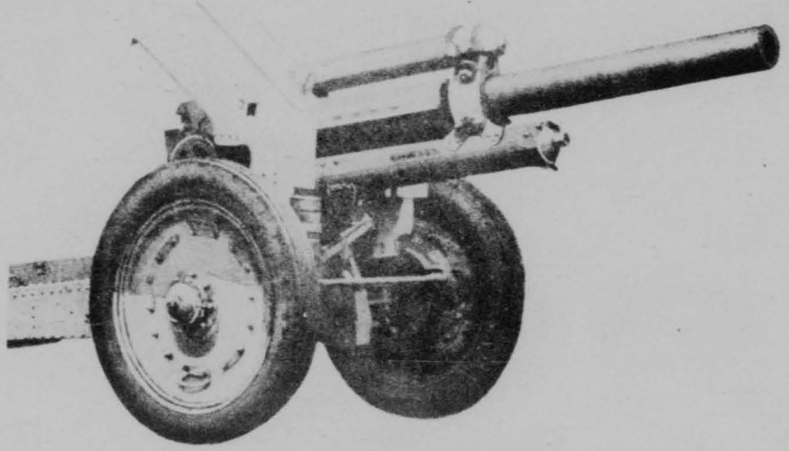
122mm Howitzer M1938



Caliber........................121.92mm

Horizontal Range................12,980 yards

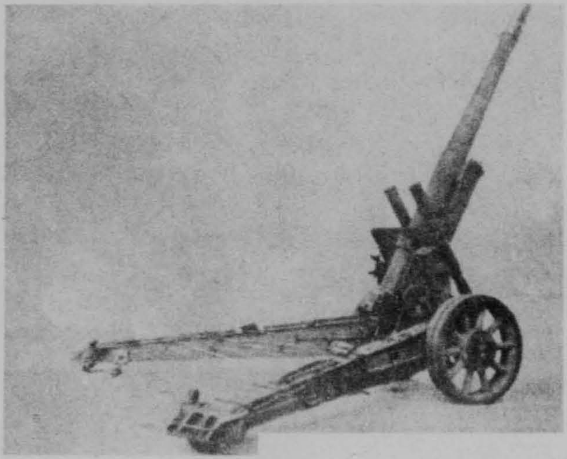
Rate of Fire (rpm).............6

Muzzle Velocity................1,690 feet per second

Elevation Limits................3° to +65°

Remarks - 122mm howitzers M38, the backbone of Soviet field artillery, are characterized by great flexibility in muzzle velocity and trajectory, very effective burst, and good maneuverability. (The M10/30 howitzer is employed when terrain prohibits the use of the M38). They may be used for almost any mission except destruction of strong positions or for distant fire. Their primary missions are: Destruction of personnel and neutralization of infantry weapons in the open and under cover; anti-personnel barrages, accompanying barrages and concentrations; destruction of light field fortifications neutralization or destruction of mortars; fire reconnaissance against camouflage and minefields or in conjunction with sound ranging; neutralization of artillery at medium ranges; establishment of smoke screens; and harassing fire. Secondary missions include: antitank defensive barrages; destruction ofartillery; attack on fortified houses; destruction of wire; and destruction of tanks, ordnance, embrasures, antitank escarpments, and dragon's teeth by direct fire. The destruction of minefields is an exceptional mission. Division artillery.

152mm Gun-Howitzer M1937



Caliber........................152.4mm

Horizontal Range................19,360 yards

Rate of Fire (rpm).............2 to 3

Muzzle Velocity................2,133 feet per second

Elevation Limits...............2°to +65°

Remarks - The 152mm gun-howitzers (M37) have much greater range and penetration than 152mm howitzers, but a lower rate of fire, and, except with the self-propelled KV mount, considerably less maneuverability. They are employed in conjunction with the 122mm gun against targets beyond the range or capabilities of the 152mm howitzer. Their most important missions are: Neutralization or destruction of artillery and armored trains; neutralization or interdiction of distant targets; destruction of strong field fortifications; destruction of moderately strong permanent fortification by flat trajectory fire; fire reconnaissance of exceptionally important or resistant targets; destruction or neutralization of trench mortars, infantry weapons, and infantry in the open; and destruction of tanks, vehicles, armor, and concrete by direct fire. Reinforcement of anti-personnel fire and employment in accompanying barrages and concentrations are exceptional missions. Corps Artillery.

152mm Howitzer M1943, D-1

ILLUSTRATION NOT AVAILABLE

Caliber.......................152.4mm

Horizontal Range..............12,400 yards

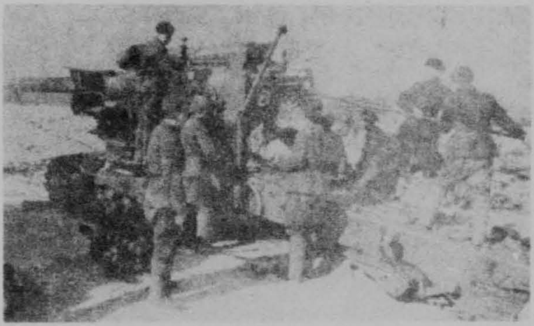
Rate of Fire (rpm)............2 to 3

Muzzle Velocity...............1,657 feet per second

Elevation Limits..............30° to +63°

Remarks - The 152mm howitzers (M43) differ from the 122mm howitzers in their greater radius of burst, slightly longer range, lower rate of fire, and reduced maneuverability. Basically, they reinforce 122mm howitzers, or replace them against more resistant targets. Their primary missions are: Destruction of personnel and neutralization or destruction of infantry weapons in the open or under cover; accompanying concentrations; antitank defensive barrages; destruction of light and medium field fortifications (including attack of fortified houses); destruction of antitank ditches; neutralization or destruction of mortars and artillery; fire reconnaissance; and destruction of minefields. Secondary missions include the following: Direct fire against very strong earth-and-timber fortifications; establishment of smoke screens; and reinforcement of antipersonnel and accompanying barrages. Exceptional missions are destruction of tanks and motor vehicles by direct fire, and harassing fire. Corps artillery.

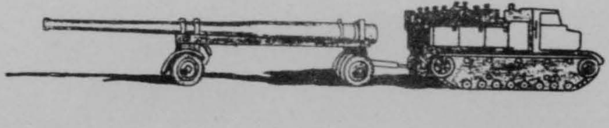
203mm Howitzer M1931



Caliber......................	203mm
Horizontal Range..............	19,700 yards
Rate of Fire (rpm)............	1/3
Muzzle Velocity...............	1,990 feet per second
Elevation Limits..............	0° to +60°

Remarks - The 203mm howitzers are the most powerful pieces habitually used by Soviet field artillery when exceptionally great blast and penetration are required. Targets for these weapons must be carefully selected because of the low rate of fire and great weight of ammunition. Typical targets are permanent fortifications (either with flat trajectory or high-angle fire), bridges, railroads, and buildings. The 203mm howitzer may be employed for maximum blast effect at moderate ranges; at short ranges, heavy rockets are more economical. Heavy artillery.

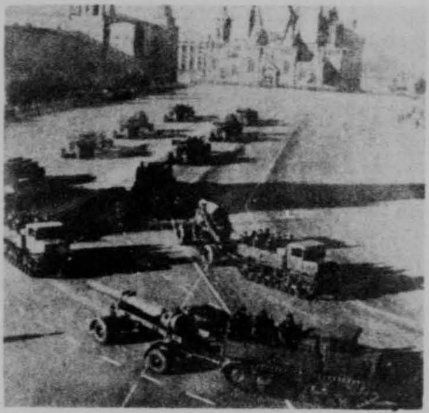
210mm Gun M1939



Caliber........................	210mm
Horizontal Range...............	32,966 yards
Rate of Fire (rpm).............	Unknown
Muzzle Velocity.	2,624 feet per second
Elevation limits.	0° to +50°

Remarks - The Soviet 210mm Gun is a copy of the Skoda 210mm piece.

280mm Mortar (Howitzer) M1939



Caliber	280mm
Horizontal Range	11,500 yards
Rate of Fire (rpm)	1/3
Muzzle Velocity	1,380 feet per second
Elevation Limits	0° to +60°

Remarks - Heavy artillery. Uses same carriage as the 152mm gun M35 and the 203mm Howitzer M31. Carriage is obsolete from the U.S. point of view.

305mm Howitzer M1940

ILLUSTRATION NOT AVAILABLE

Caliber	305mm
Horizontal Range	17,500 yards
Rate of Fire (rpm)	Unknown
Muzzle Velocity	1,740 feet per second
Elevation Limits	0° to +77°

Remakks - The Soviet model is a copy of the Skoda 305mm piece.

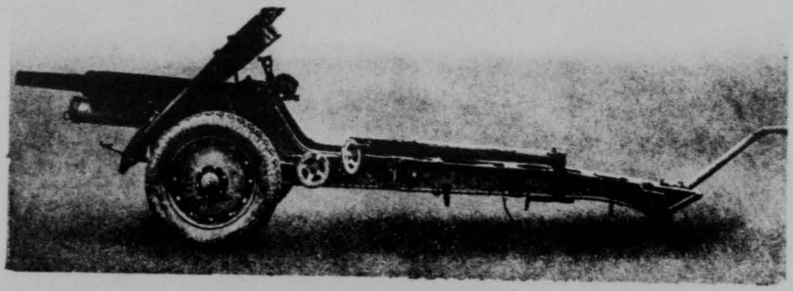
76mm Mountain Gun M1909

ILLUSTRATION NOT AVAILABLE

Caliber	76.2mm
Horizontal Range	7,700 yards
Rate of Fire (rpm)	12
Muzzle Velocity	1,250 feet per second
Elevation Limits	6° to +28°

Remarks - Obselescent, but still in use. Breaks down into 6-pack load.

76mm Mountain Gun M1938



Caliber	76.2mm
Horizontal Range	11,110 yards
Rate of Fire (rpm)	14
Muzzle Velocity	1,640 feet per second
Elevation Limits	8° to +70°

Remarks - Breaks down into 10-pack load.

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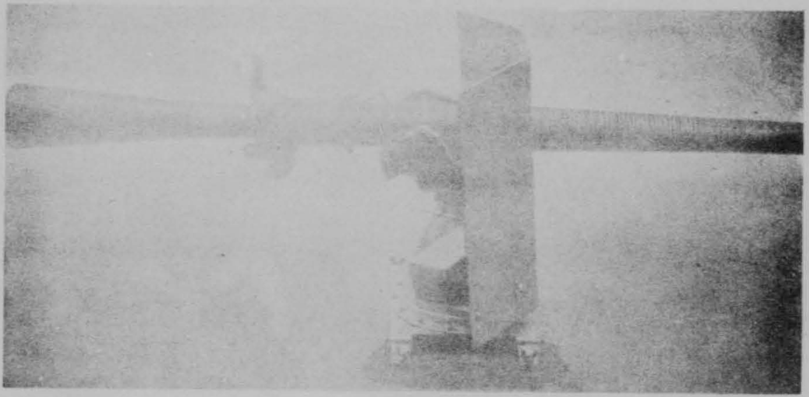
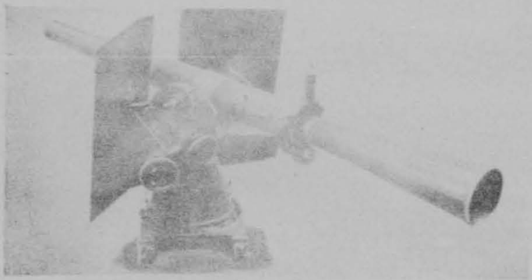
76mm Recoilless Gun M1936





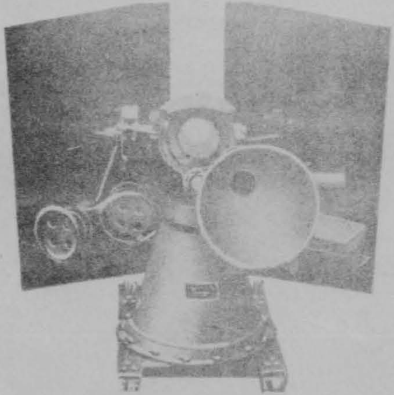
Caliber.....76.2mm

Horizontal Range..
.......7,109 yards

Rate of Fire (rpm)
.......10

Muzzle Velocity...
1,171 ft a second.

Elevation Limits..
........5° to +29°



Remarks- The only recoilless piece identified to date is the M36, which is several years ahead of the production date of this class of materiel by the other world powers. There have been no reports to indicate the use of this class of materiel by the Soviets in World War II. Although several rumors as to present Soviet manufacture and employment of this class are prevalent, nothing definite is known.

ANTITANK ARTILLERY

GENERAL

Soviet antitank artillery weapons are well capable of fulfilling their designated role. Soviet design background, coupled with the combat experience of Soviet troops and intensive exploitation of German personnel and resources, places the U.S.S.R. in a position equal to that of any other major nation for future designing of antitank artillery weapons.

Soviet antitank artillery actually ih the hands of troops has a definite advantage over similar weapons of the other major powers. This advantage does not result from Soviet designers producing better materiel than other powers. It results from the fact that the Soviets even in peacetime, have elected to produce their weapons in sufficient quantity to arm their forces fully with the latest antitank artillery weapons.

It is noteworthy that Soviet antitank artillery has been equipped with sub-caliber ammunition, which very materially increases its effectiveness and even renders the 45mm AT gun an effective weapon.

ARMOR PENETRATION OF SOVIET ANTITANK ARTILLERY

		Penetration at 90° (Range in yrds. Penetration in inches) Range					
Weapon	Ammo	109	327	545	1090	1635	2180
45mm.AT M37	APT	2.55	2.39	2.24	1.85	1.49	1.18
45mm.AT M37	SC	3.77	2.83	2.07	1.41	(*)	(*)
45mm.AT M1942	AP	2.75	2.55	2.39	2.07	1.65	1.32
45mm.AT M1942	SC	4.29	3.66	3.13	1.76	(*)	(*)
57mm.Gun M1941&M1943	AP	4.52	4.32	4.16	3.77	3.38	3.03
57mm.Gun M1941&M1943	SC	6.89	6.29	5.50	3.73	(*)	(*)
76mm.Gun M1939&M1942	APT	2.95	2.83	2.71	2.39	2.12	1.88
76mm.Gun M1939&M1942	SC	5.04	4.32	3.61	2.28	(*)	(*)
85mm AA**	AP	4.68	4.49	4.36	4.04	(*)	(*)
100mm.AT Gun M1944	APT	6.73	6.33	5.99	5.15	4.44	3.77

Effectiveness, at angles less than 60°, is reduced by 20 percent.

APT - Armor Piercing Tracer

AP - Armor Piercing

SC - Sub Caliber

* - Data not available at these ranges

** - Data not available on the 85mm. AT gun; however it may be comparable to the 85mm. AA

2017

Characteristics

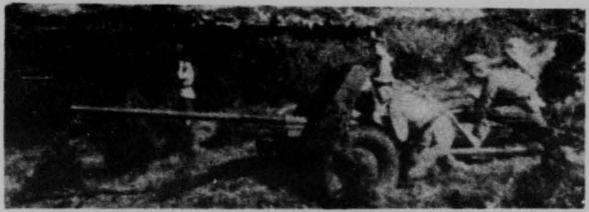
45mm M1937 Antitank Gun

ILLUSTRATION NOT AVAILABLE

Caliber	45mm
Horizontal Range	9,750 yards
Rate of Fire (rpm)	25
Muzzle Velocity	2,493 feet per second
Elevation Limits	8° to +25°

Remarks - These are not believed standard for antitank purposes, although they are still present in quantities in areas of lesser importance, and are effective as infantry weapons. The 45mm and 57mm guns are still present in the Soviet Army for antitank purposes, although in limited quantity. However, production has been stopped in favor of heavier caliber weapons.

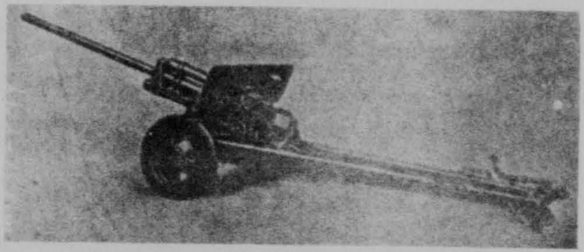
45mm M1942 Antitank Gun



Caliber	45mm
Horizontal Range	8,700 yards
Rate of Fire (rpm)	25
Muzzle Velocity	1,160 feet per second HE
	2,690 feet per second AP
	3,500 feet per second SC
Elevation Limits	8° to +25°

Remarks - Modification of 1932 and 1937 models; has a greatly increased muzzle velocity over the previous models, and is characterized by its unusually long barrel (about twice the length of the tube on 1932 and 1937 models).

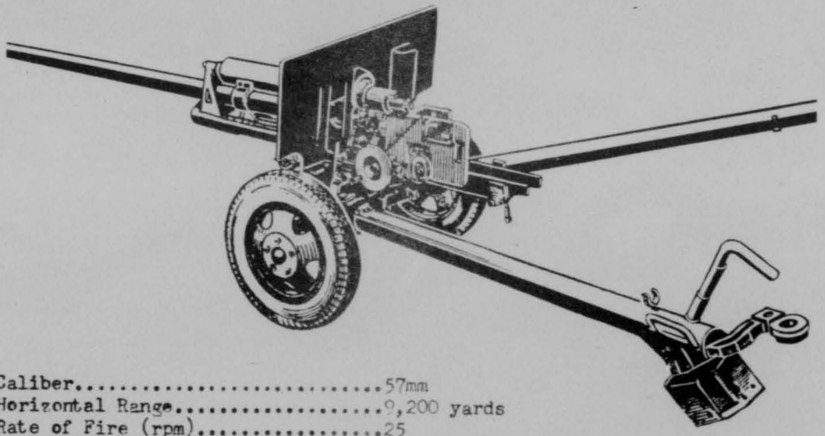
57mm M1941 Antitank Gun



Caliber..........................57mm
Horizontal Range.................8,800 yards
Rate of Fire (rpm)...............25
Muzzle Velocity..................3,240 feet per second AP
4,176 feet per second SC
Elevation Limits.................10° to +18°

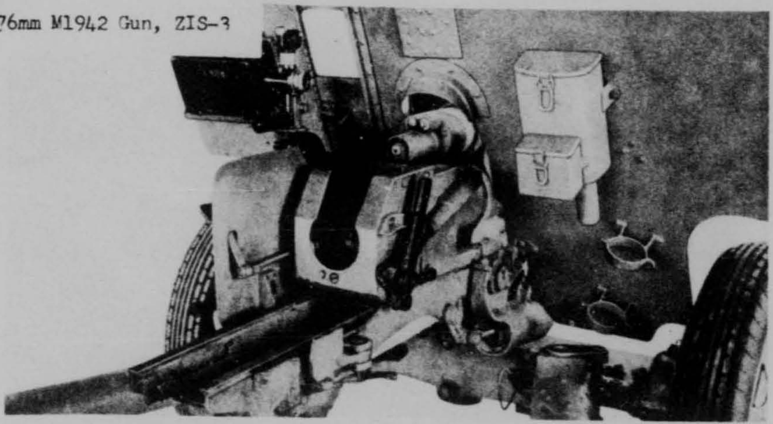
Remarks - This gun provided the Soviets with a light-weight piece with an outstanding performance. Along with the 45mm, antitank guns are still present in the Soviet Army for antitank purposes, although in limited quantity. However, production has been stopped in favor of heavier caliber weapons.

57mm M1943 Antitank Gun



Caliber............................57mm
Horizontal Range...................9,200 yards
Rate of Fire (rpm).................25
Muzzle Velocity....................3,248 feet per second AP
4, 176 feet per second SC
Elevation Limits...................5° to +25°

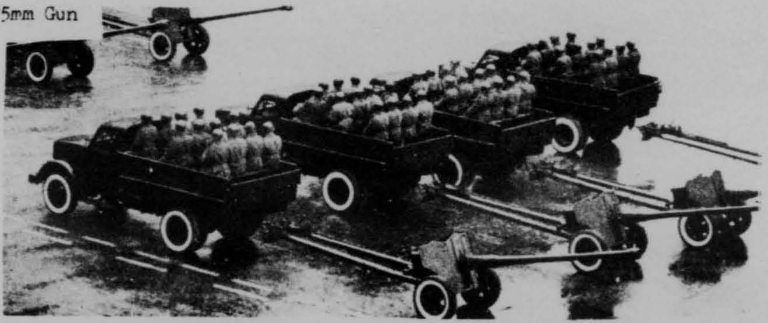
76mm M1942 Gun, ZIS-3



Caliber	76.2mm
Horizontal Range	14,300 yards
Rate of Fire (rpm)	25
Muzzle Velocity	2,230 feet per second
Elevation Limits	5° to +37°

Remarks - This field gun employed in AT roles when equipped with sub-caliber ammunition proved to be an effective antitank weapon.

85mm Gun



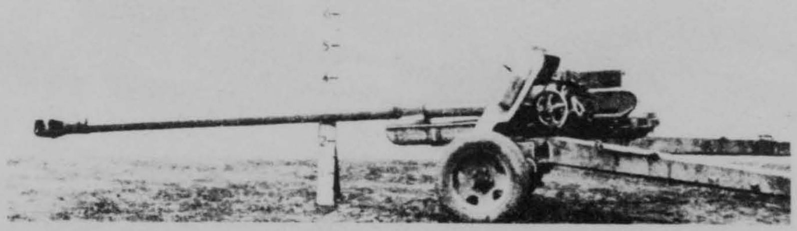
Caliber	85mm

Remarks - Nothing is known about the piece except that it exists. May be a field gun or an antitank gun, probably the latter. This weapon has tubular steel trails, a concentric ring type of recoil mechanism, and a small irregularly sloped shield. It is believed to incorporate features that will render it more effective than either the 76 or 100mm weapons. These features include much lighter weight than the 100mm gun and superior armor-penetration capabilities compared with the 76mm gun.

2020

This piece is unique in that it apparently incorporates a modified tank-gun recoil system. Apparently, the entire recoil system is located in two cylinders on top of the rear portion of the gun barrel. It is believed that the piece recoils through a sleeve. This light-weight piece may be an application of a Krupp design which was not introduced in World War II. It has not been Soviet practice to manufacture a weapon to replace a good piece (in this case the 100mm antitank gun M1944), unless there is something to gain thereby. Hence, this new 85mm piece must offer a performance superior to that of the 100mm weapon.

100 mm M1944 6C-3 Field Gun



Caliber.........................	100mm
Horizontal Range.................	22,900 yards
Rate of Fire (rpm)...............	8
Muzzle Velocity..................	2,749 feet per second
Elevation Limits.................	5° to +25°

Remarks - Either corps or AT artillery, depending upon its assignment.

This is the largest caliber antitank piece supplied in quantity in the hands of any army in the world. Although penetrations for this weapon are known only for the conventional AP projectiles, even with this type of ammunition the results are excellent. In addition, it is known that a type of sub-caliber ammunition has been supplied for this weapon. Its penetration is undoubtedly higher than that achieved with conventional ammunition.

In 1944, the Soviets culminated their race of gun versus armor by adopting as their standard antitank weapon a 100mm gun of very high performance. This weapon, which fires a 34-pound projectile at a muzzle velocity of 2,950 feet per second, has better penetration figures than those of any of the standard German, British or American antitank guns used operationally in World War II. Weighing 7,620 pounds, this weapon is 2000 pounds lighter than the most outstanding German antitank gun - the very efficient 88mm Pak 43/41. This Soviet weapon is today the outstanding operational antitank gun of the world.

ANTIAIRCRAFT ARTILLERY

GENERAL

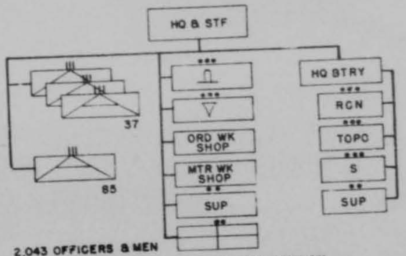
Soviet antiaircraft weapons are divided into two major categories of materiel. The tactical, or field, class consists of all antiaircraft weapons up to and including 85mm caliber, while the strategic, or rear area, class consists of all antiaircraft artillery pieces over 85mm caliber.

Considerable information is available concerning the tactical class of weapons, enough upon which to formulate estimates as to its effectiveness. Such is not the case with the strategic weapons, as little is known about them.

During World War II the lack of modern fire-control devices proved to be the greatest weakness of Soviet medium and heavy antiaircraft artillery. This deficiency was so marked as to preclude the accurate delivery of antiaircraft fire by these weapons. Due to the materiel received from the United States under the Lend-Lease program and to the interest shown by the Soviets in such devices, this relative importance is not expected to be of long duration. In the past, reliance has been placed by the Soviets upon the ability of the Bofors Company of Sweden, one of the outstanding designers and manufacturers of light and medium antiaircraft materiel in the world, to produce antiaircraft weapons. Since 1930, the Soviets have based the design of their 37mm M1939, 40mm M1933, 76mm M1931, 76mm M1938 and 85mm M1939 antiaircraft weapons on Bofors manufactured weapons. Today, the exact state of relationship between the firm of Bofors and the Soviet Union is not known.

ORGANIZATION

Antiaircraft Artillery Division:- The Soviet antiaircraft artillery division corresponds roughly to a U.S. automatic antiaircraft weapon group. One antiaircraft artillery division is generally assigned to each operational Army, and one or more to each Army Group (Front). In addition to their primary mission of antiaircraft defense of important installations and troop concentrations, antiaircraft artillery units are used for antitank defense, support of ground troops by direct fire against targets whose destruction requires high-velocity fire, and less often for indirect fire against general ground targets. An antiaircraft artillery division is completely motorized and has good strategic mobility.



ANTIAIRCRAFT ARTILLERY DIVISION

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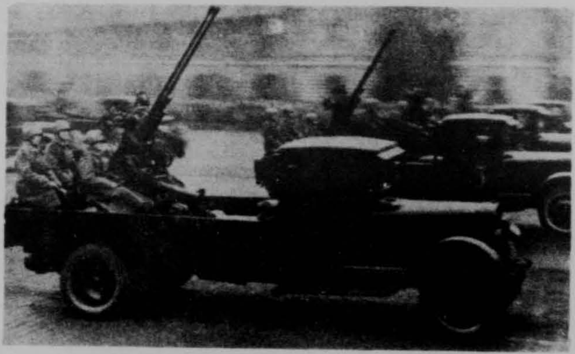
CHARACTERISTICS

2cm Oerlikon JLAS

ILLUSTRATION NOT AVAILABLE

Caliber	20mm
Horizontal Range	5,450 yards
Vertical Range	12,200 feet
Rate of Fire (rpm)	120 - 250
Elevation Limits	15° to +85°

25mm Automatic Antiaircraft Gun M1941



Caliber	25mm
Muzzle Velocity (ft/sec)	2800
Horizontal Range	5,500 yards
Effective Vertical Range	8,100 feet
Rate of Fire (rpm)	240
Elevation Limits	10° to +85°

Remarks - Little is known of the Russian 25mm antiaircraft gun other than given above. A twin barreled 20mm gun has been developed that is similar to the earlier Oerlikon twin barreled 20mm gun used by the Germans. This gun is usually mounted on a circular platform carried on the body of a ZIS-5 truck. It also may be mounted on a T-70 tank chassis.

37mm Gun M1939

Caliber......................37mm

Muzzle Velocity (ft/sec).....2950

Horizontal Range......8,720 yards

Maximum Effective Vertical Range......................9,840 feet

Rate of Fire (rpm)........160-180

Elevation Limits.......5°.to +85°

Remarks - -

A copy of Bofors materiel.

40mm Gun 1933 Medium

Caliber.........................40mm

Muzzle Velocity(ft/sec).........2950

Maximum Horizontal Range.....................................12,400 yards

Maximum Vertical Range......................................15,000 feet

Rate of Fire (rpm)...........100-120

Elevation Limits 5° to +80°

Remarks - This gun is probably of Bofors manufacture. It is not believed that Russia is manufacturing any 40mm guns with the exception of the Muzzle Velocity. The characteristics correspond closely with those of the Model 1936 40mm Bofors gun used by many European countries.

ILLUSTRATION NOT AVAILABLE

47mm Automatic Gun

ILLUSTRATION NOT AVAILABLE

Caliber..................47mm

Muzzle Velocity(ft/sec)...3200

Horizontal Range.......Unknown

Vertical Range.....14,000 feet

Rate of Fire (rpm).......40-60

Elevation Limits.......Unknown

Remarks - May be the Schwack A C Gun on a ground mount. Status unknown.

85mm Antiaircraft Gun M1939

Caliber..................85mm

Muzzle Velocity(ft/sec)...2625

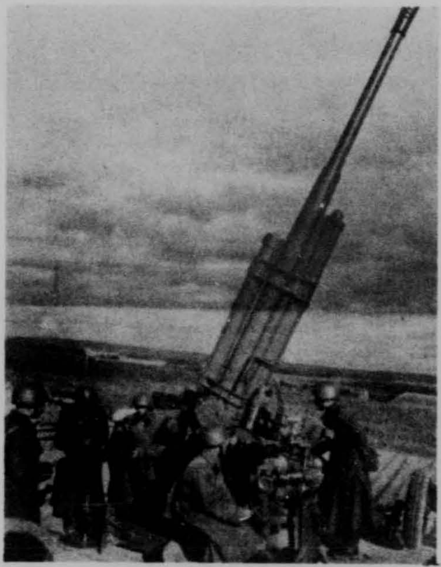
Maximum Horizontal Range........................17,000 yards

Maximum Vertical Range...........................34,000 feet

Rate of Fire (rpm).......15-20

Elevation Limits....2° to +82°

Remarks - Mounted on the carriage of the 76mm AA M38, this gun was modified in 1944.



85mm Antiaircraft Gun M1944

Caliber..................85mm

Muzzle Velocity(ft/sec)...2900

Maximum Horizontal Range......
..................17,600 yards

Maximum Vertical Range........
..................40,000 feet

Rate of Fire (rpm).......15-20

Elevation Limits 3° to +82°

Remarks - The M39 modernized.

ILLUSTRATION NOT AVAILABLE

105mm Anitaircraft Gun M1934

ILLUSTRATION NOT AVAILABLE

Caliber..................105mm

Muzzle Velocity(ft/sec)...3,050

Maximum Horizontal Range.......
...................19,300 yards

Maximum Vertical Range.........
....................43,500 feet

Rate of Fire (rpm)........12-20

Elevation Limits 5° to +80°

Remarks - This weapon is believed to have been modernized in either 1942 or 1943. It is a static gun on a pedestal mounting. It is probably used in railway antiaircraft batteries in addition to static defenses.

122mm Antiaircraft Gun M - Unknown

ILLUSTRATION NOT AVAILABLE

Caliber.........121.92mm

Remarks --
For planning purposes; assumed to be similar in performance to the U. S. 120-mm Gun M-1.

152mm Antiaircraft Gun M - Unknown

Caliber..........152.4mm

Remarks - -
May be based upon German research and development. Some doubt as to the existence of this weapon.

ILLUSTRATION NOT AVAILABLE

SELF PROPELLED ARTILLERY

GENERAL

Soviet self-propelled weapons are designated by the prefix "SU" followed by a number. This prefix is an abbreviation of the Russian "SAMOKHODNAYA USTANOVKA," meaning self-propelled mounting. In the majority of instances the subsequent figures indicate the caliber of the gun in millimeters. However, in one known case (JSU-249) the figures have no relation to the caliber but are thought to be a code or design number allotted at the time of the weapon's inception. Recent self-propelled guns, mounted on the Joseph Stalin heavy tank chassis, use the prefix "JSU" - the "J" indicating the Stalin mounting.

A possible weakness of Soviet gun mounts in self-propelled vehicles, is that they are capable of only very slight depression (average maximum depression of less than 4°.

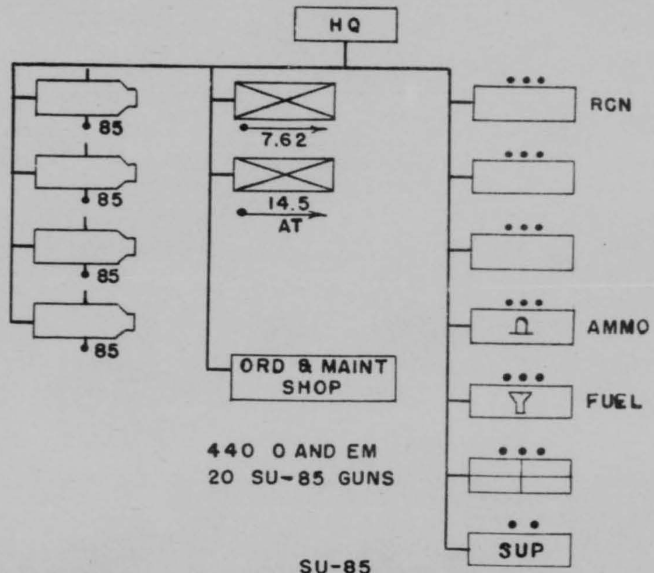
All known pieces of modern Soviet self-propelled artillery consist of either field, antitank, or antiaircraft weapons which have been adopted to armored roles. All these weapons are ballistically identical with their parent pieces, fire the same kind of ammunition, and use the same ballistic charts.

Modification of field weapons for use in armored roles has been simple, usually consisting of a slight shortening or machining down of the barrel, or installation of a muzzle brake. In addition, recoil mechanisms suited for armored vehicle mounts are fitted on all weapons.

ORGANIZATION

In the Soviet Army, self-propelled artillery is a part of the tank and mechanized forces. Organization of the self-propelled artillery regiments reflects tank rather than artillery doctrine. Infact, the organization of the heavy tank regiment is the same as that of the heavy self-propelled artillery regiment. It has the same supply requirements and capabilities, and the same mobility. The medium self-propelled artillery regiment is a smaller version of the heavy regiment.

SU-85 Self-propelled Artillery Regiment (World War II)


HQ
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RCN
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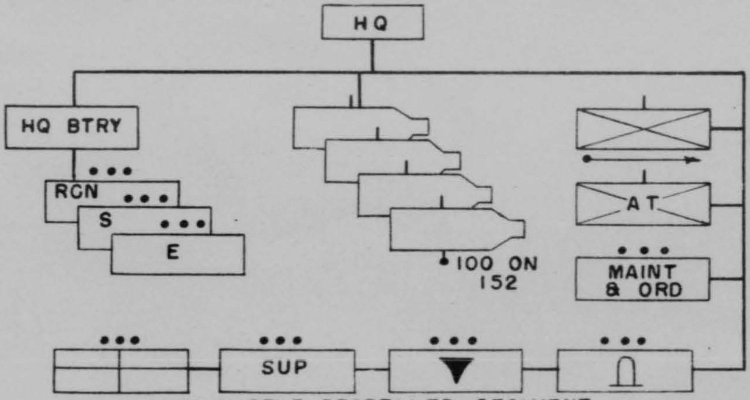
SU-85
SELF-PROPELLED ARTILLERY REGIMENT (WW II)

Heavy Self-propelled Regiment (World War II)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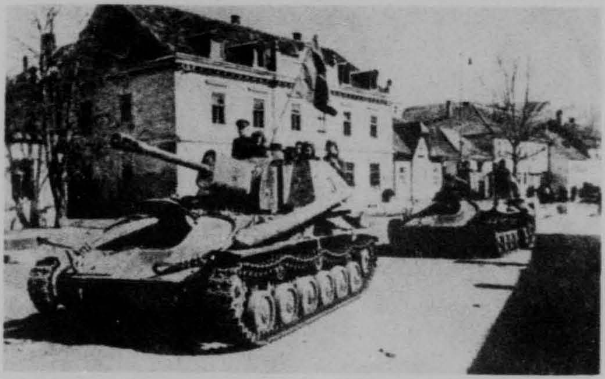
HEAVY SELF-PROPELLED REGIMENT
(WORLD WAR II)

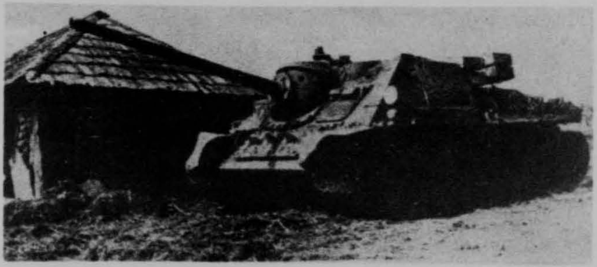
CHARACTERISTICS

SU-76



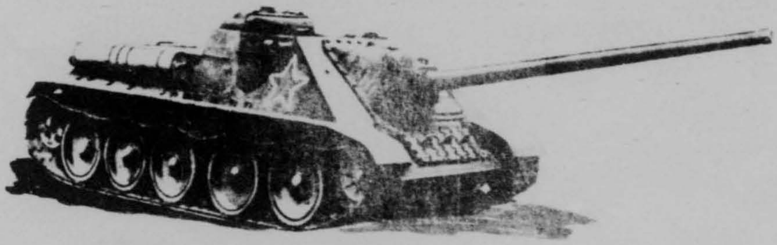
Combat Weight..................12.3 U.S. Tons
Crew...........................4
Armament.......................One 76.2mm ZIS-3, 1942 field gun
Total Traverse.................60°
Elevation......................5° to +25°
Speed..........................Roads, 28 mph maximum
Range of Action................Roads, 223 miles - Cross-country,112 miles

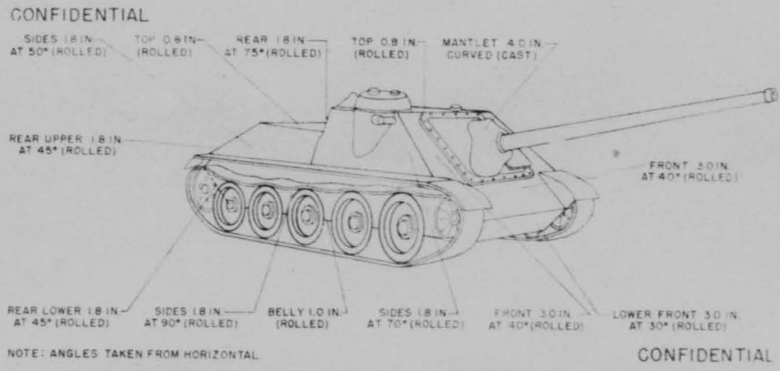
Remarks - Mounted on a lengthened T-70 light tank chassis. The SU-76 is considered to be obsolescent in the post-war Soviet Army but considerable numbers of the SU-76's are still being used by the Soviet Army.



Combat Weight..................32.5 U.S. Tons
Crew...........................5
Armament.......................One 85mm M1944 Gun (developed from 85mm AA Gun M39)
Total Traverse.................20°
Elevation......................5° to +25°
Speed..........................34 mph maximum
Range of Action................Roads, 186 miles
Remarks - Mounted on a T-34 medium tank chassis. It is thought to have been replaced by the SU-100 in 1945. Obsolescent.

SU-100

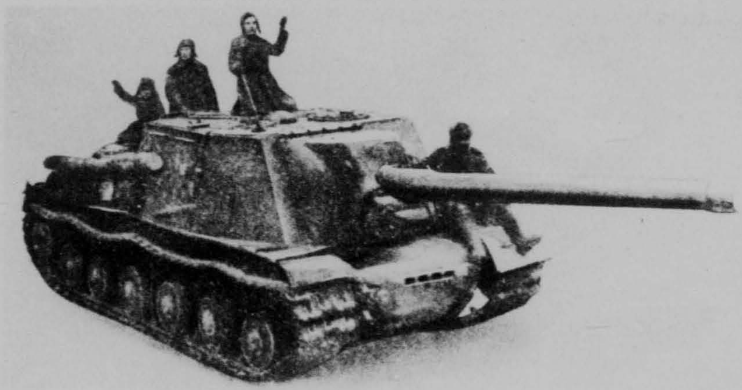


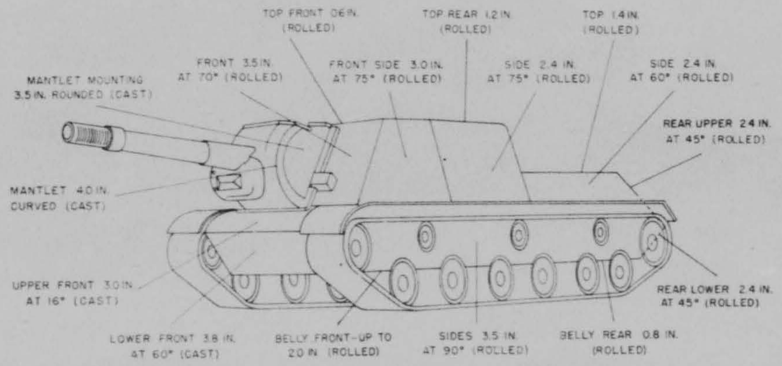

CONFIDENTIAL
SIDES 1.8 IN. AT 50° (ROLLED)
TOP 0.8 IN. (ROLLED)
REAR 1.8 IN. AT 75° (ROLLED)
TOP 0.8 IN. (ROLLED)
MANTLET 4.0 IN. CURVED (CAST)
REAR UPPER 1.8 IN. AT 45° (ROLLED)
FRONT 3.0 IN. AT 40° (ROLLED)
REAR LOWER 1.8 IN. AT 45° (ROLLED)
SIDES 1.8 IN. AT 90° (ROLLED)
BELLY 1.0 IN. (ROLLED)
SIDES 1.8 IN. AT 70° (ROLLED)
FRONT 3.0 IN. AT 40° (ROLLED)
LOWER FRONT 3.0 IN. AT 30° (ROLLED)
NOTE: ANGLES TAKEN FROM HORIZONTAL
CONFIDENTIAL

Combat Weight	33 U.S. Tons
Crew	4
Armament	One D-10-S (L/55) 100mm M1944 AT Gun
Total Traverse	32°
Elevation	2° to 17°
Speed	34 mph maximum
Range of Action	Roads, 186 miles

Remarks - - Mounted on the T-34 medium tank chassis, and thought to be the most modern Soviet tank destroyer.

JSU-122

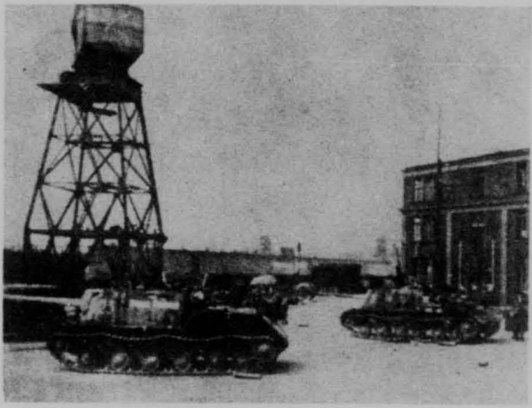



TOP FRONT 0.6 IN. (ROLLED)
TOP REAR 1.2 IN. (ROLLED)
TOP 1.4 IN. (ROLLED)
MANTLET MOUNTING 3.5 IN. ROUNDED (CAST)
FRONT 3.5 IN. AT 70° (ROLLED)
FRONT SIDE 3.0 IN. AT 75° (ROLLED)
SIDE 2.4 IN. AT 75° (ROLLED)
SIDE 2.4 IN. AT 60° (ROLLED)
REAR UPPER 2.4 IN. AT 45° (ROLLED)
MANTLET 4.0 IN. CURVED (CAST)
UPPER FRONT 3.0 IN. AT 16° (CAST)
REAR LOWER 2.4 IN. AT 45° (ROLLED)
LOWER FRONT 3.8 IN. AT 60° (CAST)
BELLY FRONT-UP TO 2.0 IN. (ROLLED)
SIDES 3.5 IN. AT 90° (ROLLED)
BELLY REAR 0.8 IN. (ROLLED)

Standard Combat Weight............52 U.S. Tons
Crew..............................5
Armament..........................One 122mm Gun M1944
Total Traverse....................22°
Elevation.........................4° to +15°
Speed.............................23 mph maximum
Range of Action...................Roads, 80-90 miles

Remarks - This is a modification of the 122mm field gun M1931/37 mounted on the US-1 heavy tank chassis.

JSU-249



Combat Weight............
.............52 U.S. Tons
Crew...................5

Armament.......One 122mm
M1944 with muzzle brake

Total Traverse.......22°
Elevation.....4° to +15°
Speed.....23 mph maximum

Range of Action...Roads,
...............80-90 mph

Remarks - Chassis and superstructure are believed identical to JSU-122.

JSU-152

Combat Weight...........
............52 U.S. Tons
Crew...................5

Armament.......One 152mm
......Gun.Howitzer M1937

Total Traverse.......20°
Elevation.....3° to +20°
Speed.............Roads,
..............23 Maximum

Range of Action...Roads,
.............80-90 miles

Remarks - Mounted on the same carriage and superstructure as the JSU-122. Standard.

FUTURE TRENDS

Existence of super-heavy self-propelled pieces, ranging in caliber from 172mm to 210mm has been reported. These are in the advanced experimental stage, and production of a super-heavy piece for special roles is a strong possibility for the very near future, it is believed. In addition, the mounting of the German 172mm (used by the Germans wihh outstanding success, mounted on a mortar carriage) on a special SP chassis would produce a splendid weapon. Recent reports indicate that this may already have been done on an experimental basis.

GUIDED MISSILES

GENERAL

The successful introduction of guided missiles in World War II by the Germans resulted in a race in this field by the major victor nations. The USSR, like the other principal nations, came into possession of: (1) German technical personnel familiar with the development of guided missiles; (2) a number of actual missiles and components; (3) technical information on research; (4) manufacturing data.

The research and development of guided missiles has followed two broad but related fields.

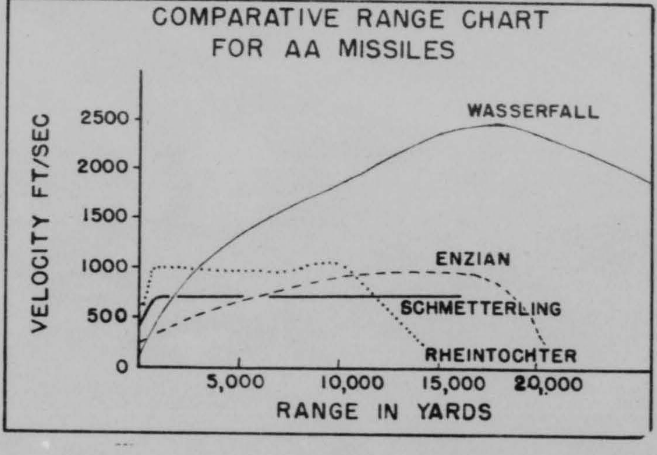
(1) To produce weapons which can accurately hit any area on the surface of the earth, with whatever radically new explosive and propulsive substance may become available.

(2) To produce antiaircraft weapons that will be effective against future jet-propelled bombers, against which conventional AA artillery will be relatively ineffective owing to the high bombing altitude and speed.

Under group (1) above are the V-1 and V-2, A-9 and A-10. Under group (2) are the HS-117, Wasserfall, Enzian, Rheintochter, and X-4.

It is reported that the USSR is building and stockpiling a slightly improved version of the German V-2.

It is believed that by 1950 the USSR could have usable AA guided missiles, based on German design, ready for production.



TACTICAL CONSIDERATIONS: LONG RANGE GUIDED MISSILES, GROUND TO GROUND

It is believed that for the first few months after a declaration of war, guided missile operations will be more for the purpose of gaining operational experience than for striking decisive blows. Reasons for this belief are:

It is logical to use aircraft if they are available in great numbers, and the Soviet has an overwhelming superiority in bomber and fighter strength.

Logisitc problems, imposed by operational employment of guided missiles on a large scale, are so great that establishment of supply channels probably would require several months.

The above conclusion is based on the assumption that the rockets available will have the same range and accuracy characteristics as those produced by the Germans. If, however, the Soviet has been able to solve the tremendous problems incident to increasing the range, launching sites could be prepared inside the present Soviet-controlled areas prior to opening of hostilities and logistic problems would largely be solved in advance. In spite of present inaccuracy, these weapons would be very effective against large industrial and densely populated areas, such as London.

The Germans had in the development stage the A-9 and A-10 guided missiles, intended for use against the continental United States. The present state of these in the Soviet Union is unknown.

Although the testing range for long-range guided missiles is partly in the Arctic, this does not necessarily point to strategic planning for trans-polar rocket attacks.

CAPABILITIES OF USSR FOR A MISSILE OFFENSIVE

Against Land Targets -

Utilizing the full production capabilities of German factories now controlled by them, the Soviets could produce enough V-1 and V-2 bombs to launch approximately 25 V-2's and 80 V-1's daily from current production, plus an additional number of V-1's from previous stockpiling.

Against Air Attack -

Little is known of the stage of development of ground-air guided missiles in the Soviet Union. They have been working on this since 1945, and, in addition to having complete samples of each missile and technical details of its operation, they also have a group of competent German scientists and technicians to carry on the development work. It is estimated that by 1950 the Soviets could have a usable AA guided missile ready for production.

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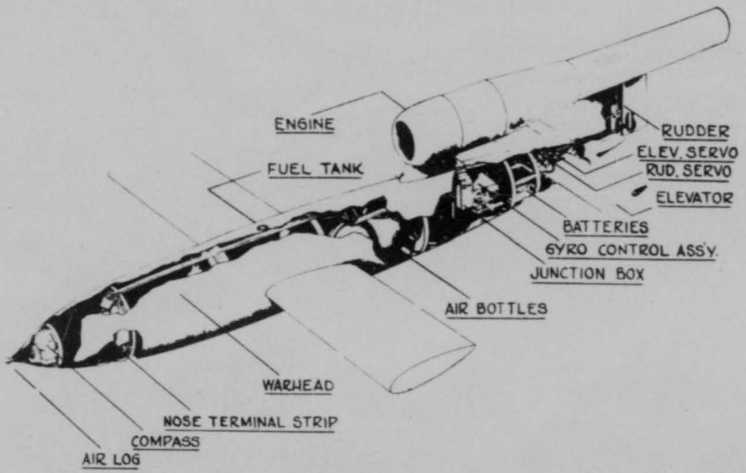
CHARACTERISTICS

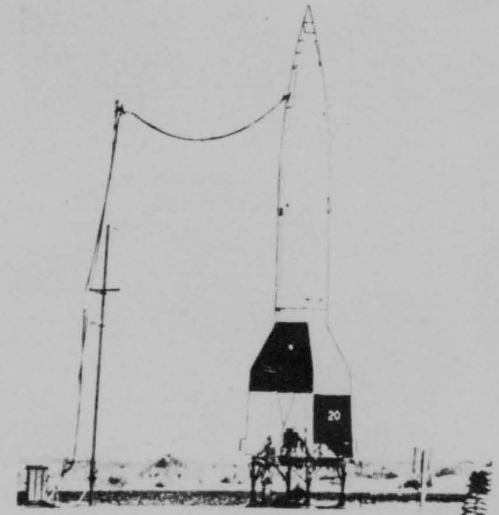
V-1

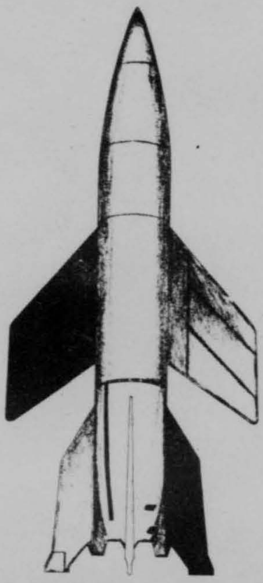

ENGINE
FUEL TANK
RUDDER
ELEV. SERVO
RUD. SERVO
ELEVATOR
BATTERIES
GYRO CONTROL ASS'Y.
JUNCTION BOX
AIR BOTTLES
WARHEAD
NOSE TERMINAL STRIP
COMPASS
AIR LOG

Total Launching weight........	3 tons.
Payload........................	1983 lbs.
Length.........................	25' 4"
Wing Span......................	16'
Fuzes..........................	3 (1 elec. impact, 2 mechanical)
Maximum Range..................	150 miles (approx) 50% hits in circle of 8 miles radius at range of 130 miles.(Ground launched).
Stockpiling....................	Can be stockpiled.
Vulnerability..................	Approx. 60% successfully launched were destroyed before reaching target. 20% of launchings were failures.
Countermeasures................	Fighters, flak, barrage-balloons.
Lethality......................	Average 2.2 deaths per V-1 reaching London.
Launchings.....................	From ramps, or from aircraft, which renders a/c vulnerable to fighters.

Remarks - Smaller and cheaper (cost of 20 V-1's equals approximately the cost of one V-2) than the V-2, can be air-launched. Has greater payload.

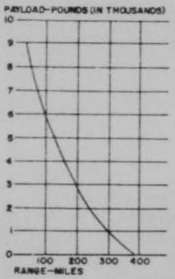
V-2 (A-4)





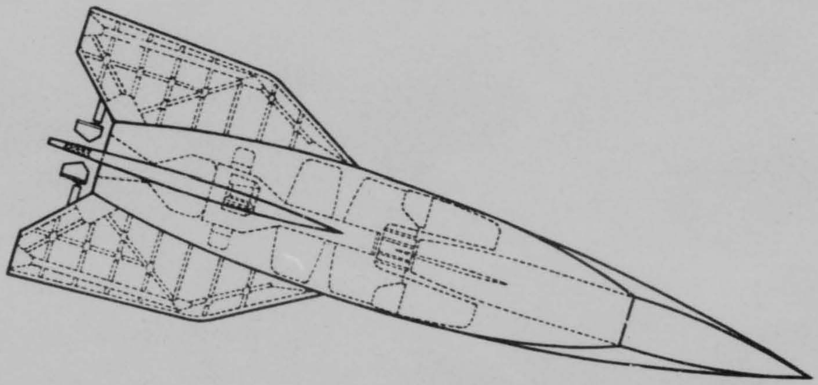
WINGED V-2 (A-4b)

Launching Wgt..........................14.85 tons
Payload................................1620 lbs.
Length.................................45' 10"
Maximum diameter.......................5' 6"
Fuzes.........................5, (1 elec. impact
2 mech. in nose, 2 mech in tail)
Maximum Range...................225 miles approx.
Accuracy.................50% hits in circle of 11
miles radius at range of 200 miles
Vulnerability............None destroyed at active
defense. 15-20% malfunctional
Countermeasures..............................None
Lethality...Av 4.8 deaths per V-2 reaching London
Launching...From mobile metal or concrete platform
Stockpiling..Extremely difficult,particularly the
liquid oxygen which is the chief fuel component.



Remarks - V-2's killed more than twice as many people per missile than the V-1, and did slightly more structural damage than the V-1. No means of destroying the V-2 after it is launched has yet been developed. Its launching site can be easily concealed. It has a greater ground range. The V-2 is also known as the A-4. The A-4b is the same missile with wings attached as per illustration, which has the effect of approximately doubling the range.

A-9



The A-9 guided missile is similar in appearance to the A-4b. It differs only in internal structure. Like the V-2, it isshot vertically into the air, and bent towards the target; but, rather than falling, it glides like the A-4b, until it is over the target, where it goes into a vertical dive. It would travel about 600 kilometers in 17 minutes.

It was proposed to launch the A-9 from a catapult at supersonic speed to increase the range. It was also proposed to install a pressurized cabin and to use a human pilot. The pilot would drop the warhead on the target and then return to his base. A retractable landing gear would be used in the landing which it was felt could be carried out at a speed as low as 160 kilometers per hour.

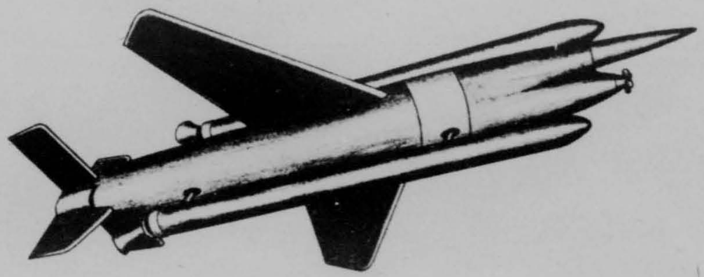
At the close of World War II, the A-9 was under development by the Germans, but none were ever built. Evidence indicates the Soviets are working on the development of this missile.

A-10

This missile was never built, but calculations were complete. It was to be used as an assist takeoff motor for the A-9, supplying a thrust of 200 tons before being jettisoned. The A-9/A-10 combination was expected to have a range of 5000 km, and an ultimate velocity of 2800 meters per second. After being jettisoned, the A-9 motor would begin to function. It was also proposed to use a human pilot in this combination.

Considering that calculations on this missile were complete, and that the Germans had planned to use this weapon against the continental United States in the early months of 1946, it must be assumed that the Soviets have continued development of this missile.

Hs 117 (Schmetterling)

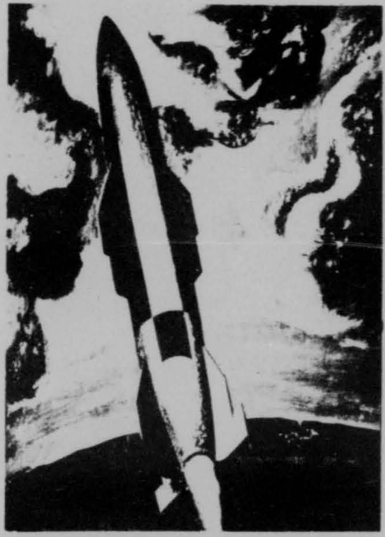


This small subsonic airplane, 13 feet long with a 6 1/2 foot span was powered by a liquid-fueled rocket unit. It was to be guided by radio, using optical tracking. The warhead weighed 55 lbs. and was to be fired by a proximity fuze. It was to have an effective range of 10 miles, an altitude ceiling of 35,000 feet and an expected accuracy of 8 yards.

Development of this missile was given a high priority by the Soviets.

The HS 117 was used experimentally by the Henschel aircraft firm in 1941, but its development was not pushed until 1943. The project, scheduled for completion in February 1945, was still in the development stages on VE-day. Of 59 missiles test-fired, 25 performed satisfactorily.

Wasserfall



This radio-controlled supersonic rocket, similar in operation to the V-2 (A-4), weighed only 4 tons. It was designed to destroy a plane 30 miles away, flying at an altitude of 65,000 feet and a speed of 560 miles per hour. The missile was to have a 200-pound warhead and an infrared proximity fuze and homing device.

Research began on this missile in 1942. Of 25 rockets fired, 15 operated satisfactorily.

Production plans had been drawn up calling for 5000 units per month, but production never began.

The Soviets are working on this missile, but it is reported that no important progress has been made, and that the work still consists of attempts to develop the original German designs.

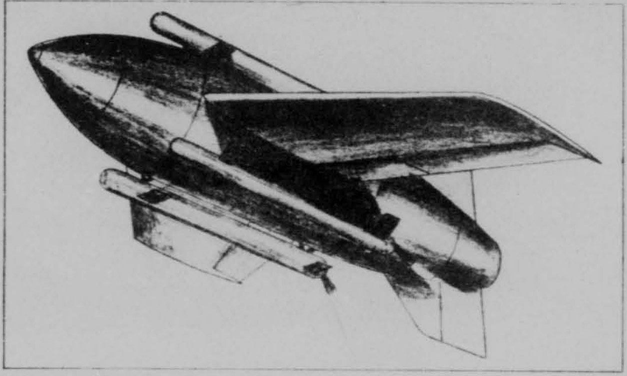
Enzian E-4 and E-5

This subsonic rocket-propelled, radio-controlled missile carried a 1050-lb. warhead and was designed for use against heavy bomber formations. Research began in 1943 and of 30 test-fired, only 10 were successful. In appearance, it bears a striking similarity to the Me-163. Total weight is 1800 kg including the 320 kg of the four assist take-off units shown in the illustration. It attained its velocity of 300 meters per second with a main thrust unit delivering 2000 kg initially, decreasing to 1000 kg during flight. Duration of power was 72 seconds, resulting in vertical range of 16,000 meters and a horizontal range of 25,000 meters.

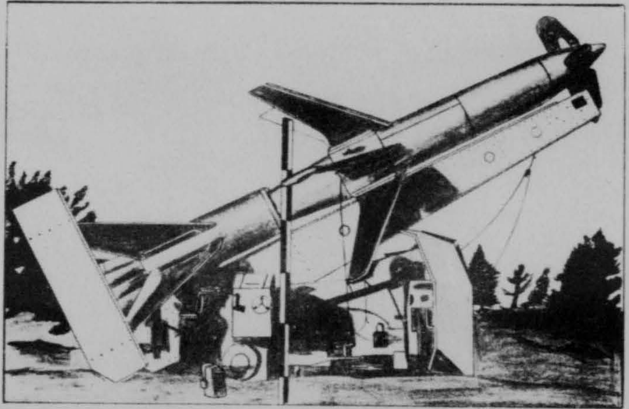
It was planned to launch the Enzian from a ramp 6.8 meters in length. The assist take-off units are jettisoned after 5 seconds and the Enzian is directed to the target vicinity under radio control, using either line-of-sight or radar navigation. When the missile's approach to the target comes within the operating range of the particular self-seeking head employed, the latter would assume control and direct the Enzian to the target's proximity on a modified homing course. The proximity fuze at predetermined distance activates the warhead, which is designed to insure maximum effective damage to the target from 45 meters.

The Enzian E-5 was similar to the E-4 but was tailless and had crossed wings. It had a 550 lb. warhead, radio-control, homing device, proximity fuze and one-axis gyro stabilizing system. It was the latest outgrowth of the Enzian E-4. The missile had progressed beyond the preliminary design stage, but the prototype had not been built.

No information is available regarding the status of this missile in the USSR.



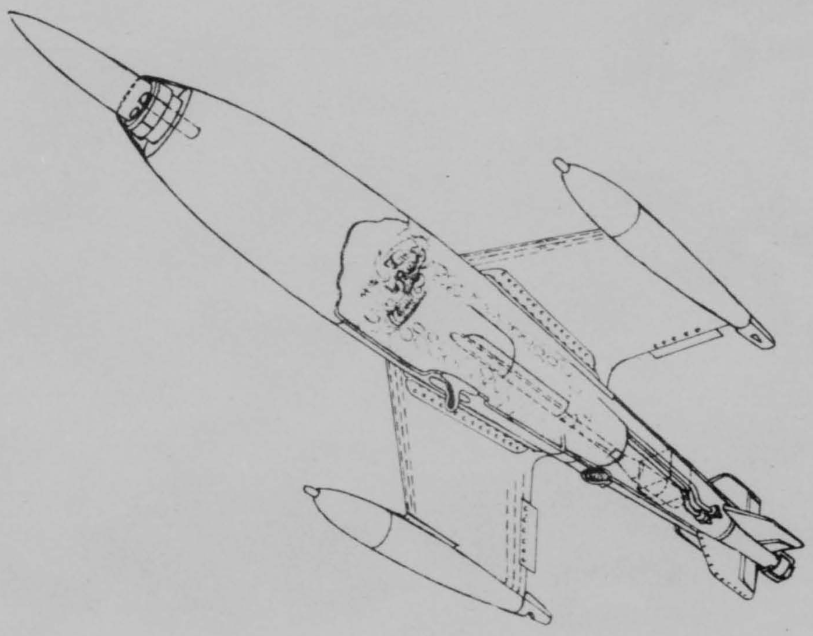
Rheintochter I and III



The Rheintochter I was a subsonic, radio-controlled, solid fueled rocket. It was never seriously considered for production, but rather as an experimental model for use in designing the Rheintochter III.

The Rheintochter III was designed for high velocity using liquid fuel, and carried a 330-pound warhead. Only 6 of the III were test-launched, none of them having any controls. No production of this missile was ever planned.

X-4



This is a fin-stabilized guided missile, with proximity fuzed warhead of about 44.1 pounds, which could be launched by fighter planes against large bomber formations.

It was planned to use wire control and presumably visual tracking from the parent aircraft. Such control would restrict its maneuverability and render the parent aircraft more vulnerable. With acoustic homing device installed, the X-4 could be launched, and the parent aircraft could immediately execute an evasive maneuver.

No information regarding development of this missile is available at the present time.

ROCKETS AND ROCKET LAUNCHERS

GENERAL

Soviet rocket weapons are characterized by a very small number of projectiles and launchers and a strict adherence to conventional design. The original rockets were aircraft type, dictated by the need for a suitable means of combating armor. These were followed in late 1941 by three ground launchers - the M-8, M-13, and M-30 - which remained the only field equipment until the introduction of the M-31 in 1945.

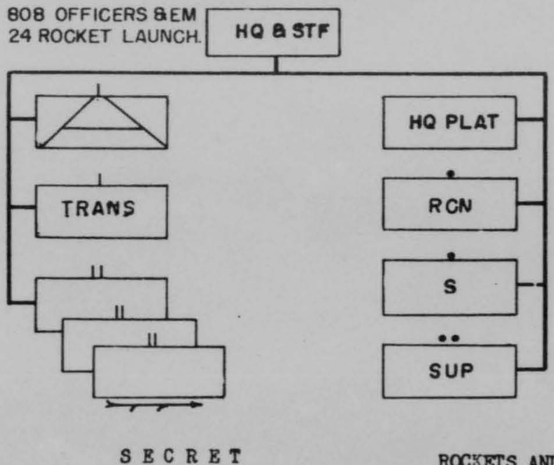
It is believed that the three mobile launchers (the M-8, M-13 and M-31) will fulfill the Soviet demands for field equipment and that further development will be restricted to other types such as antitank and antiaircraft rockets.

Similarly, rocket projectiles are limited to a small number, all of which are of conventional fin-stabilized design. All are fired electricclly, using either a pyrotechnic device integral with the launching rail or an internal electrical squib. There is still insufficient information concerning the construction of projectiles above 132mm caliber and the performance of all types. It is possible that spin-stabilized projectiles are under development.

The principle of rocket employment in the Soviet Army prescribes mass commitment at critical phases of an operation. Rocket units are normally coordinated in the general plan of artillery and mortars, and are under the control of corps artillery.

ORGANIZATION

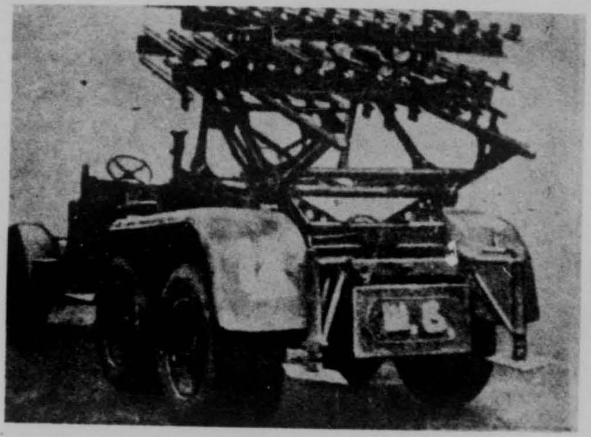
Rocket Regiment (M13)



The rocket regiment (M13) may be a part of a rocket brigade, or it may be independent. It has a balanced headquarters, three rocket battalions with two rocket batteries each, an antiaircraft machine gun company, and services. This regiment is used against area targets. Weight of metal of a single salvo from this unit is more than seven (7) tons.

CHARACTERISTICS - LAUNCHERS

M-8



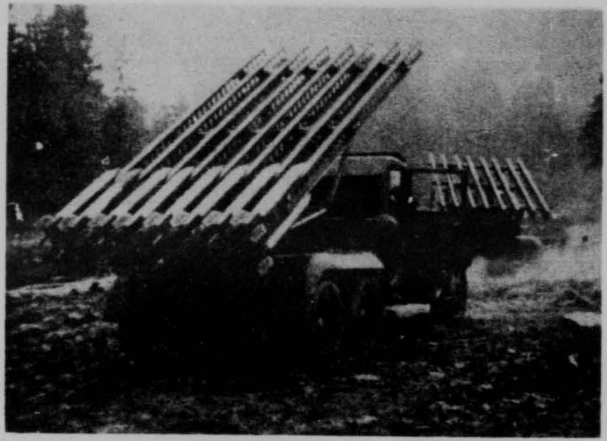
Status..Standard

Number of Rounds Launched per Salvo.............38

Type of Rounds Launched......................RS - 82 Believed to fire an 82mm incendiary rocket

Remarks - Mobile ground launcher. Some indication has been received that in cases of dire need, this projector is used in anti-aircraft roles for barrage effect against low-flying aircraft.

M-13



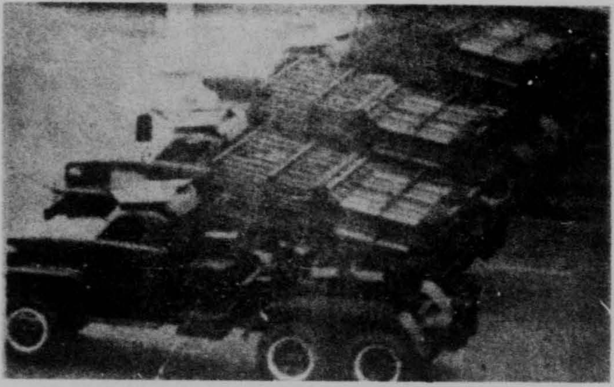
Status....................................Standard

Number of Rounds Launched per Salvo..........16

Type of Rounds Launched.....................RFOS-132

Remarks - Mobile ground launcher, basically similar to the M-8. This launcher is also used on alternative mountings such as armored vehicles and patrol boats. Some indications has been received that in cases of dire need this projector is used in antiaircraft roles for barrage effect against low-flying aircraft.

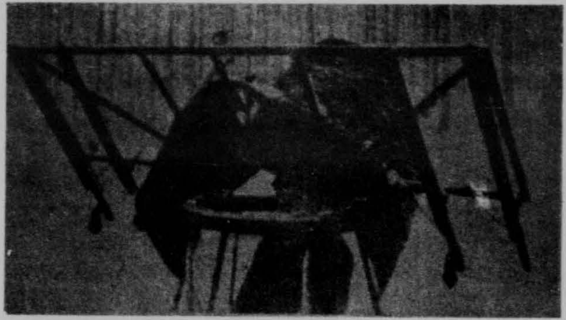
M-31



Status....................................Standard
Number of Rounds Launched per Salvo.......12
Type of Rounds Launched...................300mm (Designation unknown)

Remarks - Mobile ground launcher. This launcher is believed to have replaced the M-30, the only non-mobile launcher produced. It is considered the latest type of ground launcher.

82mm Four-Round AA



Status....................................Unknown
Number of Rounds Launched per Salvo.......4
Type of Rounds Launched...................RS-82

Remarks - Antiaircraft Type.

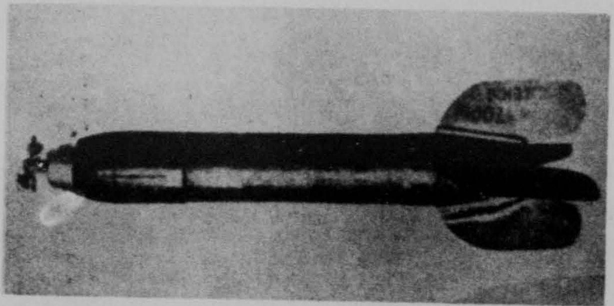
ILLUSTRATION NOT AVAILABLE

Status....................................Standard
Number of Rounds Launched per Salvo.........48
Type of Rounds Launched....................RS-82

Remarks - Antiaircraft Type. Little is known concerning this launcher, but from appearance it is believed to be a modification of the M-8.

CHARACTERISTICS - PROJECTILES

82mm RS-82 - HE/F Type



Range or Ceiling...............6,000 yards from ground
1,670 yards from AA launcher
7,000 yards from aircraft

Launched from.................M-8 Mobile Ground Launcher,
AA Launcher and Aircraft (RO-82)

82mm Rocket - HE/F Type

ILLUSTRATION NOT AVAILABLE

Range or Ceiling..........3,520 yards
Launched From.............48 Round AA Launcher. Requires 7-10 minutes to reload.

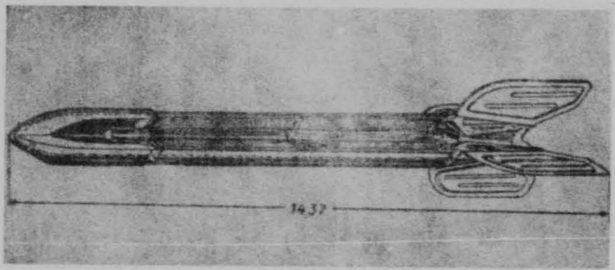
82mm Rocket - INC Type

ILLUSTRATION NOT AVAILABLE

Range or Ceiling.........Unknown
Launched From............M-8 Mobile Ground Launcher

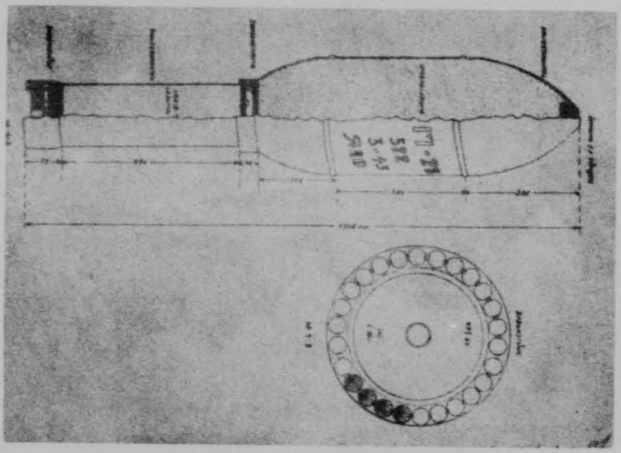
Remarks - Believed to exist. No details available.

132mm RFOS-132 - HE/F Type



Range or Ceiling.....................9,735 yards
Launched From........................M-13 mobile ground launcher
Initial Velocity.....................1,320 FPS

260mm - HE Type



Range or Ceiling..........3,300 yards
Launched from.............M-30 Static Ground Launcher (obsolete)

300mm - HE Type

ILLUSTRATION NOT AVAILABLE

Range or Ceiling..............6,500 yards
Launched from.................M-31 Mobile Ground Launcher

ARMORED VEHICLES

GENERAL

The Soviet Army now has an estimated 25 tank divisions and 30 mechanized divisions. This gives a relative proportion of almost one (1) armored or mechanized unit to three (3) infantry units in the Soviet Ground Forces as a whole. The wartime ratio was approximately one to ten.

All known Soviet tanks employ standard field artillery fire-control devices for indirect fire; namely, the Schneider or the German type of quadrant sight for indirect fire, as well as direct-fire telescopes.

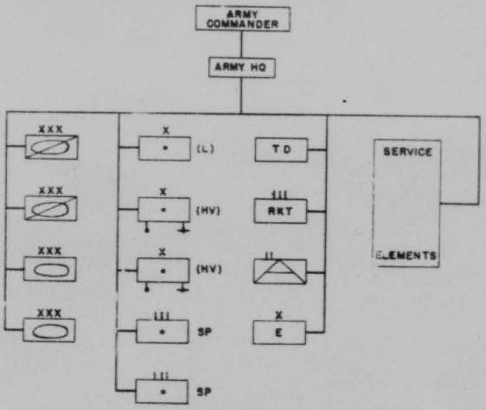
A possible weakness of Soviet Gun mounts is that they are capable of only slight depression. Modern tank pieces have an average maximum depression of less than 4° .

ORGANIZATION

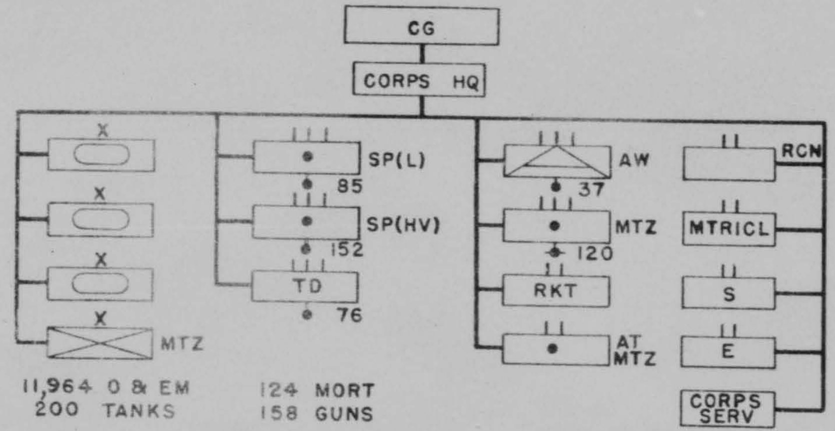
Examples of Normal Unit Strength

Medium Tank Regiment	- 1,300 men	- 65 tanks
Heavy Tank Regiment	- 1,400 men	- 65 tanks
Motorized Rifle Regiment	- 2,200 men	-
Mortar Regiment	- 600 men	- 35 mortars
Howitzer Regiment	- 600 men	- 24 guns
Rocket Regiment	- 200 men	- 16 rocket launchers
Antiaircraft Battalion	- 320 men	- 18 guns
Engineer Battalion	- 350 men	
Signal Battalion	- 200 men	

Army

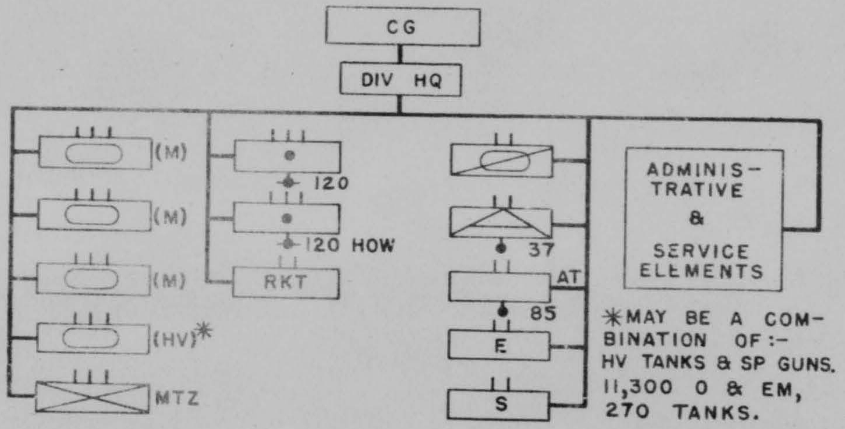


Corps


CG
CORPS HQ
X
X
X
X
MTZ
SP(L)
85
SP(HV)
152
TD
76
AW
37
MTZ
120
RKT
AT
MTZ
RCN
MTRICL
S
E
CORPS SERV
11,964 O & EM
200 TANKS
124 MORT
158 GUNS

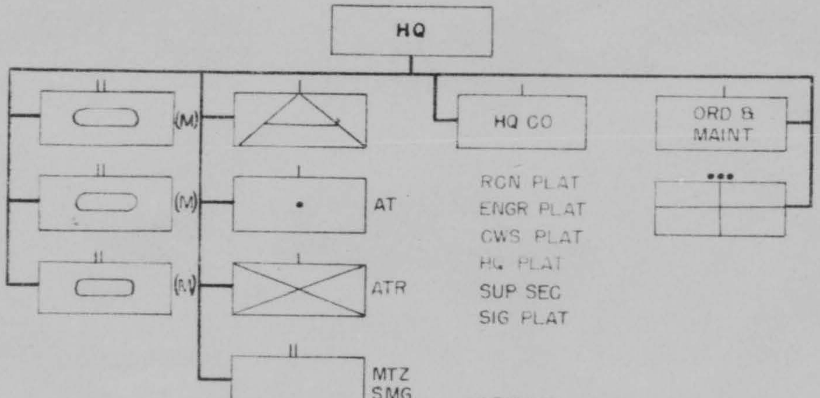
A tank corps usually forms a part of the mobile striking forces of the commander of a front or an army. It is used to deliver a decisive blow on a narrow sector, and in cooperation with other arms to exploit a breakthrough.

Division


CG
DIV HQ
(M)
(M)
(M)
(HV)*
MTZ
120
120 HOW
RKT
37
AT
85
E
S
ADMINISTRATIVE & SERVICE ELEMENTS
*MAY BE A COMBINATION OF:- HV TANKS & SP GUNS.
11,300 O & EM,
270 TANKS.

The existing tank division is a development of the wartime corps. The present tank strength of the division consists of medium tanks, nearly equivalent to U. S. Pershing tanks, and heavy tanks as well. Personnel strength of units has not been reduced materially. The main change is mostly a matter of shifting components. Self-propelled artillery probably has now been released to a higher echelon and most likely is controlled by army or army group, to be attached to divisions as the situation demands.

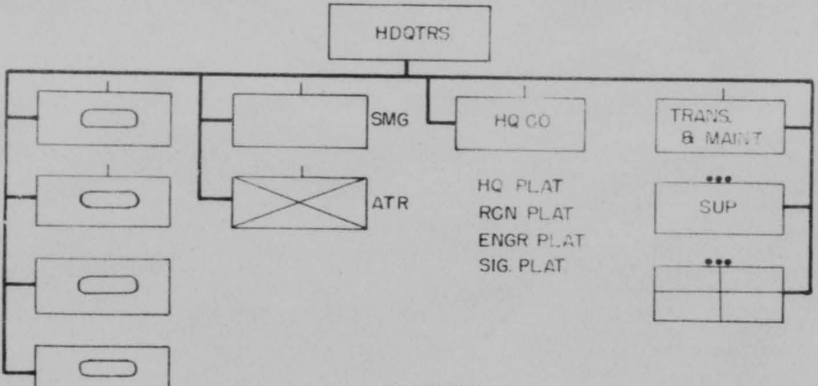
Brigade


HQ
(M)
(M)
(M)
AT
ATR
MTZ
SMG
HQ CO
RCN PLAT
ENGR PLAT
CWS PLAT
HQ PLAT
SUP SEC
SIG PLAT
ORD & MAINT

BRIGADE

The mission of a tank brigade is destruction of hostile infantry by means of fire and shock action. Maneuverability of a tank brigade is good, although its service echelon is road bound. A tank brigade usually forms a part of a tank corps. With corps resources, a tank brigade can be committed to moderate combat for 5 or 6 days.

Regiment


HDQTRS
SMG
ATR
HQ CO
HQ PLAT
RCN PLAT
ENGR PLAT
SIG. PLAT
TRANS. & MAINT
SUP

REGIMENT

The basic organizational elements of the tank arm of the Soviet Army are the medium tank regiment, the heavy tank regiment and the tank battalion. The medium tank regiment is a balanced organization with its own reconnaissance, engineer, signal, and maintenance units. The heavy tank regiment is independent. It has relatively large supply and maintenance units. It is used to support infantry and medium tanks during attacks on heavily fortified positions, and as heavy artillery in support of mobile operations.

Battalions

Two types of tank battalions exist in the Soviet Army. They are the independent tank battalion and the tank battalion which is organic to a tank brigade. The mission of the independent tank battalions is the same as for heavy tank regiments, that is, to support the infantry and medium tanks during attacks on heavily fortified positions, and as heavy artillery in support of mobile operations.

TACTICS

Employment of Tanks

The Soviets recognized during World War II that tanks can be employed effectively both in direct support of infantry and in large tank units with relatively independent missions.

By the end of the war, heavy tank "break-through" regiments were being attached to rifle divisions to support the infantry assault with their firepower and shock action.

The combat tasks of Soviet armored forces are to deliver decisive blows on a narrow sector, to wedge deeply into the enemy defensive system, and, in coordination with other arms, to envelop and destroy large hostile units. The paramount principles of Soviet tank tactics are the continuity of coordination with other arms, and full exploitation of tank mobility.

Current Soviet doctrine requires that all armor be given local protection by infantry, normally riding the vehicle prior to deployment, in order to combat concealed infantry traps. Advance engineer detachments and engineer tank riders clear lanes in minefields. The organic self-propelled artillery of these units is used in the dual role of assault guns and for centralized massed indirect fire.

The Soviets consider that armored forces are most effectively employed to the depth of the enemy operational zone. After intensive artillery preparation, the infantry assault penetrates into the enemy defenses. Then, armored forces strike in the direction of the deepest infantry penetration on a narrow front, from a concealed centralized position, develop the break-through, and strike at the enemy's rear to destroy him.

The Tank Offensive

An assault by tank forces, normally a tank division, differs in several respects from the coordinated infantry attack. In the tank offensive, tanks attack in deeply echeloned formation in a narrow sector, using their fire and shock power to effect a penetration. Resistance is by-passed in order to avoid full deployment and protracted local combat. Infantry and artillery mop up enemy strong points and provide flank security for the tank units against counter-attack. The tank forces are assigned specific terrain objectives in the rear, rather than mission-type orders.

The tank forces themselves cannot hold territory, but must rely upon the following infantry and, occasionally, cavalry. The tank units destroy enemy rear installations and supply lines, and attempt to encircle and destroy the enemy by coordinating their penetration with adjacent units in a wide turning movement or a double envelopment by converging tank penetrations.

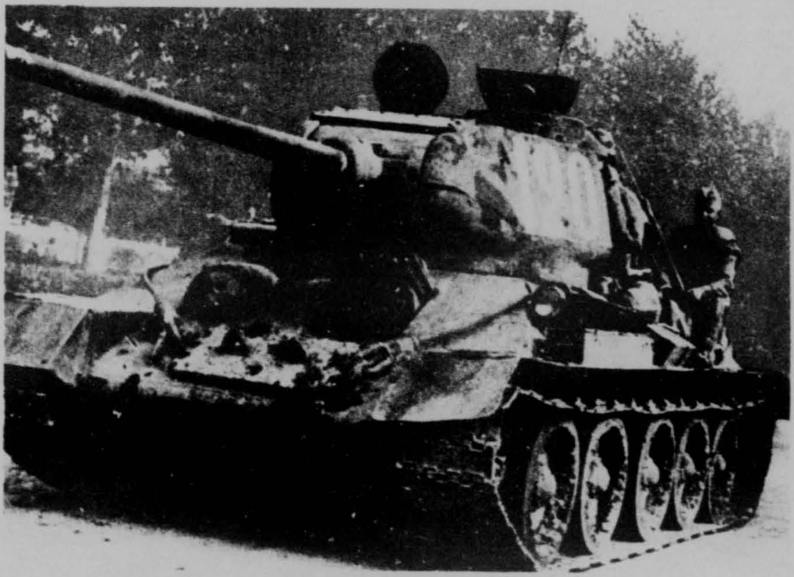
CHARACTERISTICS

Light Tank T-70

Caliber of main armament	45mm
Maximum range of main armament	5,500 yards
Rate of fire of main armament	25 rds per minute
Weight w/combat load	10.8 tons
Speed - Maximum	28 mph
Cruising	19 mph

Remarks - Main Soviet light tank of World War II.

Medium Tank T-34 (85mm gun) "Workhorse of the Armored Force"



Caliber of main armament	85mm
Maximum range of main armament	10,500 yards
Rate of fire of main armament	7-8 rds per minute
Weight w/combat load	35 tons
Speed - Maximum	34 mph
Cruising	19 mph

Remarks - The most widely used tank in the Soviet Army. The T-34 (76.2mm gun) is now obsolete with the Soviets having superceded it in 1944 by the T-34 (85mm gun). The T-34 (85mm gun) is believed to be in the process of being replaced by the T-44 Medium tank.

Medium Tank T-44

ILLUSTRATION NOT AVAILABLE

Caliber of main armament....................85 to 100mm

Maximum range of main armament.............85mm - 10,500 yards
100mm- unknown

Rate of fire of main armament..............85mm - 7-8 rds per minute
100mm- 6 rds per minute

Weight..........85 mm version.............34 tons
100mm version.............34 tons

Speed...........85 mm version....maximum..30 mph
cruising..19 mph
100mm version....maximum..34 mph
cruising..19 mph

Remarks - An improved version of the T-34 (85mm gun). This tank closely resembles its progenitor, but has benefited by a reduction in overall height, increased armor, and cleaner glacis plate. Despite these improvements, the total weight of the tank is said to be one ton less than that of the T-34 (85mm gun), resulting in at least equal, if not slightly superior, mobility and cross-country performance. This tank is armed either with an improved 85mm gun or with the 100mm antitank gun M1944. Recent reports indicate that it is probably the latter.

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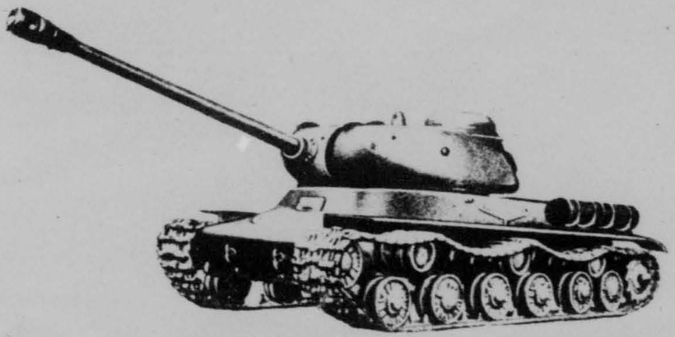
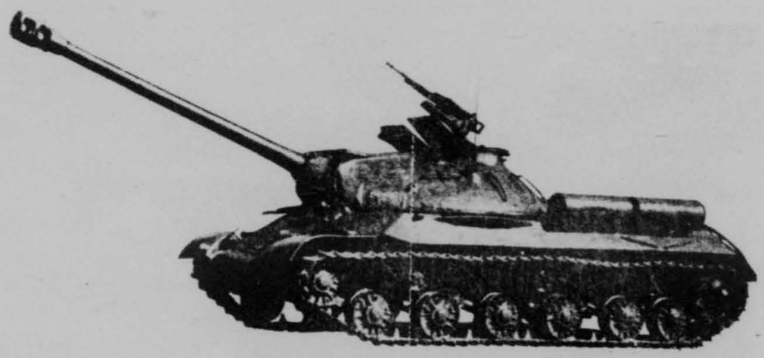
Heavy Tank "JS-1" and "JS-2" (Joseph Stalin 1, 2)



Caliber of main armament	122mm
Maximum range of main armament	Unknown
Rate of fire of main armament	3 rds per minute.
Weight w/combat load	50-55 tons
Speed...... Maximum	15-20 mph
Cruising	10 mph

Remarks - The JS-1, which saw combat in 1944, was based on a modified KV chassis. (KV 1 heavy tank was produced in 1941 and is now obsolete). Shortly afterwards, the Joseph Stalin 2 was produced. This closely resembled the JS-1 in design, but incorporated a redesigned hull front plate. Both proved quite capable of dealing adequately with the German Mark V and Mark VI heavy tanks.

Heavy Tank "JS-3" (Joseph Stalin 3) "Shchuka" (Pike)



Characteristics are the same as the JS-1 and 2.

Remarks - The JS-3 is the present standard Soviet heavy tank, and is the latest known development in the Joseph Stalin series. The heavy armament (122mm gun) and thick, well-shaped armor make this one of the most revolutionary tanks ever designed.

The front plate is unlike that of any other tank and affords an easy recognition feature. The plate is in two sections and shaped like the prow of a ship, thus giving horizontal as well as vertical deflection.

This tank is regarded by some observers as the outstanding heavy tank in the world today.

FUTURE TRENDS

The originality and excellence of Soviet Tank design, which was apparent throughout World War II, gives every indication of being maintained in post-war developments. Indications are that much effort is being directed at improving existing materiel, and it is thought that several new types of combat vehicles have at least reached the prototype stage. While authoritative information is lacking, the most significant of these developments appear to be:

Type	Remarks
Super-heavy tank or self-propelled gun	Numerous reports have indicated the production of a super-heavy tracked vehicle weighing in excess of 100 tons and mounting a gun of at least 152mm caliber. It is probable that it is a self-propelled gun for special tasks rather than a combat tank.
Heavy Tank, JS-4 (Joseph Stalin-4)	Little is known of this other than it appears to be a heavier development of the JS-3. This tank may be fitted with a flame-thrower in addition to its normal armament.
Light Tank	There seems to be a distinct possibility that the Soviets have produced a midget tank carrying a two-man crew. Such a vehicle is probably intended for reconnaissance or air borne tasks.

Soviet designers, it is believed, are continuing to take an interest in even heavier tank armament. Undoubtedly, they are attempting to produce a weapon for heavy tank roles in excess of 122mm in caliber. Since the Soviets have adhered to the policy of adapting successful field pieces to armored roles, it is not unlikely that the next weapon to be installed in their heavy tanks will be of 152mm caliber.

Emphasis on armored units in the current Soviet reorganization program make it appear that the Soviets are preparing for a war of maneuver. Their successes on various parts of the Eurasian land-mass demonstrate the Soviets ability to utilize their armored units to the best advantage in any type of environment. The Soviets have shown decisive capabilities for successful employment of large mobile concentrations.

ARMORED CARS

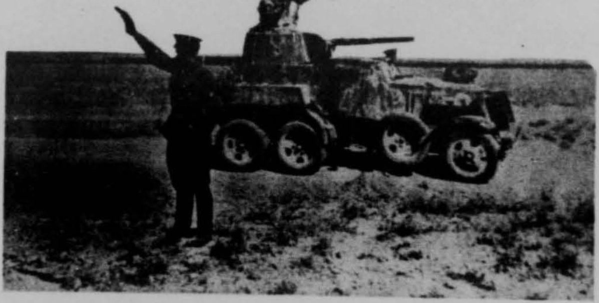
During World War II, the Soviets employed to a large degree U.S. scout cars (M-3) for armored car roles. For tasks beyond the capabilities of wheeled vehicles, T-70 or T-34 tanks were used. Production of personnel carriers, recovery tanks, flame-thrower tanks, etc., appears to have been limited to the adaptation or modification of various types of combat tanks, rather than to the manufacture of specially designed, unipurpose vehicles.

BA-64 (4x4)

Armament..................	One 7.62 MG in turret
Speed......................	Surfaced roads - maximum - 50 mph average - 28 mph Earth roads - average - 12 mph
Radius of action...........	372 miles

Remarks - This light armored car was produced during World War II. It is the most recent armored car known to have been produced by the Soviets.

BA-10 (6x4)



Armament	One 45mm gun with coaxial One 7.62mm gun in turret One MG ball mounted in front of hull
Speed	Surfaced roads - maximum - 34 mph average - 25 mph Earth roads - average - 11 mph
Radius of action	102 miles

MISCELLANEOUS

FIRE-CONTROL DEVICES - GENERAL

The Soviets do not appear to have developed any outstanding types of fire-control equipment.

The various fire-control systems in use by the Soviet Army at the end of World War II represented slight improvement over the systems of World War I.

The Soviets have developed a good system of sound and flash recordings. They have employed this system much more than the United States.

Conventional artillery slide rules, proportional scales, wind rosettes, and other plotting instruments, common to all artillery units, are employed.

In the last analysis, it is considered that the delivery of fire by the Soviet Artillery is complicated because of the actual limitations of the devices themselves. These limitations make necessary detailed reconnaissance of the fire mission and require forward observation posts manned by experienced artillery officers if accurate fire is to be delivered. This would explain the Soviets' seeming disregard for human life and materiel in sending scouts and observers into dangerous forward areas. In addition, the quality of fire-control equipment might partially account for the close-up employment of the artillery. In over-simplifying their fire-control system, they actually have complicated the accurate firing of the gun in combat; whereas, although U.S. fire-control systems appear complicated, the accurate combat firing of the pieces is simplified.

All modern German fire-control equipment is available to the Soviets.

Mortar

Soviet mortar sights function similarly to those of the United States. Small range finders are used in the fire-control of the mortars. To date, no Soviet mortar sight has been reported employing the back sighting principle of the United States M6, which allows the placing of aiming stakes to the rear of the piece.

Field Artillery

Field artillery on-carriage fire-control equipment is designed for both direct and indirect laying. The systems in use are copies of French and German devices, and neither is considered comparable to present-day United States sights.

The two systems in use are: 1) a copy of the French designed Schneider quadrant sight. This sight was adopted by major powers in World War I. This type of sighting materiel was abandoned by the United States Army around 1928, but it is believed to be widely used by the present-day Soviet forces; 2) a copy of the German-designed "match the pointer system", basically a sight of German design adopted by the United States and other major powers at about the end of World War I.

Antitank Sights

To date, three systems of antitank sighting have been identified on Soviet pieces. They are all of French and German design and do not appear strictly modern.

By far the most common type of antitank sights encountered are the simple antitank and/or machinegun type dial sights, which have been identified on all 45mm and 57mm weapons. These sights permit only direct firelaying; any other type of fire undertaken by these sights would be exceedingly inaccurate.

In the heavier class of antitank materiel, as represented by the 100mm antitank gun M1944 and the 85mm antitank gun, the German "match the pointer" quadrant sight is employed.

Antiaircraft Sights

A reflex sight, designed in 1939 for the 37mm antiaircraft gun M1939, appears to be the basic design for the light antiaircraft guns of the 25mm, 27mm and 40mm class. Several varieties of this sight exist, but they all operate on the same principle. The sight is designed for direct fire against air and ground targets.

With the 76mm and 85mm antiaircraft guns, an independent elevation sighting line (the line of sight can be directed onto the target without moving the barrel) is employed. It is constructed as an indicator sighting system and allows following the target in elevation by means of a sighting linkage. This device is employed for ground roles in addition to its antiaircraft work. For antiaircraft roles, this device is considered very crude and incapable of delivering accurate antiaircraft fire.

Directors

Although several obsolete Soviet directors were known to exist, only the Puazo 2 and 3 are deemed worthy of note. Both of these are believed to have been copied from instruments brought forth by Skoda. They function on the linear-speed principle, in that for accurate fire to be delivered by them, the target must travel a course that is straight, at the same altitude, and at the same speed during the time of flight of the projectile.

Gun-Laying Radar

Although, according to German intelligence, the employment of antiaircraft fire-control radar was a part of Soviet Army doctrine during World War II, it was the great exception rather than the rule for fire-control radar to be employed. The Soviets did receive from the U.S. and the U.K. during the war the following fire-control radar: SCR 268; SCR 547; SCR 584; 282 gun laying set, U.K. GLIII, gun laying set, U.K: and Mark III.

Range and Height Finders

Soviet range finders can also be used as height finders and are used in this dual role by field units. It is believed that the Soviet height and range finders function quite like United States materiel.

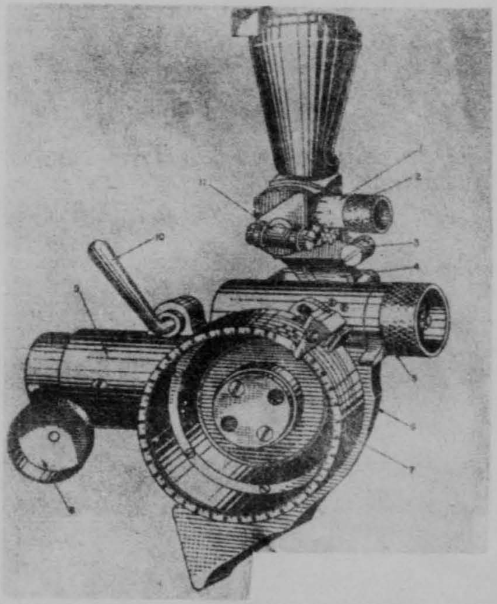
Other Fire-control Devices

In the line of other fire-control devices, the Soviets employ devices that are deemed quite similar to those of other nations of the world. Conventional hand periscopes, battery commanders scopes, aiming circles, field glasses, alidades, transits, compasses, and sound and flash ranging stations and systems are employed.

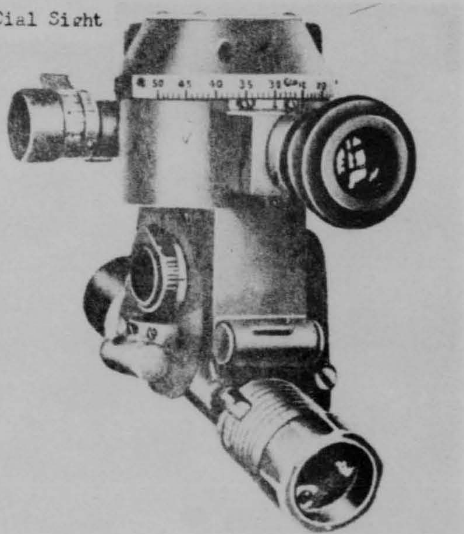
Periscope. Razvoedchik

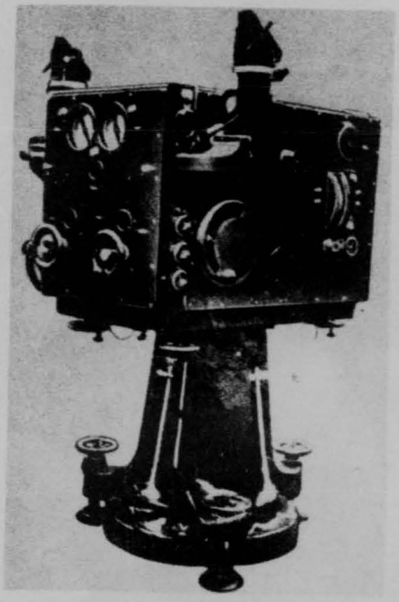
AA Machine Gun Sight

M1930 Quadrant Sight



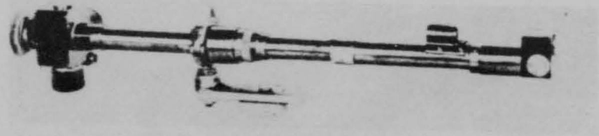
Antitank Dial Sight

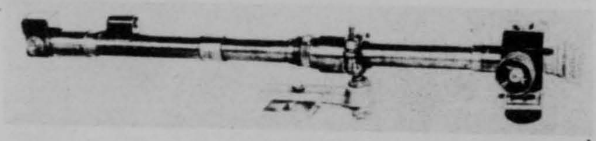


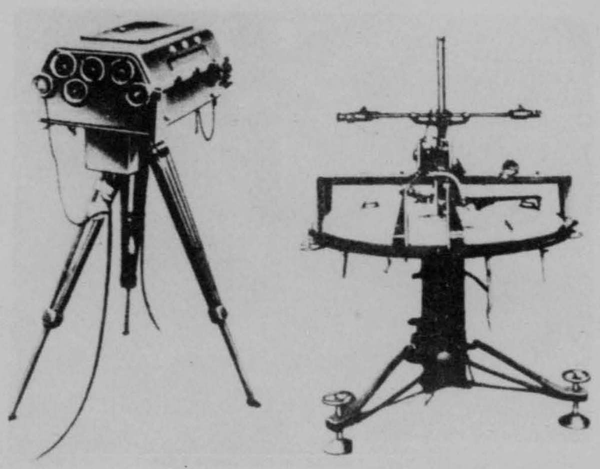


Puazo 3 Director

Tank Gunner's Direct Fire Telescope

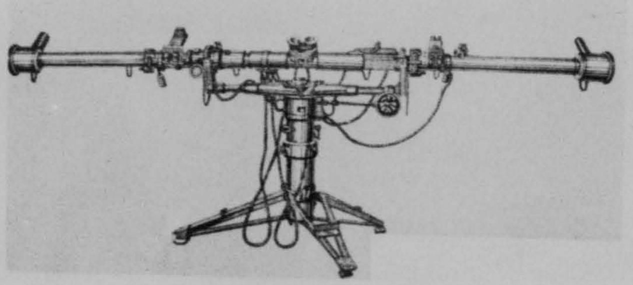






Puazo 2 Director

DYA Height Finder



ENGINEER EQUIPMENT - GENERAL

For the most part, engineer equipment is of crude manufacture. In certain categories, however, notably mines and floating bridges, the Soviets have shown marked ingenuity in the development of equipment that compares favorably with any United States or British type. Because Soviet engineer troops do not receive engineer equipment on a broad basis of issue, many of their engineer tasks are performed by hand labor supplemented by whatever mechanical aids that may be available.

Explosives and Demolition Equipment

Standard Soviet explosives are similar in type and chemical composition to standard United States explosives, the only difference being in name. Soviet standard demolition equipment includes blasting machines, firing reels and wire, circuit testing equipment, caps, fuze, detonating cord and demolition tools. All this equipment is similar in type and effectiveness to standard United States demolition equipment.

Bridges and Stream-Crossing Equipment

The Soviet Army possesses standard stream-crossing equipment employed in normal stream-crossing operations. The equipment compares favorably with that of any other modern army. Equipment is available for crossing loads ranging from individual soldiers (flotation suits) to 110-ton loads (TMP heavy Bridge Park). The trend in development of Soviet stream-crossing equipment is to simplify the processes of construction and transportation of the equipment.

The Soviet Army has two standard footbridges. Soviet equipment of this type is crude compared with United States types, but will serve the purpose for which it was intended.

Soviet floating bridges are called bridge parks. Several types are used, the majority being in the light floating bridge class. Most Soviet floating bridge materiel can be used not only to construct bridges, but also to construct ferries of the same capacities as the bridges. In many cases, individual portions are used as assault or reconnaissance boats. The existing types appear to be adequate to satisfy the immediate needs of the Soviet Army.

The fixed portable bridges in the Soviet Army are of three types: (1) decked stell - RMM-4; (2) suspension - PVM, LVM and TVM; (3) decked wooden SVM-2. The decked steel bridge is very similar to the United States steel bridges H-10 and H-20; the suspension bridges, which are used in mountainous regions, are peculiar to the Soviet Army; and the portable decked wooden bridge is made of the superstructure of the DMP-42 heavy bridge park. The trend in the development of fixed portable bridges is toward a light-weight steel truss through bridge similar to the

British and United States Bailey bridge.

Soviet assault boats utilize outboard motors. Two types of power boats are being used and only general details are known of these boats. The PG or "Half-Glisser" (Half-Glider?) is a light power boat used for towing rafts, reconnaissance, and general river-crossing operations. It is powered by a GAZ-AA four cylinder gasoline engine and has two forward speeds and one reverse. It is made of wood. The BMK-70 is a heavy all-metal motor tug about 36 feet in length. It is also known as the "Glisser" (Glider?). It is transported on a special two-wheeled trailer towed behind a truck. No other details are available.

The Soviet Army uses various types of river-crossing expedients made of materials available at the site. These consist of combinations of various floating materials such as logs, gasoline drums, canvas tarpaulins, and available commercial river craft.

Quantities of German bridging equipment were captured by the Soviets during World War II. It is believed, however, that his equipment will not be standard in the Soviet Army, but rather that the best features of design will be adopted in any new construction which may be undertaken.

Heavy Construction Equipment

The Soviets have several standard pile drivers of various sizes and driving capacities, all of which are portable and used very effectively in the construction of bridges and other engineering works. The Soviets possess a large variety of earth-moving equipment of their own design and manufacture. All types are very similar to standard United States types. Little information is available on the manufacture and use of prefabricated construction materials in the Soviet Army. Under the Lend-Lease program, the Soviets received a small amount of pierced steel planking for use in airfield construction.

Electrical Equipment

Soviet electrical equipment consists of a variety of electric generators, etc, which for the most part are very similar to standard United States equipment.

Mechanical Equipment.

Very little information is available on Soviet mechanical equipment. The Soviets manufacture standard models of air compressors, gasoline-powered tools, and portable and mobile workshops. From the available information, this class of equipment appears to be very similar to standard types used in the United States Army.

Camouflage Materials

Soviet camouflage practices and materials closely conform to those of the United States. The camouflage materials consist of nets, dummies, paint, and natural materials. The best Soviet camouflage practices often include the use of nets for both personnel and equipment.

Miscellaneous Engineer Equipment

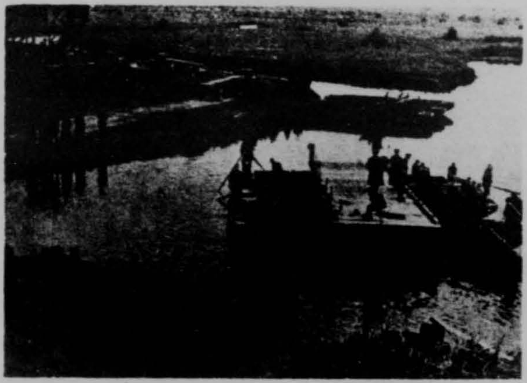
Hand pneumatic tools are similar to standard types used by the British and the United States.

The Soviets are experimenting with a roller device fitted to the front end of a T-34 tank which precedes the tank and detonates all mines it encounters. The rollers are equipped with sheep-foot projections and rotate about a shaft fitted to a steel yoke mounted at the front of the tank. Further technical details of this device are lacking.

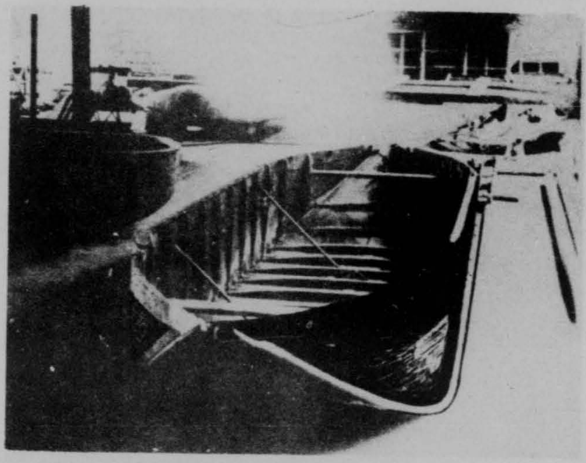
From information available, surveying, photographic and reproduction equipment as used by the engineers is similar to types used in the U.S. Army.

The system of water supply in the Soviet Army does not differ very greatly from that used by the U.S. Army. The whole system is a joint responsibility of engineer and medical services.

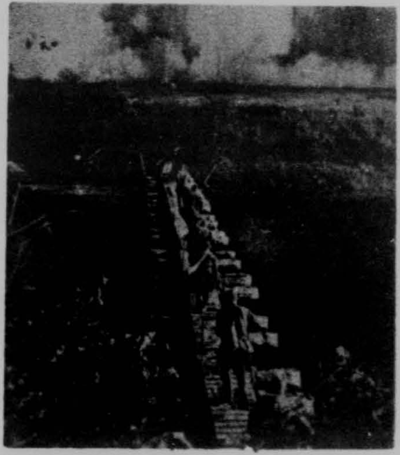
N2P Heavy Steel Bridge Equipment



Folding Plywood Ponton, NII



Footbridge of Kapok Floats, PZ-1



SIGNAL EQUIPMENT - GENERAL

The latest Soviet equipment is a copy of United States Lend-Lease production models and of German equipment. This modern equipment, however, is inferior in quality to its prototype.

At present, according to reports, the Soviets are concentrating on the manufacture of military communications equipment, particularly on receiving and transmitting equipment for motorized troops and armored units.

Radio Equipment

Soviet sets are roughly comparable to Japanese equipment. Little thought is given to reduction of weight, compactness, or the ample supply of spare parts. Consequently, sets often are difficult to handle and to operate. Exceptions are later models which are smaller sets for battalions and companies. They are of light weight and of good quality.

Radio communication lines are now being fitted exclusively with Soviet apparatus such as new receiver and transmitter equipment, efficient short-wave antennae, the new 6 and 9 channel Bodo-radio apparatus. New multiple-channel systems MTP-3 and TRT-1 have been developed.

Soviet direction finding equipment is of outmoded design, although it has fair accuracy.

The organic allotment of radios in a Soviet rifle division is a little over 10 percent of that of the United States infantry division; radio being used as an auxiliary to wire principally in command and artillery fire control nets. Several types of portable and mobile radio sets are used, including walkie-talkie and frequency-modulated sets.

In Soviet tank and mechanized units, the allotment of radios is about 30 percent of that of similar United States units, all tanks and self-propelled vehicles being equipped with transmitters and receivers.

Wire Equipment

Field Telephones. The basic type of telephone instruments now used is the so-called UNA type. They consist of phonic instruments UNA-F-28 and UNA-F-31 used by the regiment, battalion and company, and induction instruments UNA-I-28, UNA-I-31, UNA-I-42, and UNA-I-43 used by higher headquarters.

Switchboards. The Soviet Army still retains some early switchboards of European design, although most of the types now used are of Soviet manufacture.

Telegraphs and Teletype. A line field telegraph unit is used in conjunction with field telephones. Field telephones are fitted for buzzer communication and are probably used widely as a substitute for the telegraph at lower echelons. Above corps level, tape recorders of the Hughes or Baudot types are used. In areas farther to the rear, Soviet-built teleprinters, copies of the Schoren and the Treme, are utilized.

Line Equipment. In infantry units, wire is the primary means of signal communication in all except mobile situations. All-wire circuits are used for major circuits. Telegraph is used extensively for routine signal traffic at division and higher level. Teleprinters are used by armies and army groups. Except in extremely mobile situations, only wire communications are maintained with the rear services and installations.

While the organic wire facilities of the Soviet rifle division are only slightly greater than those of a United States infantry division, they are heavily reinforced for operations.

The standard field wire has two copper and five steel strands with rubber and fabric insulation.

Open wire is used above corps level. It may be copper of 2.1, three, or four millimeters, or, more commonly, iron of three or four-millimeter diameter.

Other Means of Communication

Several different types of signal lamps are widely employed throughout the Soviet Army. Heliographs also are used. In addition to signal lamps, the Sovietsalso employ signal panels, rockets, flares, and aural devices such as whistles and sirens as signal expedients. Pigeons are considered an extremely valuable means of signal communications. They are used in the more temperate regions of the Soviet Union, but not in the Arctic regions, as they are unable to withstand prolonged exposure to low temperatures. In addition to their use for psychological warfare, public address systems are also employed in the command posts of regiments and higher units connected with the command net.

MINES - GENERAL

In the past, war mines of all types were used by the Soviet Army. Every conceivable method of employing mines was utilized. The majority of the types used were improvised, but standard types of mines in all categories have been perfected and are consididred to be standard equipment. Mines of all sizes, shapes, weights, materials of construction, type of explosive, type of igniter, with and without booster charges, were employed. Methods of detonation included, in addition to the standard pressure and pull igniters, clockwork igniters, chemical igniters, vibration igniters, and remote-controlled radio igniters. Material of construction included steel, wood, plywood, plastic, cardboard, asphalt and glass. Often a combination of igniter devices was used in the same mine which made handling or removing the mine a delicate problem. The Germans found that the wisest means of dealing with Soviet mines was to blow them in place when encountered.

The Soviets handle mines boldly and cleverly. However, for antitank work, they depend more upon the antitank weapons for the actual destruction of armored vehicles, with the mines used to channelize the direction of attack into the range of antitank weapons.

Among the defensive measures advocated by the Soviet Army, and used by them with success, is the immediate laying of defensive minefields, once an objective is occupied. During World War II, the Soviets made use of hasty minefields as a defense against quick counter-attack much more freely than did the other Allied armies.

Planning for minefield defense systems begins before the operation takes place. Vital avenues of approach are surveyed, and special engineer formations are attached to infantry troops solely for the purpose of laying mines in these areas and along the flanks of the attacking force. These mine laying sections accompany the first echelons of attacking infantry, and carry their equipment along with them on sleds. The sleds may be towed behind tanks, or pulled by the troops themselves.

Each mine-laying team is assigned a mission in advance. Some sections mine the vital avenues of approach, some the flanks of the position, and some are held in close reserve to lay mines in the path of attacking enemy tanks.

The actual laying of the mines begins the moment that the position is occupied, and continues, even under heavy enemy fire, until adequate barriers to attack have been laid. Quite often, the Soviet engineers lay electrically-controlled mines, thus permitting their own troops to move forward again through their own minefields, without the necessity of removing the mine.

The trend in the development of mines by the Soviets will be toward the improvement of existing types, the perfection of non- detectable mines (non-metallic), and the development of induction igniters. Several types of mines that were used most successfully during World War II have been adopted as standard by the Soviet Army.

In addition to the standard mines listed here, information received indicates that the Soviet Army is using or contemplates using the principal types of standard German mines used during World War II. Following is a list of standard German mines which may be employed by the Soviet Army.

Tellermine 35
Tellermine 42
Tellermine 43

Wooden Box Mine (Holzmine 42)
Riegelmine 43 (R. Mi. 43)
S. Mine 35 (S. Mi. 35)
S. Mine 44 (S. Mine 44)

Antitank Mines

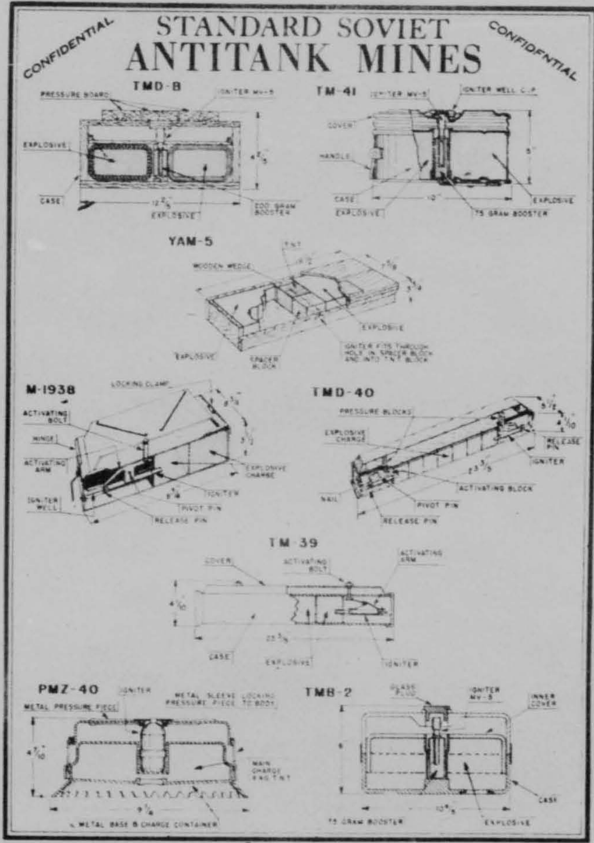
The early days of World War II found the Soviet Army equipped with a number of models of metal-case antitank mines. These included the TM-35 and its later version, the M-1938, which were simple metal boxes filled with block explosives and employing the old model UV pull igniter. The designs of both these mines were abandoned in favor of the TM-41 antitank mine, which contained a cast explosive and the new MV-5 pressure igniter, which made this mine operationally more reliable and safer to use than its predecessors. The TM-39, also used during the early days of the war, was replaced by a later and improved model of the same type, the TMD-40. The TM-39 was a long, rectangular-shaped, sheetmetal box mine using one UV or MUV pull igniter which was activated through lever action by pressure applied to the cover of the mine case.

The Soviets, to facilitate increased production by following simple designs and using materials available in quantity, commenced production of the YAM series of wooden box antitank mines of which the YAM-5 proved to be the most successful.

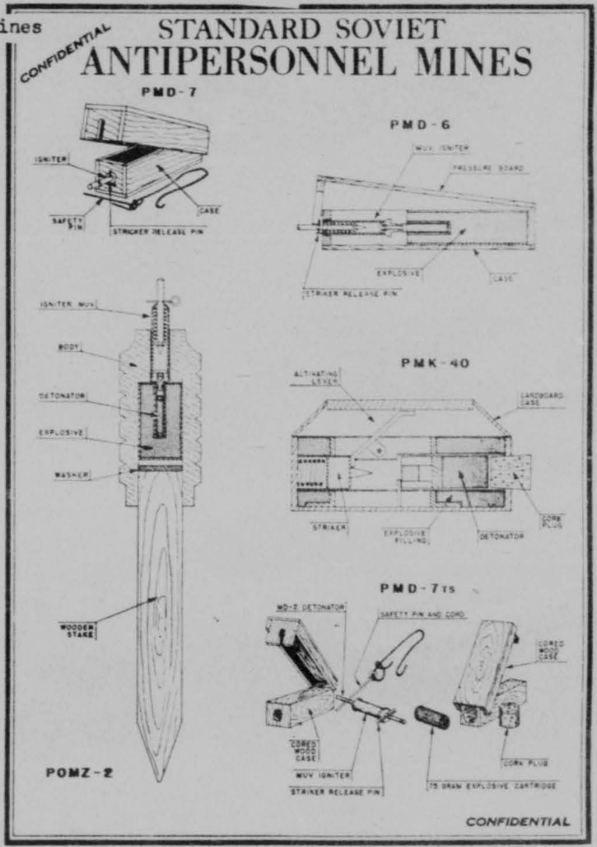
A new model, the YAM-10, is now in production. Its chief advantage over other mines in this series is that it contains 22 pounds of explosive, approximately 10 pounds more than the next larger Soviet mine.

The Soviets, wishing to produce a compact steel-cased mine which could be transported and employed more safely than any mine produced previously, designed the PMZ-40, which had a separately transported igniter, the MV-3, However, because it required a special igniter which could not be used interchangeably with the common igniters, MV-5 and MUV which were used in all other Soviet mines, the PMZ-40 was not produced in quantity.

The latest type wooden box mine used during the war was the TMD-B, which contained an increased amount of explosive and was the first wooden mine to employ the now highly reliable MV-5 igniter. To eliminate enemy detection as much as possible, the TMB-2 antitank mine was produced with a bitumen impregnated cardboard case. The only metal in this mine was the MV-5 igniter.


CONFIDENTIAL
STANDARD SOVIET
ANTITANK MINES
CONFIDENTIAL
TMD-B
PRESSURE BOARD
IGNITER MV-5
EXPLOSIVE
4 2/5"
CASE
12 2/5"
EXPLOSIVE
200 GRAM BOOSTER
TM-41
IGNITER MV-5
IGNITER WELL C.P.
COVER
HANDLE
5"
CASE
EXPLOSIVE
10"
75 GRAM BOOSTER
EXPLOSIVE
YAM-5
T.N.T
WOODEN WEDGE
7 5/8
3 1/4
EXPLOSIVE
IGNITER FITS THROUGH HOLE IN SPACER BLOCK AND INTO T.N.T. BLOCK
EXPLOSIVE
SPACER BLOCK
M-1938
LOCKING CLAMP
ACTIVATING BOLT
HINGE
ACTIVATING ARM
IGNITER WELL
3 1/2
EXPLOSIVE CHARGE
IGNITER
PIVOT PIN
RELEASE PIN
TMD-40
PRESSURE BLOCKS
EXPLOSIVE CHARGE
5 1/2
4 1/10
RELEASE PIN
IGNITER
23 3/5
ACTIVATING BLOCK
NAIL
PIVOT PIN
RELEASE PIN
TM-39
COVER
ACTIVATING BOLT
ACTIVATING ARM
4 1/10
23 3/5
CASE
EXPLOSIVE
IGNITER
PMZ-40
IGNITER
METAL SLEEVE LOCKING PRESSURE PIECE TO BODY
METAL PRESSURE PIECE
4 7/10
MAIN CHARGE 4KG T.N.T
9 3/8
METAL BASE & CHARGE CONTAINER
TMB-2
GLASS PLUG
IGNITER MV-5
INNER COVER
CASE
10 4/5
75 GRAM BOOSTER
EXPLOSIVE

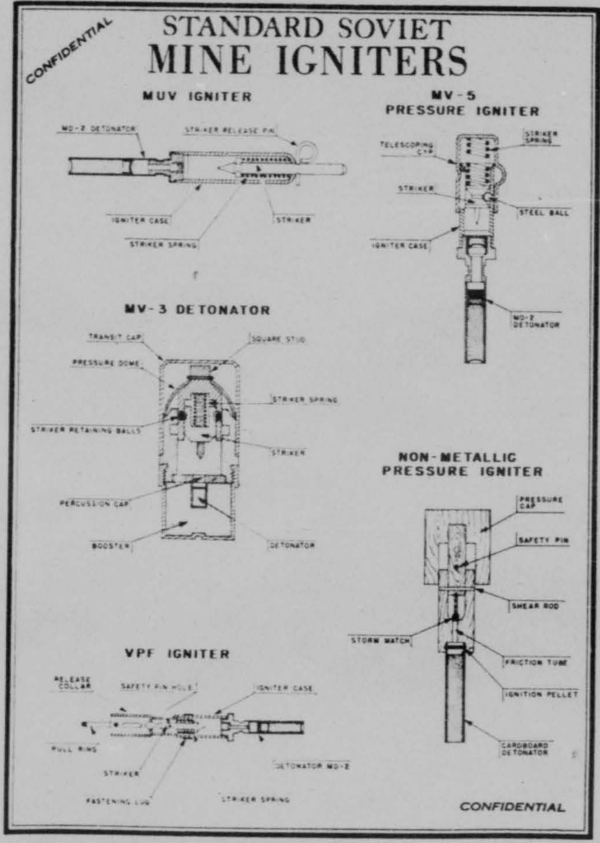
Antipersonnel Mines


CONFIDENTIAL
STANDARD SOVIET
ANTIPERSONNEL MINES
PMD-7
IGNITER
SAFETY PIN
STRIKER RELEASE PIN
CASE
PMD-6
MUV IGNITER
PRESSURE BOARD
EXPLOSIVE
CASE
STRIKER RELEASE PIN
IGNITER MUV
BODY
DETONATOR
EXPLOSIVE
WASHER
WOODEN STAKE
POMZ-2
PMK-40
ACTIVATING LEVER
CARDBOARD CASE
STRIKER
EXPLOSIVE FILLING
DETONATOR
CORK PLUG
PMD-7TS
MD-2 DETONATOR
SAFETY PIN AND CORD
CORED WOOD CASE
CORED WOOD CASE
MUV IGNITER
STRIKER RELEASE PIN
75 GRAM EXPLOSIVE CARTRIDGE
CORK PLUG
CONFIDENTIAL

The Soviets have only a limited number of types of standard antipersonnel mines, the majority of antipersonnel devices being in the nature of booby traps, which are largely improvised. The first antipersonnel mines to appear during World War II were the PMD-6 small wooded box mine and the POMZ-2 shrapnel stake mine. Both of these appear to have been patterned after standard German antipersonnel mines. Later versions of the PMD-6 were the PMD-7 and the PMD-7ts, which were much smaller than the PMD-6 and contained only 75 grams of explosive.

The smallest operational antipersonnel mine used by the Soviets was the PMK-40, called the "Shoe-Polish Can" mine because of its size and shape. All the standard Soviet antipersonnel mines employed the MUV igniter, with the exception of the PMK-40, which had a built-in igniter.

Mine Igniters


CONFIDENTIAL
STANDARD SOVIET
MINE IGNITERS
MUV IGNITER
MD-2 DETONATOR
STRIKER RELEASE PIN
IGNITER CASE
STRIKER
STRIKER SPRING
MV-5
PRESSURE IGNITER
TELESCOPING CAP
STRIKER SPRING
STRIKER
STEEL BALL
IGNITER CASE
MD-2 DETONATOR
MV-3 DETONATOR
TRANSIT CAP
SQUARE STUD
PRESSURE DOME
STRIKER SPRING
STRIKER RETAINING BALLS
STRIKER
PERCUSSION CAP
BOOSTER
DETONATOR
NON-METALLIC
PRESSURE IGNITER
PRESSURE CAP
SAFETY PIN
SHEAR ROD
STORM MATCH
FRICTION TUBE
IGNITION PELLET
CARDBOARD DETONATOR
VPF IGNITER
RELEASE COLLAR
SAFETY PIN HOLE
IGNITER CASE
PULL RING
STRIKER
DETONATOR MD-2
FASTENING LUG
STRIKER SPRING
CONFIDENTIAL

The Soviets employ several types of igniters in their mines and explosive charges. Standard types include: The MUV (Modernized Simplified Igniter) pull igniter; the MV-5 pressure igniter; and the VPF pull and tilt igniter. All of these are made of metal, have spring-actuated strikers, and use the MD-2 detonator as an integral part of the igniter.

A wide variety of special types of igniters used by the Soviets include: Time-delay types, operated by chemical action; vibration igniters, which are activated by passing vehicles; electrical igniters, operated by the closing of an electrical contact; and clockwork igniters, which detonate a mine after a predetermined period has elapsed. Many models of each of these types exist in the Soviet Army.

2079

CAVALRY

General Tactics

In Soviet terminology, cavalry means horse cavalry. The cavalry arm is numerically of relatively secondary importance now, but cavalry is still considered to be a powerful force for decisive operations in suitable terrain. Cavalry doctrine takes into account the special capabilities and vulnerability of horse cavalry and envisages cavalry units as balanced combat teams with adequate supporting elements. Large units, a corps and more, were used during World War II in making flanking and enveloping attacks. Sizable forces made raids through more lightly held sectors of the enemy line deep into enemy rear areas. The Soviets also employed small cavalry units for reconnaissance purposes.

Organization

1. Cavalry Corps. - The Cavalry Corps is the normal operating cavalry formation and consists of three cavalry divisions, two to four tank regiments of 41 tanks each, a medium self-propelled artillery regiment, a motorized tank destroyer artillery regiment, a motorized heavy mortar regiment, a rocket battalion, and supporting arms and services. A cavalry corps has sufficient organic transport to maintain all of its components for 5 or 6 days of moderate combat.

2. Cavalry Division. - The Cavalry Division normally forms a part of a cavalry corps. It may be independent. A cavalry division is a formation which is designed to perform one phase of an operation, such as an encirclement, pursuit, or a raid. A cavalry division consists of headquarters, three cavalry regiments, a mortar-artillery regiment, a light antiaircraft artillery battery, and supporting arms and services. It lacks the antitank battalion normally found in other formations of comparable size. Its mortar-artillery regiment is singular in that it has no battalion organization, and that it consists of three 76mm batteries, and two 120mm mortar batteries. Services of the cavalry division are small. Its maintenance and resupply facilities are sufficient to maintain it for only 1 to 2 days of moderate combat. It has no replacement pool.

3. Cavalry Regiment. - The cavalry regiment is normally a part of a cavalry division. However, cavalry regiments may be attached to other formations for reconnaissance, or they may act as independent units for specific missions such as night raids. A cavalry regiment consists of headquarters, four cavalry squadrons, and supporting arms and services. The proportion of cavalry proper to the supporting arms and services is less than 50 percent, a much smaller ratio that the proportion of infantry to other arms and services in a rifle regiment. A cavalry regiment is strong in automatic and antitank weapons. In comparison to a rifle regiment, it is weak in mortars.

The USSR is reported to have produced in quantity the following chemical agents:

Mustard Gas

Nitrogen Mustards

Lewisite

Adamsite

Phosgene

Diphosgene

Phosgene Oxime

Hydrogen Cyanide

Chloracetophenone

Diphenylchorarsine

Cyanogen Chloride

Chloropicrin

Knowledge of the new, highly toxic German nerve gasses acquired during World War II has undoubtedly resulted in studies of these compounds from the standpoint of manufacture, dissemination and protection. These nerve gasses are extremely toxic, synthetic organic chemicals which have great potentialities as chemical warfare agents. The United States-British designations GA, GB and CD have been applied to the German compounds whose names were Tabun, Sarin and Soman.

Soviet chemical warfare strategy, appears to be retaliatory in nature. All reports indicate that the USSR was prepared to wage chemical warfare had she been attacked with gas, but that the Soviet leaders did not attach sufficient strategic value to gas to justify the initiation of gas warfare. Soviet practices for the dissemination of chemical agents will probably include the use of modern artillery, mortar, and small-arms projectiles, tactical rockets, hand and rifle grenades, burning-type candles, aerial bombs, aircraft spray tanks, portable and mechanized chemical agent sprayers, land mines, and possibly guided missiles. Regarding the latter, however, it should be noted that such weapons will probably be capable of efficiently transporting and disseminating clustered incendiary munitions before they can be developed as economical gas warfare projectiles.

TRANSPORT VEHICLES

In 1947 the following vehicles were believed to comprise the range for post-war military purposes.

Truck GAZ-67 - Soviet version of U.S. "jeep". Believed fitted with Ford-type engine.

Truck GAZ-AA - (4x2) Based on Ford Model A.

Truck GAZ-51 - (4x2) Based on Ford 6-cylinder. Known to be used as prime mover for 57mm AT gun M1943, new AT gun (76 or 85mm), and 76mm field gun M1942. Carries a crew of two men in cab plus twelve men in cargo space.

Truck GAZ-63 - (4x4) Is to be the future standard truck of the Soviet Army. Based on Ford 6-cylinder.

Truck ZIS-5 - (4x2) Based on Autocar.

Truck ZIS-150- (4x2) Based on Autocar. 6x6 truck and bus to be designed with this chassis and engine.

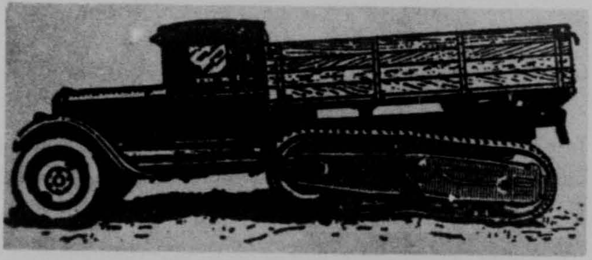
Truck ZIS-253 Diesel (4x2) Based on Autocar with GM Diesel engine. A 6x6 truck and bus to be designed with this chassis and engine. Status of production unknown.

HALF-TRACKS

The Soviets have few half-tracked vehicles, in the strict sense of the term. Such types as are known are of prewar origin and obsolete in design. The most widely used has been a modification of the ZIS-5 truck, known as the ZIS-33. This consists of a standard truck fitted with a cross-country attachment composed of a track, driving sprocket, return roller, and two small bogie wheels.

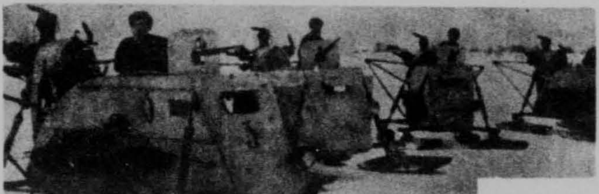
During World War II, Soviets depended on full-tracked vehicles, therefore, the future of the half-track is obscure.

V-Z Half Track

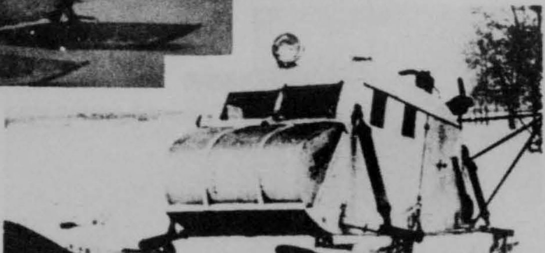


SELF-PROPELLED SLEIGHS

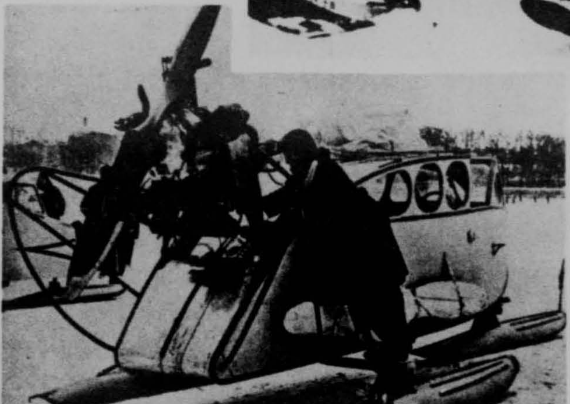
The Soviets appear to have devoted considerable attention in the past to the development of self-propelled sleighs for use in the colder areas of the USSR. These vehicles have lightly constructed, full-enclosed bodies mounted on either three or four runners. Power is supplied by aircraft engines, usually mounted at the rear. Certain of these sleighs have lightly armored bodies and carry one or more machine guns, being designed for cavalry or reconnaissance roles. Other vehicles are used for the transportation of supplies, or the evacuation of wounded. It is reported that speeds of 20 to 30 miles per hour may be attained with loads of from 1,500 to 2,000 pounds.



Lightly Armored Sleigh



Transport Sleigh



Utility Sleigh

LOGISTICS

The combat supply system (Chart - Bottom of Page) of the Soviets during World War II was efficient and economical. Its essentials would probably be duplicated in a future war. Moreover, now that allotments of motor vehicles to units have been greatly increased, the system of higher unit distribution of supplies and equipment may be amended to allow for units below army transporting their own supply requirement.

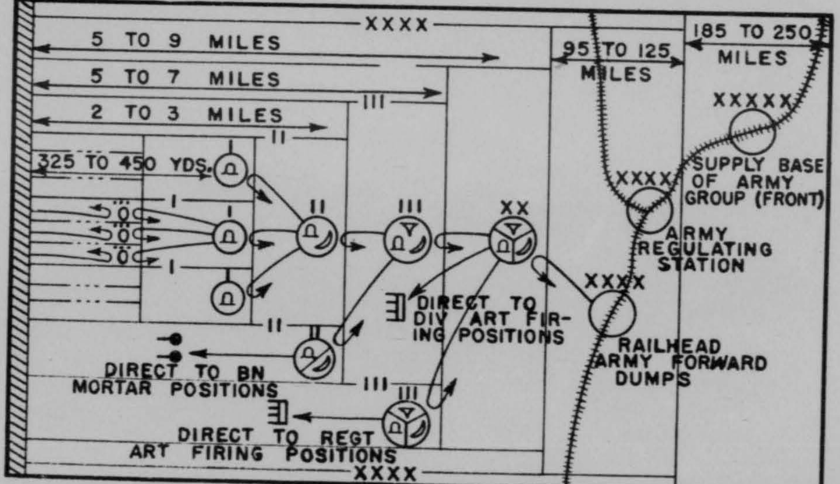
Supply of units and organizations in the combat zone was organized as follows:

Factories or central storage depots supplying combat echelons, shipped equipment and supplies to front (army group) depots, which were normally located in the vicinity of rail-heads, behind the rear boundary of the command. These depots were large, semi-permanent installations containing several days supply.

From front depots, materiel was sent to army field depots located at various railroad stations in the rear of the Army zone, anywhere from 95 to 125 miles from the fron line. The army depots usually maintained stocks of 1 unit of fire, 3 to 4 rations, and 2 refills of fuel and lubricants for the army, although reserves were increased if protracted offensive operations were in prospect.

Motor transport battalions and companies moved supplies forward from army supply bases.

Supply channels of Soviet Army Regiments, Divisions, Armies and Army Groups (Fronts).


XXXX
5 TO 9 MILES
5 TO 7 MILES
III
2 TO 3 MILES
II
325 TO 450 YDS.
I
I
I
I
II
III
XX
II
II
III
III
DIRECT TO BN MORTAR POSITIONS
DIRECT TO DIV ART FIRING POSITIONS
DIRECT TO REGT ART FIRING POSITIONS
XXXX
95 TO 125 MILES
185 TO 250 MILES
XXXXX
SUPPLY BASE OF ARMY GROUP (FRONT)
XXXX
ARMY REGULATING STATION
XXXX
RAILHEAD ARMY FORWARD DUMPS

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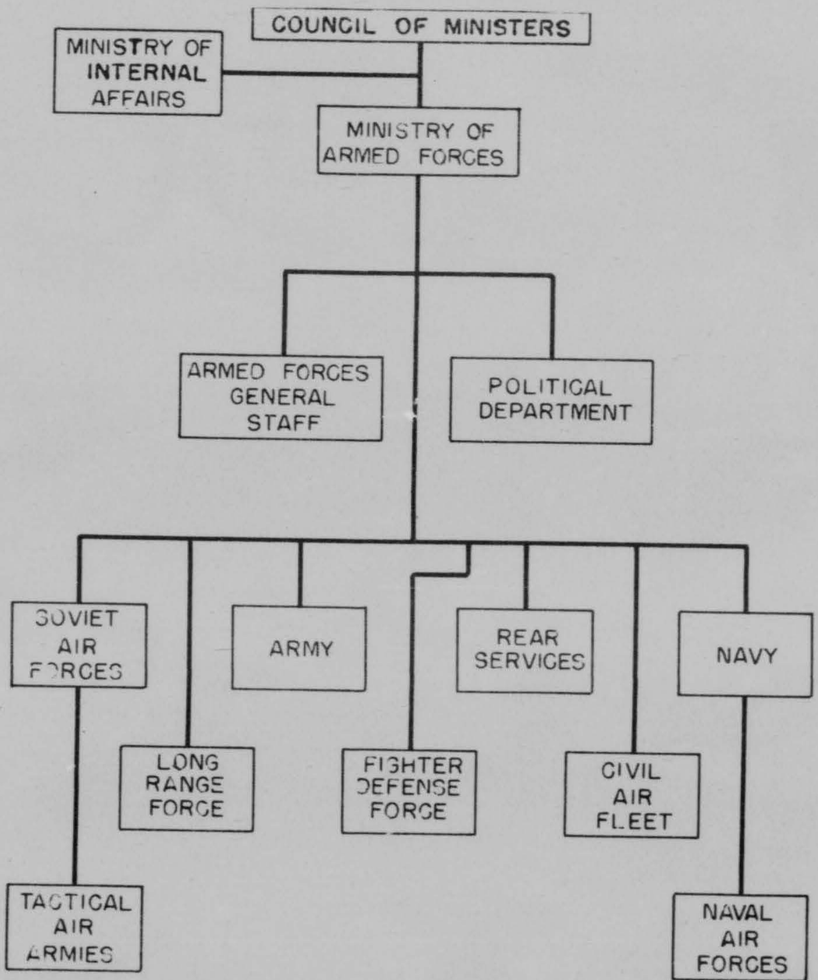
TOP-LEVEL ORGANIZATION

POSITION OF AVIATION HEADQUARTERS IN THE GOVERNMENTAL ORGANIZATION OF THE USSR


COUNCIL OF MINISTERS
MINISTRY OF INTERNAL AFFAIRS
MINISTRY OF ARMED FORCES
ARMED FORCES GENERAL STAFF
POLITICAL DEPARTMENT
SOVIET AIR FORCES
ARMY
REAR SERVICES
NAVY
LONG RANGE FORCE
FIGHTER DEFENSE FORCE
CIVIL AIR FLEET
TACTICAL AIR ARMIES
NAVAL AIR FORCES

THE SOVIET AIR FORCE

The Soviet Air Force is the largest and most important of the five air agencies (The Long Range Force, The Fighter Defense Force, The Naval Air Force and The Civil Air Fleet), under the Ministry of Armed Forces. Tactical Air Armies, the major operational commands of the Soviet Air Force, correspond in many ways to the tactical air forces of the United States Air Force. Typically, each one is composed of two or more air corps, each corps being composed of two or more air divisions (normally three), with each division usually consisting of three air regiments. All units, up through the air corps, are generally homogeneous, that is, entirely fighter, bomber or attack. Most air armies, in addition, usually control some independent reconnaissance regiments, and occasionally have integral air transport.

Soviet Air regiments are the largest flying units with fixed tables of organization and equipment. They are, however, smaller than the United States Air Force group. A fighter or attack regiment has 42 aircraft, as against 75 in the American group. A bomber regiment has 32 aircraft as against the 48 aircraft of an American A-26 group. By way of further comparison, wartime fighter groups of the USAF called for 952 personnel, and a Soviet fighter regiment at full strength has only 235 men.

This disparity between the two nations in the aircraft-to-personnel ratios of the tactical air units is explained in part by the Soviet logistic and engineering systems - both of which are handled mainly by agencies separate from the tactical organizations.

THE LONG RANGE FORCE (18th AIR ARMY OR ADD)

During World War II, the Long Range Force never did become a true strategic air arm. What slight capabilities it did develop for strategic aerial action were never adequately utilized. No strategic purpose was evident in its operations. Some haphazard night bombing of a few cities, possibly designed to demoralize the civilian population and accomplish some degree of industrial dislocation, was undertaken, but gains were negligible.

At present, The Long Range Force is probably composed of several regional commands or air armies instead of a number of air corps, as it was at the defeat of Germany. It apparently is being re-equipped with B-29 types and capabilities for strategic operations are undoubtedly on the upswing. Although the lack of wartime experience in strategic warfare has a retarding effect on the speed of current developments, a serious attempt is assuredly being made to improve tactics and technique and to equip crews with more suitable aircraft and modern auxiliary air equipment.

THE FIGHTER DEFENSE FORCE

The defense of important political and economic areas under the USSR rests primarily with the Fighter Defense Force. It is a well-integrated organization which maintains administrative and operational control over interceptor fighter aircraft, air warning nets, AAA and subsidiary installations.

The basic unit of the Soviet Fighter Defense Force is the Air Regiment and consists of four squadrons. There is a probable aircraft establishment of 12 operational and two training aircraft per squadron, and Regiment Headquarters has a further six aircraft for its own use. The fourth squadron is a training and reserve squadron to which newly arrived pilots are posted for final operational training.

THE NAVAL AIR FORCE

(See C 6, Navy)

THE CIVIL AIR FLEET

The importance of the Civil Air Fleet stems from the fact that in time of war its units, probably completely militarized, would provide the airlift required for airborne attack and the normal air transport of men and material incident to other military operations.

In the broadest sense, the Civil Air Fleet controls all non-military aircraft in the Soviet Union. It plans and supervises all civil air activities and controls and operates all non-military airfields. (Both as a scheduled and non-scheduled carrier, it handles large quantities of passengers and freight on a rapidly growing network of domestic and international air routes. Actually, it is the Soviet Union's state air line.)

Although most of its aircraft are DC-3 types, a more modern Soviet twin-engine model is now operational in small numbers, and production has been started on several new four-engine transports.

Normally, a civilian air organization, the Civil Air Fleet is organized along military lines and is similarly run. It is believed to cooperate closely with a planning agency of the Ministry of Armed Forces known as the Air Force of the Air-borne Forces. The obvious purpose of such practices is to facilitate the rapid and painless utilization in wartime of the Soviet air transport force for primarily military functions.

TACTICAL ORGANIZATION

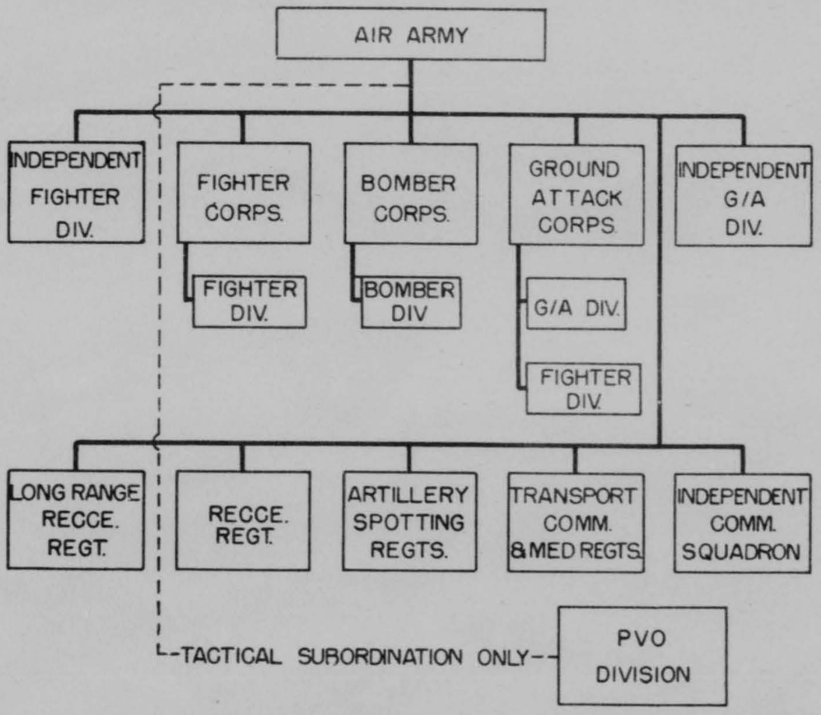
AIR ARMY

The organization and strength of an Air Army varies in accordance with its assigned task and the scope of its operations. No two Air Armies are of the same size and composition; this concept permits flexibility of function to Air Armies assigned to different fronts. It is no longer certain that in the event of hostilities, each air army will be directly subordinated to the commander of the front to which it is assigned.

Command of an Air Army consists of the Commanding General and four deputies - Chief Deputy, Deputy for Political Affairs, Deputy in Charge of Engineering and Technical Affairs and Deputy for Rear Services. Six other officers serving as assistants to the Commander but exercising very limited command powers are the Chief of Staff, who directs the work of the operational staff, which includes the Operations Department, Intelligence Department, Signals and Communications, Personnel, Cryptography, Meteorology and Chemical Warfare; the Director of Navigation; the Inspector of Flying Training and Aviation; the Director of Aerial Gunnery; the Medical Officer; and the Director of Movements of Personnel and Assignments.

Primary functions of an Air Army, other than the 18th, include participation in preparation for ground attacks, immediate support of attacking ground troops by attacks against the front line or against targets either out of range of artillery or which cannot be observed from the ground, and support of troops which have effected a break-through.

FLYING FORMATION OF A SPECIMEN AIR ARMY


AIR ARMY
INDEPENDENT FIGHTER DIV.
FIGHTER CORPS.
BOMBER CORPS.
GROUND ATTACK CORPS.
INDEPENDENT G/A DIV.
FIGHTER DIV.
BOMBER DIV
G/A DIV.
FIGHTER DIV.
LONG RANGE RECCE. REGT.
RECCE. REGT.
ARTILLERY SPOTTING REGTS.
TRANSPORT COMM. & MED REGTS.
INDEPENDENT COMM. SQUADRON
TACTICAL SUBORDINATION ONLY
PVO DIVISION

An air corps in the Soviet Air Force is a staff organization controlling both the operations and administrative procedures of two or more divisions. During the war, air corps were created for the purpose of establishing a mobile reserve and providing a means of committing newly formed units. An Air Army requiring reinforcements in an active sector would be assigned one or more complete air corps. As the war progressed, the corps took on a more permanent form. Initially, an air corps headquarters was temporarily assigned to an Air Army, later becoming a permanent fixture.

From the standpoint of operations, it matters little whether the air corps headquarters is a permanent one under the Air Army or one merely subordinated tactically to the Air Army for a limited time and a specific purpose. Effective liaison with the ground army or corps being supported is perhaps the most important task of the air corps.

The Soviet Air Force designates its air corps as fighter, bomber or ground attack types. Originally, there were a number of mixed air corps composed of divisions of different types, but this practice ceased at the close of World War II. Within the past year, however, mixed air divisions have reappeared in some areas.

The air corps headquarters staff closely resembles that of an air army, and is organized on the same basis as a staff of an air division, except that the air corps sections are generally larger. The corps commander has a General Deputy, a Deputy for Political Affairs, and a Deputy in Charge of Engineering and Technical Affairs. All operational departments are under the control of the Chief of Staff and directly subordinate to the Commanding General are the Inspector of Flying Training and Efficiency, the Director of Aerial Gunnery, the Senior Sturman, the Chief of Supply, the Medical Officer, and the Director of Movements of Personnel and Assignments.

AIR DIVISION

The air division is a tactical organization of two or more air regiments assigned either to an air corps or operating directly subordinate to an Air Army. The air division does not operate independently but receives its operational orders from its corps headquarters or the Air Army. Principal responsibility of the divisional commander is to effect liaison with the particular army ground units to which support is to be given.

The Soviet Air Force includes fighter, ground attack, and bomber divisions. Fighter and bomber divisions are almost invariably homogeneous. Normally, a division includes only three regiments, but divisions with four or five regiments have been identified occasionally.

AIR REGIMENT

Air Regiments are the largest units in the Soviet Air Force, with a fixed establishment, and correspond closely to the USAF combat group, though smaller in personnel and number of aircraft. Most of the Air Regiments of the Military Air Force are subordinate regiments, and, at present, regimental organization is believed to be as follows:

Fighter Regiment - Three squadrons. (A fourth training squadron may now have been added) 350 officers and enlisted men. 43 aircraft, usually all of the same type.

Ground Attack Regiment - Three squadrons. 250 personnel. 42 aircraft.

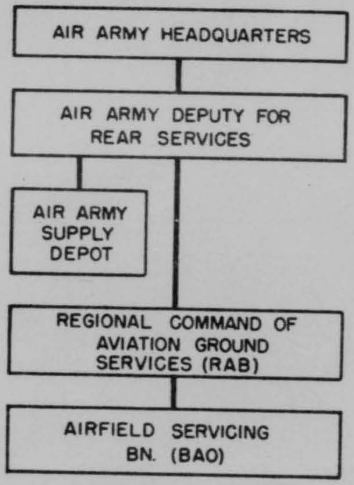
Bomber Regiment - Three squadrons. Usually 350 personnel, though T/Os differ. 32 aircraft.

Independent Regiments - Reconnaissance. (No fixed establishment). Artillery spotting (T/O not known.) Transport, communications and medical. (Usually four or six squadrons of 18 or 20 aircraft each.)

GROUND SERVICE ORGANIZATION - GENERAL

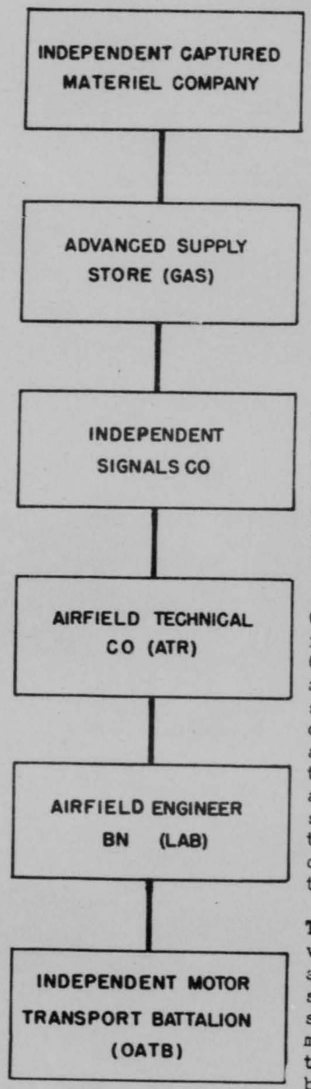
Consideration is given here only to those organizations which service flying units in the field. The main weight of responsibility for supply service to flying units is borne by the Regional Commands of Aviation Ground Services (RAB), and the Aircraft Repair Base (PARB) is the unit responsible for the repair service to flying units.

Supply Service


AIR ARMY HEADQUARTERS
AIR ARMY DEPUTY FOR REAR SERVICES
AIR ARMY SUPPLY DEPOT
REGIONAL COMMAND OF AVIATION GROUND SERVICES (RAB)
AIRFIELD SERVICING BN. (BAO)

RAB is a headquarters unit having administrative allocation of supplies control over subordinate units in a prescribed subdivision of an Air Army area. The number of RABs in an Air Army area varies, the average number being 5.

An average of 11 BAO's per RAB. It is subordinate to RAB for administrative and technical matters, but for operations it is subordinate to the commanding officer of the flying unit serviced. Its mission includes casual maintenance of air-fields, furnishing fuel, homes, ammunition, etc., guarding of air-fields and camouflage, provision of transport and transfer of units, weather services, 2 or 3 air regiments. Each BAO has a number of stores, but these hold supplies for only five days and are restocked by the advanced supply stores. (GAS)


INDEPENDENT CAPTURED MATERIEL COMPANY
ADVANCED SUPPLY STORE (GAS)
INDEPENDENT SIGNALS CO
AIRFIELD TECHNICAL CO (ATR)
AIRFIELD ENGINEER BN (LAB)
INDEPENDENT MOTOR TRANSPORT BATTALION (OATB)

Organized into two platoons and a demolition group. Very little is known of the work of such units, but is is believed that their main tasks are probably connected with the location, inspection and removal of both captured enemy air force materiel and damaged Soviet Air Force equipment.

Main function of the GAS is to obtain supplies exclusively designed for use of air units and to furnish them as needed to units being serviced by the RAB.

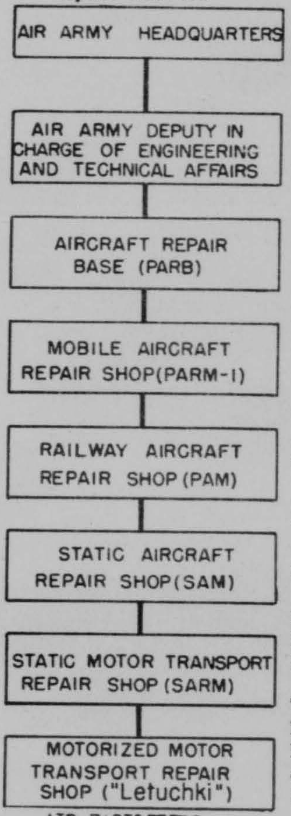
Attached on a basis on one (1) per division serviced. The Independent Signal Company is responsible for communications within the air regiment and between the units of ground organization.

Operationally, the ATR comes under the CO of the BAO, and for administration under CO of the RAB. Its mission is to carry out large scale repairs on airfield installations and to complete new airfields laid out by the Airfield Engineer Battalion. (IAB)

Only one IAB is attached to each RAB and is responsible for airfield construction. Civilians in the area of a project do the actual manual labor and the IAB does the specialized work incident to airfield construction. The IAB's also repair damaged airfields. It must be emphasized that planning with regard to the location and size of new airfields and the expansion of existing airfields is an operations function and, as such, remains under the direct control of commanders of tactical units.

This organization is responsible for providing motor transport for all transfers and large scale moves of units. It consists of two transport companies and one special motor transport company, plus one motor transport repair shop. As routine transport of supplies is the responsibility of the BAO, the OTAB can be regarded as a permanent reserve attached to the RAB for special transport tasks.

Repair Service


AIR ARMY HEADQUARTERS
AIR ARMY DEPUTY IN CHARGE OF ENGINEERING AND TECHNICAL AFFAIRS
AIRCRAFT REPAIR BASE (PARB)
MOBILE AIRCRAFT REPAIR SHOP(PARM-1)
RAILWAY AIRCRAFT REPAIR SHOP (PAM)
STATIC AIRCRAFT REPAIR SHOP(SAM)
STATIC MOTOR TRANSPORT REPAIR SHOP (SARM)
MOTORIZED MOTOR TRANSPORT REPAIR SHOP ("Letuchki")

A PARB is usually attached to an air division through which it controls its three to five subordinate mobile aircraft repair shops. The PARB is purely administrative in function.

Mobile aircraft repair shops are designated PARM-1 through PARM-5, the figure indicating the number of repair trucks included in the establishment. Each Air regiment ordinarily has one PARM-1, and although the PARM is subordinate to the PARB for administration and technical matters, it is subordinate operationally to the engineer of the air regiment. Main task of the PARM-1 is the execution of minor and running repairs which technicians of the air regiment are unable to handle. Routine servicing of the aircraft is the responsibility of technical personnel of the air regiment.

Consists of approximately 30 railway cars fitted as workshops. No other information is known of the unit.

One SAM ordinarily is assigned to each air army. The SAM is responsible for the repair of aircraft so badly damaged they cannot be handled by the PARM's.

Subordination is unknown, but the SARM's are believed responsible for major repair and overhaul of transport equipment.

The "Letuchki" are reportedly subordinate to the RAB and are attached for their work to BAO's. Each "Letuchki" is equipped with trucks fitted as workshops and presumably deals only with field repairs to motor vehicles.

AIR FACILITIES

Selection - Various reports indicate that the wartime policy of selecting a base airfield - where units are serviced, refueled, and re-armed and then to disperse to a satellite, is still in effect. With supplies concentrated at the base airfield, and an abundance of satellite landing grounds available, the units are then free to make frequent and rapid changes of location.

Construction - During the war the Soviets had no construction equipment comparable to that available to the Western Powers, but they are experts at improvisation and allow no considerations to stand in the way of employment of labor. Virtually no use was made of pierced steel planking and other prefabricated surfaces. The sites chosen were always particularly suitable for airfield development.

OPERATIONAL PROCEDURES - GENERAL

As long as the Soviet Army retains its dominant position in the military hierarchy, it may be assumed that the Air Force will continue to put great emphasis on a tactical air force designed to furnish close support to the Army.

Mission of the Air Force:

Close support of the Army ground forces in all tactical operations. This function will continue to absorb a great portion of the Soviet aircraft and air personnel.

Strategic Bombing: This mission will become increasingly important as airborne weapons of greater power are developed and as the interests of the Soviets more openly assume a global aspect.

Air Defense: It is almost inevitable that the Air Force has assigned a high priority to the perfection of interceptor fighters and defense techniques.

Reconnaissance for the Army ground forces and for the Air Force.

Air lift for airborne troops, other military personnel, and critical military supplies.

Utility and liaison services.

FIGHTER FORCES

Missions (World War II)

During an offensive the principal missions were:

Patrols over enemy forward airfields.
Cooperation with ground forces, and especially with task and motorized units.
Aerial reconnaissance, both visual and photographic.

Secondary missions during an offensive were:

Escort for ground attack and bomber aircraft.
Free-lance patrols.

During defensive operations the main missions were:

Patrol flight and live patrols in the main battle areas.
Escort for ground attack aircraft.
Protection of own forward area.
Photographic and visual reconnaissance.
Free-lance patrols.

Bases - At the time of an advance, the main body of the front line fighter formation was based in a zone 18-20 miles wide, running parallel to and six miles from the main defense lines. The main fighter formation was disposed in accordance with the sectors designed for the projected offensive.

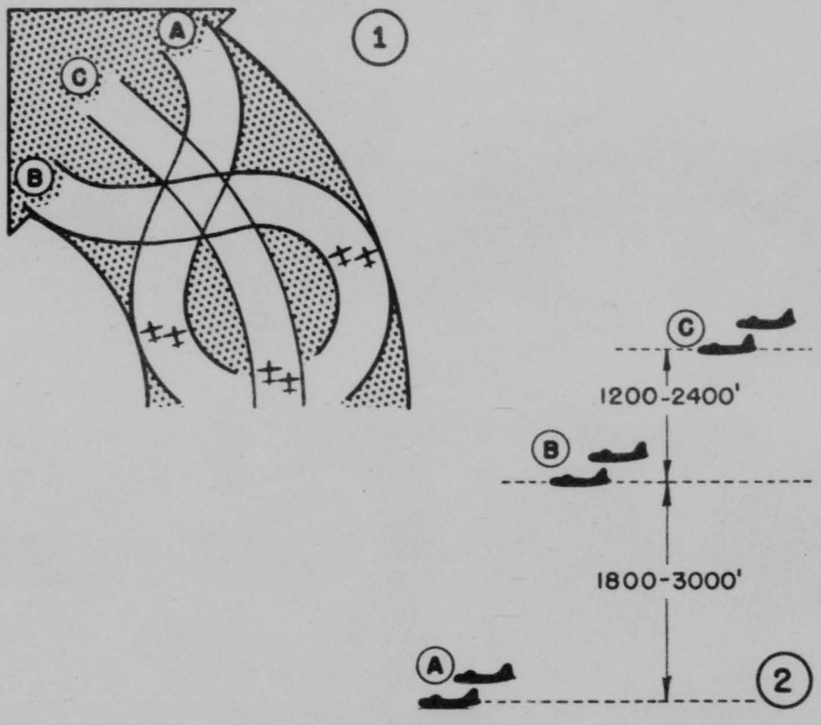
Tactical Formations

The basic tactical unit in the Soviet Air Force during World War II was the "PARA" or pair consisting of two aircraft.

The "GRUPPA" or group was the largest tactical air unit and usually consisted of six and sometimes eight aircraft.

The tactical nucleus of the GRUPPA was the "ZVENO" with four aircraft.

Typical Gruppa Formation



The following are examples of altitudes flown by fighter formations on patrol:

Operational Conditions	Heights
Slight enemy air activity	Constant change from 2,800 - 3,500 to 17,500 - 18,500 ft.
Strong enemy air activity or bad weather	Specific height allotted (e.g., 3,500 - 6,500 ft. or 10,000 - 15,000 ft.)
Expected attack by enemy ground attack aircraft	Range of heights between 2,000 ft. and 6,000 - 7,000 ft.
Expected attack by enemy bombers	Range of heights from 15,000 - 20,000 ft.

Radio Communications: It is fairly certain that radio sets were fitted in all fighter aircraft, but air-to-air and air-to-ground transmission was confined normally to the "GRUPPA" or formation leader. The ground control stations kept in touch with the "GRUPPA" and formation leaders only, and orders affecting any aspect of an operation, such as changes in task height, strength of sector, were passed to individual formation leaders by their "GRUPPA" or formation leader. Near the airfields were radar stations which had their own sector of the front to scan, and on picking up enemy aircraft they reported immediately to the aircraft standing by and to ground control stations which took over the control and vectoring of their own airborne aircraft. Towards the end of the war IFF apparatus was installed in a certain number of aircraft.

State of Readiness: A system for stand-to duty, incorporating a series of reliefs, was introduced in the air units committed to protection of the main battle areas. Four GRUPPAS alternated in doing stand-to duty, and, in practice, the system appeared to be as follows:

"State of Readiness 1"	Airborne on operations.
"State of Readiness 2"	On Airfield. Aircraft at full readiness. Pilots in aircraft.
"State of Readiness 3"	Aircraft ready. Pilots at airfield.
"State of Readiness 4"	Aircraft being serviced. Pilots in quarters.

Offensive Operations

Cover for Main Battle Areas - During critical situations, operations might tend to be of a prolonged nature, in which case, regimental GRUPPA's operated on a non-stop basis, as explained above in paragraph on readiness. Under normal conditions, a substitute rest interval of 10-40 minutes was given between the landing of one GRUPPA back from operations and the take-off of the next. Multi-layer cover was carried out for large scale operations, or when strong enemy air resistence or attack was experienced. With this type of operations, one sector of the main battle area was given simultaneous cover by several GRUPPAs of different regiments or divisions, the object being to insure complete sector area cover by the disposal of all engaged GRUPPAs at specially allotted heights.

Support of Aircraft covering Main Battle Area - The formations employed on this task were regarded as a reserve fighter force, and, although they patrolled over the actual battle area, the intention was that they should intervene only if the enemy's superiority over the close cover GRUPPAs became obvious. The patrol height varied between 17,000 and 20,000 feet. These formations operated only during an offensive and then mainly at the focal points of operations.

Cover of Forward Area - This operation was a precautionary measure against the contingency of enemy aircraft breaking through the air umbrella over the main battle area and was specially used during the preparation for an offensive. It included - 1) protection of forward airfields against enemy attacks; 2) protection of concentrations of ground troops; 3) protection of troop movements and supply lines; 4) protection of strategic targets such as bridges, river crossings, railway junctions, etc; and 5) interception of enemy reconnaissance aircraft. Cover of the forward area was effected independently of the cover of the main battle area, and embraced a zone 5-60 miles deep running back into friendly territory. Forward area sectors are, as a rule, 2 to 2 1/2 times larger than main battle area sectors. Patrolling above the sectors was carried out mainly by PARAs, unit flying heights determined by the ground control stations according to aircraft type and the height of the approaching enemy. The average height for patrolling was 8,500 to 13,500 feet, with a maximum of 20,000 feet. Aircraft detailed to intercept enemy reconnaissance aircraft usually flew at between 7,000 to 10,000 feet.

Cooperation with Ground Forces - Apart from the ever-present general tactical cooperation of the air force with the ground forces, there was, in addition, a series of special tactical methods belonging to a closer, more specialized form of cooperation. In such cases, fighter regiments and sometimes fighter divisions were tactically subordinated to different arms of the ground forces and proceeded to work with them independently of the general coordinated operations of ground troops and the air force. The control of these aircraft formations lay entirely in the hands of the ground forces to which the air force units were subordinated, and was exercised exclusively in the light of the tasks and interest of the ground forces. This method of cooperation related especially to collaboration with tank formations aiming at a break-through in depth. Fighters were tactically subordinated to tank formations in order to carry out reconnaissance on behalf of tank spearheads and to afford protection for tanks against enemy air attacks.

Reconnaissance For Tank Formations - Visual reconnaissance in the operational area of the tank units was carried out by one or more PARAs, usually during the early morning or in the evening, or in the case of fluctuating ground situation, several times a day. Data acquired from this type of reconnaissance was normally taken into consideration in preparing a tank attack on enemy formations, and the operation was always ordered by the tank unit commander. In addition, reconnaissance was also called for during an attack and went on continually. A tank spearhead was usually escorted by a PARA of fighters which maintained constant radio communication with the commander of the tank unit from whom the fighters received reconnaissance instructions. The area to be visually reconnoitered was that in which the attack by the tank spearhead was developing and all results were immediately transmitted to the commander of the tank unit. While the attack by the tank spearhead was developing, reconnaissance PARAs continually relieved one another in the air, and the tank spearhead was thus provided with a continuous reconnaissance service during the attack. The flying height of the reconnaissance PARAs varied from very low level up to 6,500 feet, depending on the reconnaissance objectives, visibility and AA opposition. Although reconnaissance PARAs were not escorted by fighters, they received a certain amount of protection from aircraft engaged in cover of the main battle area, or from tank protector fighter formations, and they could, of course, defend themselves against fighter attacks.

Other Aerial Reconnaissance - Nearly all fighter regiments carried out routine reconnaissance work in addition to their other responsibilities. This included reconnaissance of tank and artillery concentrations and movements, airfields, railway traffic, etc., in areas between 20 and 80 miles behind the frontal area, and, to a lesser degree, antiaircraft and antitank positions, troop concentrations, etc., in the battle zone. Weather reconnaissance was also undertaken.

Escort for Ground Attack and Bomber Aircraft - The following information on escort tactics deals with escort of ground attack aircraft. Escort of bombers is, however, believed to follow similar lines. Escort cover for ground attack aircraft is an important task of the Soviet fighters, and was provided for nearly all ground attack operations. The classic pattern for balance of strengths in escort cover was 1: 1 with the escort fighters split almost equally into two parts - The immediate escort and the assault group.

The immediate escort remained constantly near the ground attack aircraft, flying somewhat higher (300 to 1,000 feet) and slightly behind, in continued criss-cross flight, maintaining normal speed. These fighters entered the battle only when enemy fighters had broken through the forward assault group and were directly menacing the ground attack formation. Over the target they maintained their altitude and stood by just out of AA range to cover the attacking aircraft, resuming their original position for the withdrawal flight. Frequently, in the absence of enemy fighters, the immediate escort attacked AA positions or other ground targets with their own armament. Fighter bombers were sometimes used for the purpose.

The assault group flew 1,500 to 3,000 feet higher than the immediate escort, remaining either directly above the ground attack formation or half to three-quarters of a mile ahead, flying at top speed on a zig-zag course. The duty of the assault group was to prevent any enemy aircraft from reaching the ground attack formation. Frequently, one PARA was sent out well in advance to scout for enemy fighters, while another PARA remained in reserve at a higher altitude, taking full advantage of sun and cloud cover for surprise attacks when the enemy was met. Over the target, the assault group maintained altitude up to 10,000 feet, and patrolled the sky over a contracted area until the ground attack formation completed its duty.

Free Lance Patrols - In comparison with the other tasks of the Soviet Army fighter force, free-lance patrols were relatively rare, the reason being that the fighter types were not suitable for attacking ground targets.

Defensive Operations

Night Fighter Operations - Two methods of interception with the aid of searchlights were employed. The first consisted of merely directing the aircraft into the right area among the searchlights and AA fire. When the enemy aircraft passed out of range of the searchlights, the latter indicated the direction to the fighter by dipping several times. The other method was a system of visual beacons coupled with searchlights. During the approach, orange lights on the ground flared up vertically under the supposed enemy aircraft, and were extinguished again shortly after the aircraft had flown over. Near each orange light a small searchlight of low intensity pointed in the direction the aircraft was flying until the latter reached the next beacon zone. In addition, a more powerful searchlight in the distance showed the general direction in which the enemy aircraft was moving.

Sometimes fighters cooperated with other aircraft, which dropped flares in the path of the enemy bombers. The fighters then endeavored to sight the bombers against the flares.

There is very little information on the use of Soviet Airborne Radar equipment, but it is certain that Soviet fighters were vectored within a short distance of the enemy aircraft by ground control. The main organization of the ground control was on the British and American pattern, using "RUS", "MRU", and "Redut" radar sets and observer corps reports.

GROUND ATTACK FORCES

Missions

The ground attack forces were used practically continuously by the Soviet High Command to exert a constant pressure on the main enemy defense line. Consequently, the Soviets called these forces the "Air Infantry," and the ground attack pilots were "the people who do the toughest work in the war." A characteristic feature of the tactical use of the ground attack force was its almost complete independence of weather conditions, and only extremely unfavorable weather caused any interruption in operations.

In Offensive Operations:

Attacks against the main defense lines.
Attack on the enemy's forward area.
Cooperation with the ground forces.
Reconnaissance.
Attacks on enemy airfield.

In Defensive Operations:

Exerting continuous pressure on the enemy's main line.
Attacks on the enemy's forward area.
Reconnaissance.
Free-lance patrols against ground targets.
Attack on airfields.
Sorties "On Call".

Bases

The ground attack regiments were located in a belt approximately thirty miles deep, lying about fifteen miles from the front lines. Dispersal was not so marked as in the fighter force, and it was not unusual for two or three regiments to share the same airfield. Frequently, an airfield contained one ground attack regiment and one fighter regiment for escort purpose.

Tactical Formations

The ground attack units adhered chiefly to two kinds of formation - the echelon to port or starboard, and the blunt arrowhead formation, each of which might contain from four to eight aircraft. The formations adopted were remarkably elastic and permitted a full range of types of attack without loss of time for regrouping. Echelon formation required little maneuvering to become line abreast, line astern, or battle circle. The blunt arrow-head was not quite as elastic, and was, therefore used less frequently. In attacks on area targets, such as definite sectors of the front line, airfields, etc., the frontal run-up (aircraft in line abreast) was used, with the formations attacking in line abreast or in column at very short intervals. In addition, the battle-circle, formed by front-ally disposed formations, was used when several attacks were made on one target. In attacks on line targets (stretches of roads and railway lines, etc.) the aircraft usually attacked in line astern with practically no interval. The latter method was also used for attacking pin-point targets.

The strength of the formations and their intervals depended upon the nature of the sortie, weather conditions, targets, expected enemy reaction, etc., and varied from four to thirty-six aircraft. During continuous attacks by the ground forces on the main defense line simultaneous assaults were made by three or more formations of thirty to thirty-six aircraft each, followed by other similar waves at intervals. Steady pressure on the main defense line was supported by small formations of four to six aircraft, concurrent with mass attacks at break-through points. In defensive operations, steady pressure was maintained by formations of four to twenty aircraft, attacking at frequent intervals. Attacks on the enemy's forward area were carried out mostly by small formations of four to twelve aircraft, usually striking beyond their own artillery zones. Enemy airfields were attacked by formations of eighteen to thirty-six aircraft, sometimes followed by other similar waves.

Target Approach - In practice, approach heights were so variable that it is impossible to classify them. Towards the end of wartime operations the heights most frequently used were lower to medium (2,500 - 8,000 ft.) for the reasons that the numerical superiority of Russian fighters eliminated the necessity for very low level flying and the intensity and success of German light and medium AA artillery.

Low flying was used in some instances to maintain the element of surprise and to confuse the warning system as much as possible.

The run-up to the target was also varied to suit operational necessity such as types of target, caliber of bombs, etc. The aircraft did not alter formation on the run-up, except for a general tightening-up. The direction of the approach was usually predetermined by a previous reconnaissance, and took full advantage of sun, cloud cover, and terrain.

Execution of Attacks - Bombs were normally released at altitudes of 500-2,000 feet in a 30° glide and level-bombing was seldom done. Occasionally, targets were marked by means of a smoke bomb which was dropped by an aircraft assigned this special task. Against area targets, rockets were fired from 1,500-2,000 feet in a 30-45° glide, followed by cannon and machine-gun fire and bombs. Against armored vehicles in column or line, the aircraft armament was fired first, and then, if tracers showed the aim to be accurate, a salvo of rockets followed. The rocket projectiles and their use were similar to those of the Western Allies. The rocket sight was harmonized at 800 yards and the fixed guns at 400 yards. Rockets were not accurate enough to be particularly effective against pin-point targets, but were of immense psychological value.

Every ground attack formation contained a special sub-formation whose primary function was neutralization of enemy AA fire. These aircraft usually remained behind the larger formation and waited until the enemy opened fire before launching the attack. If, however, the AA positions were known exactly, the anti-flak formation did not wait, but flew in ahead of the main formation and opened fire. If the AA fire was successfully neutralized on the first attack, these units joined in the main attack on the targets. Escort fighters frequently assisted in attacks on AA positions, provided there was no air opposition.

Withdrawal - After attacking their targets, if there were no enemy fighters present, the first aircraft over the target reduced speed upon turning away, while those following increased speed, maintaining direction and climbing; if the enemy fighter attacks were expected, the "snake" formation was resorted to, whereby the leading aircraft maintained speed but flew a zig-zag course at tree-top level to enable the trailing aircraft to catch up; if attacked by fighters, the trailing aircraft endeavored to pair off and employ the "scissors" formation remaining close to the ground. If unable to pair off, each aircraft took violent evasive action, lost altitude, and attempted to overtake the formation. After clearing AA defense areas and reassembling, formation resumed its echelon or blunt arrow-head formation for the return flight.

Evasive Action - Evasion of enemy fire was accomplished primarily by variations of altitude and direction, and by exploitation of cloud-cover, haze and sun. When entering Zone of Fire, the evasion action was executed by increasing the distance between individual aircraft and also between sub-formations in conjunction with vertical and horizontal maneuvering by individual aircraft (independent of one another) or by the whole formation. When attacking the target (in case of several attacks being made) evasive action took the form of changing the flying height of the formation so as to prevent the enemy from finding range. As the ground attack aircraft pulled away from the target the pilot endeavored to fly the aircraft in such a way as to enable the air gunner to open fire at suitable targets.

Cooperation with Ground Forces - As has already been mentioned, the main function of the ground attack units was sometimes tactically subordinated to ground units, although, for the most part, cooperation was controlled by the higher commands, and such subordination was not necessary. For purpose of illustration, the following deals with some highly specialized forms of cooperation, both with and without tactical subordination. Artillery cooperation (without tactical subordination) consisted of combined and coordinated operations by large ground attack formations with artillery preparation during the break-through of the enemy's defense system. During the artillery preparation, which was in the form of "drum-fire" (a prearranged order of fire by artillery prior to ground troop advance) on the first line of defense, large ground attack formations carried out mass attacks on the second defense line in order to destroy it and to deny the enemy the opportunity of consolidating as he withdrew from the first line under pressure of the ground forces. When the first defense line was taken, artillery fire shifted to the second line, while the ground attack forces delivered more attacks on the third and exerted pressure on the enemy's forward area. When the barrage was transferred to the third line, the ground attack aircraft proceeded to attack the forward areas in order to disorganize the retreat of the enemy, impede the movement of reserves, liquidate small pockets of resistance, and destroy his troops and materiel. Ground attack units, tactically subordinated to tank units, which were effecting a deep penetration, stood in readiness on their airfields. They took off when summoned by the tank spearhead commander, who encountered enemy pockets of resistance, which he was unable to overcome without assistance. When the resistance was liquidated, the aircraft returned to base. Cooperation with infantry motorized units, etc., was, in its general methods, similar to the tank cooperation. Here, however, ground attack units played an important part in flank protection as well as in overcoming resistance ahead.

Cooperation with other Arms of the Air Force - With the exception of fighter-ground attack cooperation, whereby the fighters served principally as escort, the ground attack force for the most part operated independently of other air arms.

Free-Lance Patrols - Free-lance patrolling by ground attack aircraft appeared in two forms: 1) Picked crews were assigned sectors of the front in which they could attack targets of opportunity, bringing back aerial photographs as proof of their success. On patrols of this sort, crews usually flew in pairs without escort. 2) Crews were assigned a definite target area for purposes of "policing". Small formations of four, six or eight aircraft were usually employed for this type of patrol duty, and fighter escort was provided. Frequently, some of the escorting fighters were used as fighter-bombers to increase the effectiveness of attack. Two-way air-to-air communication was maintained, and, sometimes, though rarely, air-to-ground communication also. Usually the targets were photographed to obtain confirmation of results.

Reconnaissance - Tactical photographic reconnaissance of targets was carried out by ground attack units to a much greater extent than by fighter units. Visual reconnaissance and verbal reports were regarded as supplementary. Although tactical reconnaissance was mainly accomplished by fighter aircraft for general purposes, ground attack units did nearly all the closer photographic reconnaissance in their own areas, the results of which were passed to superior formation and quite often to ground units to whom they were subordinated, or who might have requested it.

When they had the opportunity before a raid, ground attack units made a practice of sending formation leaders on a sector and target reconnaissance to familiarize them with the targets, the routes and the defenses.

Reconnaissance was conducted continuously. In a raid, approximately one in every six aircraft carried a camera. Small groups of fully armed aircraft executed other reconnaissance; they usually had a target on the enemy's defense line, which they bombed as they crossed it. They attacked small targets in order not to disclose their real objective. With most or all of their bomb load gone, they continued their reconnaissance, attacking any chance target with aircraft armament. Other forms of reconnaissance were carried out on much the same lines as by the fighter reconnaissance units, except that targets were usually much closer to the frontal area. Weather reconnaissance was also undertaken.

Radio Communication - Radio communication between ground attack aircraft was nearly always one-way. Only the formation leader used a transmitter, and, if necessary, his second-in-command, who usually flew last. All other aircraft merely listened, even though they had a transmitter aboard. In a mixed formation of fighter and ground attack aircraft, all aircraft stood by on a common frequency. Although the fighter commander was tactically subordinate to the ground attack commander, he would not hesitate to pass warnings in an emergency. In formations on special missions (reconnaissance free-lance patrols), radio was usually two-way.

Control - The vectoring of ground attack aircraft by ground stations played an important part in the cooperation with ground forces. At the chief control stations near the front lines, fully responsible air force staff officers maintained close liaison between the staffs of army and air force commands, and not only vectored the ground attack aircraft, but also directed their operations according to the situation and to the course of the ground fighting. To prevent any confusion in control, liaison between the chief control stations was particularly close.

The most characteristic function of the chief ground control stations is to direct mass operations of ground attack aircraft in close support of ground forces. The chief control station could at any time change the target, organize the formations in groups for operations against various targets, or mass them for an attack on a single target. They could summon reinforcements, cancel an attack, or stipulate the number of attacks to be made. In addition, they assisted the aircraft in locating the target, advised them of the success or failure of their attacks.

MEDIUM BOMBER FORCES

Missions

The medium bombers of the air armies were employed almost exclusively for tactical bombing, playing an important role in the support of ground operations. The principal missions allotted to medium bombers were as follows: Destruction of troops and material on the battlefield, on the march and in assembly areas; preventing the movement of tactical and strategic reserves; destruction of rail and motor transport; attacking enemy battle headquarters; destruction of fuel, ammunition and supply dumps; destruction of airfields.

Tactics

Support of Ground Forces - In supporting ground operations, bomber units were not usually subordinated to ground units, but a close cooperation was maintained throughout. When a bomber regiment was assigned the task of supporting an army corps, the commander of the bomber regiment, after receiving his orders from the air division headquarters, immediately contacted the battle headquarters of the corps and arranged all details of the operation. During the operation, the bomber commander together with some of his staff officers, stationed himself at the corps headquarters. In addition, liaison officers from the bomber regiment were sent to each division of the ground corps to insure that the operational area was kept under supervision constantly. Radio communication was maintained throughout between the bomber unit commander at corps headquarters, the bomber formation and the division liaison officers. The liaison officers with the front line divisions passed on to the bomber commander the requirements of the ground troops, and insured that the ground troops displayed the proper recognition signals. The allotting of tasks, target data, and the passing of requirements and reports were accomplished from an army map with numbered targets, in accordance with a code selected by the corps commander. These maps and codes were supplied to each squadron commander of the bomber regiment.

In addition to attacking their targets, the bombers carried out frequent reconnaissance, maintaining continual contact with neighboring formations. Special control points, equipped with radio and means for visual signalling were set up 9-12 miles behind the main defense line, and all reconnaissance information was passed through them to battle headquarters. These control points also relayed battle orders from the headquarters to the bomber formation.

Tactical Methods - Bombing was carried out almost exclusively by day. In emergencies, specially selected crews were sent on night missions, but these instances were rare. Bombing was not only restricted to daylight operations, but also to favorable weather conditions required flight through an overcast, as the Soviet bombers were not adequately equipped with blind flying instruments.

Bombing Techniques - Bombing by the Air Army bomber force was usually carried out in straight and level flight. Formerly, some of the PE-2 regiments specialized in dive bombing, but this appears to have been abandoned in favor of level bombing. Occasionally, a few bomber aircraft were known to dive-bomb AA installations, while the remainder of the formation bombed the target from level flight.

Bombing was usually carried out by flights of three aircraft, the formation releasing on signal from the flight leader. Bombing altitudes were always specified at the briefing, and varied according to the location of the targets. Targets in the main battle area were usually bombed from altitudes of 2,500 to 6,000 feet, while those in the rear areas were bombed from higher altitudes, ranging from 10,000 to 16,000 feet. For reasons of safety, the tendency prevailed for formations to bomb from as high an altitude as possible, flying at lower levels only when cloud cover made it necessary.

On the bombing run, the flights usually lost 500-600 feet in altitude, with the result that bombs were dropped in a slight glide rather than in straight-and-level flight. When dive-bombing was carried out, the angle of dive never exceeded 60° for TU-2 type aircraft, although the PE-2 sometimes dived at greater angles.

Formations - Formation was flown in groups of nine aircraft containing three flights of three aircraft each. Each flight and each group were arranged in "V" formation, with the groups flying one behind the other at staggered altitudes. When in the target area, the pilots relaxed and flew very loose formation. Operations were frequently carried out at divisional strength, with four, five, or more groups taking part, each regiment supplying two or three groups.

Defensive Measures - Fighter escort was usually provided, but additional steps were taken to reduce losses. Routes were carefully chosen, and built-up and heavily defended areas were avoided. Courses were changed frequently, and the target approach was made to take full advantage of sun and cloud. Evasive action in flak consisted of variations in altitude and course, with evasive turns limited to 15 or 20 degrees. Generally speaking, defensive measures were inadequate in spite of improvements, and few of the crews had a thorough grasp of their effectiveness.

Control - If the entire regiment, or majority of the regiment, was employed against a single target, the regimental commander had to take part in the operation. Similarly, a squadron commander always led his squadron personally. Control in the air was exercised by means of radio contact between aircraft, and between aircraft and the regimental ground station. During the operation, the aircraft were always in contact with the ground station, but for security reasons all transmissions were kept down to a minimum. Since the radio operator was the only gunner in the PE-2, it was difficult for him to maintain contact when enemy fighters were present. It was customary for the leader only to transmit, and then only as previously instructed.

Blind Bombing - Blind bombing was not carried out, owing to lack of suitable equipment. However, a substitute method was sometimes used, whereby the target was approached from some visible point, and the bombs dropped on an estimated time of arrival over the target. Needless to say, this method was very poor and could only be used against large area targets, and only ineffectively even then.

STRATEGIC BOMBER FORCES

Employment

Due to the exigencies of war, the ADD (Long Range Air Force) completed very few strategic bombing missions, and even these few were poorly planned and executed. The power of this force was used to augment the short range bombing capacity of the tactical air armies in immediate support of the Red Army.

Tactics

General - The performance of the ADD in the field of strategic bombing as understood by the Western Allies was so poor that no useful purpose can be served by discussing what little is known of the procedure and tactics. For the greater part of the war, its work consisted of the night bombing of semi-tactical targets - railway stations, air fields, etc., in the rear of the front line. The following paragraphs summarize the available information on that aspect of the subject.

Raid Procedure - The time of take-off varied according to the time of year, as the object was to cross the main defense line as early as possible after dark (not twilight), so as not to waste any of the dark night hours. The number of aircraft employed on a particular raid was determined by the staff who took into consideration factors such as the number of units available and the type of projected operation. In addition to the main bomber force which carried HE and incendiary bombs, about three aircraft from each regiment acted as target illuminators. There were also a number of observation aircraft in the main bomber stream whose function was the visual checking of the effect of the raid. Special crews followed the main bomber force and photographed the target.

The majority of night raids by the ADD were carried out in weather conditions which did not necessitate any lengthy flight in bad visibility and which permitted good visibility for bombing. Weather conditions ranged from bright moonlight nights, with a varying cloud cover, to dark nights with full cloud cover.

Approach to Target - The target for attack was approached on a course strictly laid down in advance and normally consisting of three or four legs. Changes in course were usually made over characteristic landmarks such as lakes, riverbends, etc., and large towns were avoided for reasons of safety. The ADD had no special type of formation for night bombing, the conventional bomber stream being automatically formed by the lapse of time between the aircraft taking off. Differences in speed of take-off would therefore lengthen or shorten the bomber stream, causing, among other difficulties, dispersion of effort. In 1944, efforts were made to improve the situation by the adoption of a "rendezvous" procedure. This method required all aircraft to proceed to a general assembly area previously defined, and then fly in formation to the target. During the flight, turning points were sometimes marked by flares, though this was not a general rule. At one time, the approach height was strictly laid down, but this practice was subsequently abandoned.

Height of Attack - Unlike the approach height, the height of attack was always stipulated exactly and any infringement of this order was a punishable offense. The height of attack varied according to the type of target to be attacked, the strength of the target defense system and the type of aircraft employed, but on an average it was between 10,000 and 16,500 feet for targets in the interior and between 1,600 and 6,000 feet for targets in the main fighting zone.

Execution of Attack - The attack was made either by all aircraft from an exactly prescribed direction and height, or in a concentric form at different heights and from several directions.

Target marking was not generally introduced, but attempts were made to mark specific objectives by dropping flare cascades. If a cascade was wrongly placed, a colored flare was placed beside it to warn attacking aircraft. The same type of flare with a different color was dropped to confirm a correct cascade setting.

The HE and incediary bombs were usually dropped during the first run, a second run being exceptional. However, the target illuminators and photographic reconnaissance aircraft made two runs. Bombs might be dropped above or below cloud, provided the stipulated height was maintained.

Return Flight and Landing - After dropping its bombs, each aircraft flew to a pre-determined departure point and from there on a previously agreed course back to the home base. On reaching friendly territory, D/F bearings were taken on the base D/F station, and on reaching base, permission was requested to land. At least one alternative airfield was given in case of unexpected difficulties at home base. After landing, both oral and written reports were made by each crew.

Navigation and Radio Communications - Navigation was primarily by bearings taken by the aircraft crew. For this purpose, an extensive network of radio beacons both enemy and friendly, was used. Normal broadcasting stations were also probably used. Positions obtained by D/F were probably confirmed by dead reckoning. Some aircraft were known to have requested bearings immediately after bombing, but this could have occurred because of bad navigation, uncertainty about position after action to evade, or enemy fighters and search-lights. There might be definite orders to request bearings immediately after completing an attack in order that the base could check the accuracy of the bombing. However, judging from the frequent bearings given by radio key transmission ground stations were not very reliable, and, judging from the general standard of Russian operators, a bearing taken on an aircraft 600-700 miles away would give little or no indication of the exact position of the aircraft. Air to air traffic was rarely used, but there was considerable wireless communication with various ground stations. During take-off, all aircraft were in a voice radio contact with regimental command posts from which the take-offs were directed, and in the same way radio traffic was used extensively in the landing procedure. Apart from these occasions, traffic was scarcely ever noted, all regular ground communication to and from aircraft being effected by key transmissions in code.

RECONNAISSANCE FORCES

Missions

Reconnaissance over enemy territory.

Weather reconnaissance, which might be a main task or be combined with other reconnaissance tasks.

Terrain reconnaissance was sometimes carried out for the purpose of topographic photography. Specially trained crews were required for this task.

Camouflage supervision was frequently required of reconnaissance crews while on their return flight to check the camouflage of airfield, motor and armored vehicle columns, etc.

Leaflet dropping flights were frequently carried out by the reconnaissance crews as a subsidiary task.

Photography of targets after attacks by the ADD on rear area targets was sometimes carried out. Whether this was done systematically, or only when the photographs taken by the ADD itself were inadequate, is not known.

Targets

Along the Main Battle Line - Only area photographs were taken along the main battle line by the reconnaissance regiments. Reconnaissance of individual targets was generally carried out by the squadrons equipped with fighter or ground attack aircraft.

Behind the Front - Reconnaissance was made of the type, strength, and direction of enemy movements by rail and road; the number and type of aircraft on airfields; railway stations; number, type, and equipment of troops in occupied places; river crossings; defense works, concentrations of motor and armored vehicles; supply depots.

Reconnaissance orders rarely specified one definite type of target. Airfields, railway stations and occupied places specified in the reconnaissance orders were always photographed, but it was left to the crews to decide whether to photograph enemy troop movements which were found, or whether to limit themselves to visual reconnaissance.

The maximum radius of action for strategic reconnaissance was not fixed. The maximum radius of action for operational reconnaissance was approximately 200 miles, and the average radius of action was 125 miles. There was a remarkable uniformity with the individual regiments in this respect, which makes it appear that fixed instructions for the reconnaissance units had been issued. The maximum radius of action of the fighter and ground attack squadrons of the reconnaissance regiments for tactical or battle reconnaissance was 40 miles, with the average 25 miles.

Daylight Reconnaissance

Under suitable weather conditions, sorties were flown daily. The first aircraft took off during the early morning hours and flew weather reconnaissance in addition to its other reconnaissance tasks. The crews which took off later also forwarded weather reports if necessary, giving information concerning visibility, cloud cover, cloud base and ceiling, heights of clouds and direction of cloud movement. Icing and direction and strength of wind were not given. Sorties were flown from dawn to dusk, with emphasis on the morning hours, and take-off times were changed daily, in order to make defensive measures difficult. The route and the altitude were chosen by the crews, and the main battle line was crossed at weakly defended points which changed from day to day. When there was little or no cloud cover, reconnaissance aircraft flew at about 23,000 feet over enemy territory, and targets behind the front lines were photographed from this altitude, but sometimes lower (16,000 ft). Fortified positions along the main battle line were photographed from 13,000 to 16,000 feet or lower. The minimum altitude for photography was 4,000 feet, and below this height, all reconnaissance was visual. Reconnaissance missions were not usually flown if cloud bases were below 1,500 feet, unless the operation was urgent, and area photographs were taken over only the main battle line or directly behind it. These flights were classed as the most difficult, and, therefore only the best crews were employed. If the enemy defensive fire was weak, one aircraft would photograph two or three strips, but where strong defensive fire was expected, several aircraft were sent out in succession, or the same crew made several flights, photographing one strip each time. The interval between the individual flights were also dependent on the enemy's fire, and the stronger the fire, the greater was the interval. The use of two aircraft at a time was very rare. Plans for evasive action against enemy fighters and AA fire were worked out by the individual crews, on the basis of their experience, and the most important defense was considered to be the coordination of the defensive fire with evasive action, which required excellent coordination between the crew members. Machine-gun fire was opened at a range of from 500 to 600 yards. In some reconnaissance units, PE-2's were equipped with RS-82 rockets which were fired to the rear; these were used to ward off fighter attacks at longer ranges (600 to 1,200 yards). If the fighter approached to within 400 yards, AG-2 parachute bombs were used, with which each reconnaissance aircraft was, as a rule, equipped (ten bombs each).

For photo reconnaissance over positions heavily defended by AA fire, the following tactics were employed. The target was approached from out of the sun or clouds, and the aircraft went in on a silent glide with engines throttled down. When the first gun flashes were seen, the speed was increased by diving steeply, and after the aircraft had passed over the target it pulled up with full throttle. The course was not changed over the target, as photography would be made difficult, if not impossible. When unexpected AA fire was seen and the bursts were inaccurate, no evasive action was taken, but if the accuracy improved, course, altitude, and speed were altered. The withdrawal was always flown over a different route from the penetration flight and visual reconnaissance was continued, the Sturman (navigator) entering all observations on his map, and the radio operator making notes. The radius of action of the PE-2 without supplementary tanks varied between 125 and 200 miles, and the average duration of a reconnaissance flight was from 1 3/4 to 2 hours, with the maximum, 2 1/2 hours. The speed of the flight was maintained between 200 and 215 mph.

Radio Communications

Reconnaissance aircraft were in constant contact with their regimental ground station during the mission, from the time of taking off. If contact could not be made, the aircraft returned to base, in accordance with a standing order prohibiting operations without radio contact. For operational reconnaissance, voice radio was used, whereas for strategical reconnaissance, key transmission was customary. The change of call signs and frequencies varied in the different units; in some cases they were changed daily, and in others every few days, though they were always changed after the loss of an aircraft. There was only a single frequency for traffic between the ground station and all aircraft of the regiment. There was a frequency for air-to-air traffic with the fighter escort. The Air Army always listened in on the traffic between the reconnaissance aircraft and the ground station, and the Front Staff and frequently the ground Army Staffs also monitored the wireless traffic. Although it was intended that only coded messages should be used over enemy territory, crews found the procedure too slow, and difficulty was experienced in keeping abreast of the current code. This resulted in the use of plain language throughout, with the exception of weather reports and reports intended only for the regiment. Reconnaissance aircraft transmitted weather reports from time to time until they reached the main battle line, but only important messages were transmitted while over enemy territory. A short summary of reconnaissance results was transmitted in plain language after the main battle line had been crossed on the return flight. The ground station sometimes transmitted a change in orders, or a fighting warning, and the radio operator was, therefore, supposed to be standing by at all times, although it was not always possible, since he had also to take part in reconnaissance observations.

Night Reconnaissance

Night reconnaissance was flown every night, weather permitting. During short nights, the average number of sorties flown was six or seven, but on long nights the number was increased and the same crew frequently flew a second sortie. The aircraft always flew alone, although at times several aircraft took off simultaneously, each with a different task. The crew of the PO-2 for reconnaissance purposes was always two men, pilot, and Sturman.* The duration of a flight varied between one and a half and three hours, and the altitudes varied from 2,000 to 10,000 feet, depending on cloud cover. Both visual and photographic reconnaissance were flown and it is believed that magnesium flare bombs were used for night photography. The camera employed was usually the SAFA-19. No bombs were carried, but frequently, agents or supplies for partisans were dropped, and sometimes landings made behind the enemy lines.

*Sturman -Crew member who is essentially a combined navigator-bombardier-observer with emphasis on the "navigator"

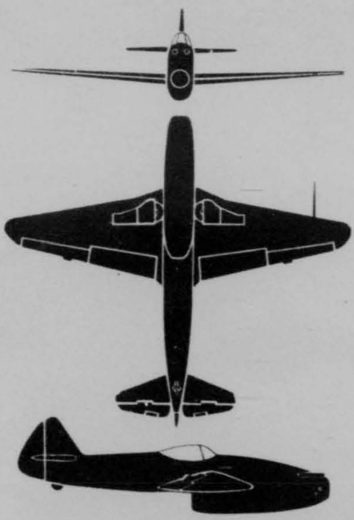
OPERATIONAL AIRCRAFT

Soviet aircraft manufacturers follow the line of simplicity, utility, ease of maintenance, and economic construction, with attention to pertinent and technical detail. The Soviets are capable of high quality workmanship if it is required by the circumstances. The engineering of the Soviet Union shows a tendency to copy existing proved equipment. The time saving policy of producing parts with an inferior finish is everywhere apparent.

The efficiency and performance of the completed item, however, is in no way affected by this lack of precision on unimportant surfaces.

FIGHTERS. JET AND ROCKET POWERED

YAK-15 - Jet Fighter



Power Plant..One Jumo 004B, 1980 lb static thrust at S/L

Performance........................
Climb Time/Alt(min/ft)..18/30,000

Rate of Climb..........900 ft/min

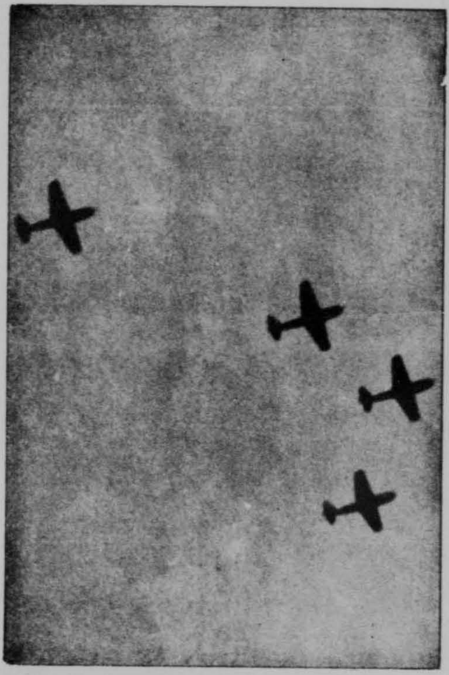
Maximum Speed (knots)......450/SL

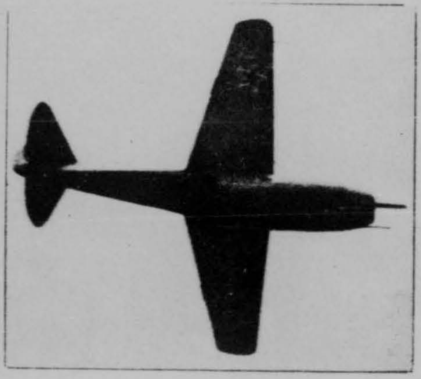
Max speed at 30,000 ft..430 knots

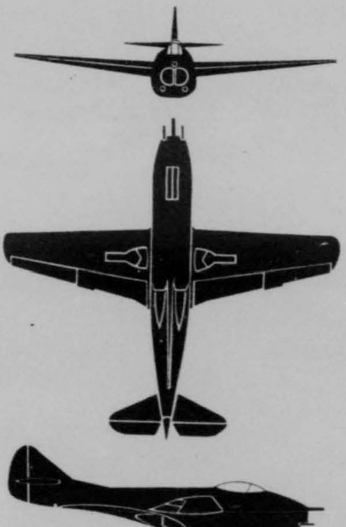
Service ceiling........38,500 ft.

Armament..........................
Two 12.7 or 20mm cannon mounted above the jet unit.

Mig-9 Jet Fighter







Power Plant..........................
Two BMW 003A, 1760 lb static thrust at S/L.

Performance..........................
Climb Time/Alt (min/ft)...15/30,000

Rate of climb.....5,500 ft/min (SL)

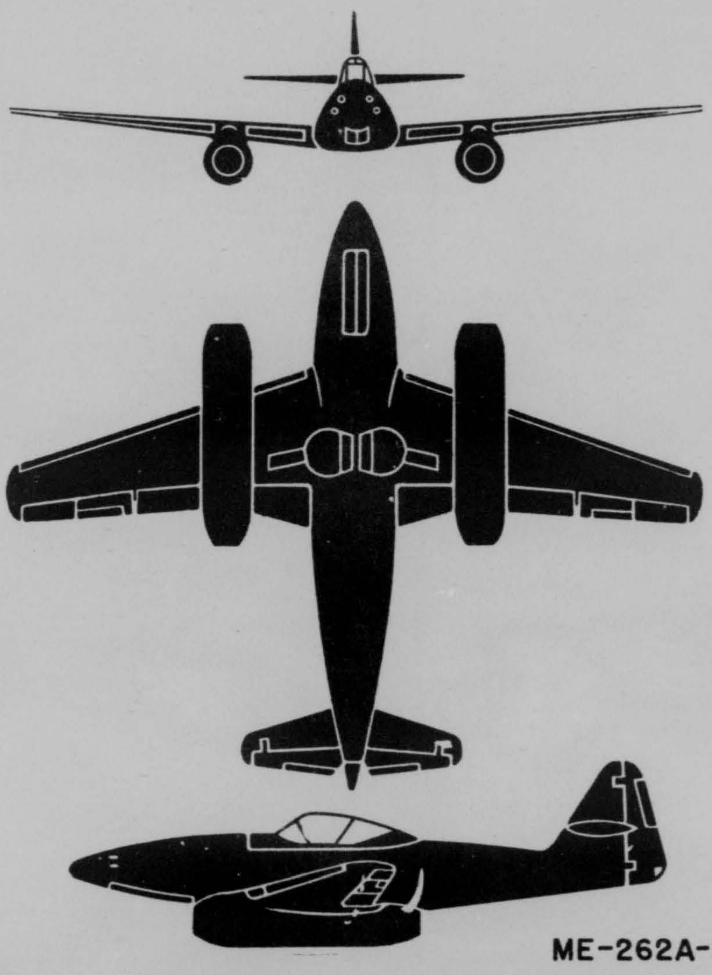
Maximum Speed (knots)........510/SL

Service Ceiling...........45,000 ft

Armament..........................

One 53mm gun installed in nose and protruding from top of air intake. Two, 23mm guns in lower part of air intake fairing.

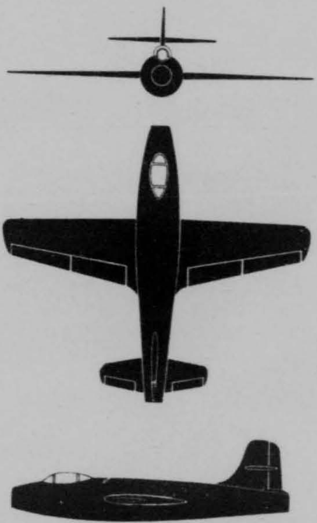
USSR Me-262 Type Jet Fighter



ME-262A-1

Power Plant......Two Jumo 004B, 1980 lb static thrust at S/L.
Performance......Climb Time/Alt (min/ft)...9.7/30,000
Maximum Speed (knots).....444/SL
Maximum Speed at 30,000 feet....488 knots
Service Ceiling (ft)........43,000
Armament.........Two or more 12.7 or 20mm guns with 800 rpm.
Remarks..........Performance shown is for the German Me-262.

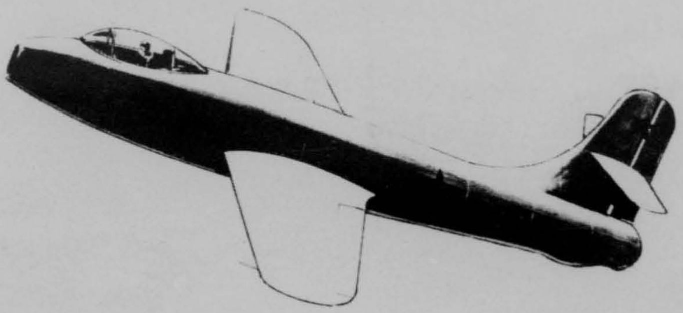
USSR F-84 Type



Power Plant.........................
One, 5,000 lb static thrust at S/L.

Performance.........................
Climb Time/Alt (min/ft)........... 7.0/30,000
Maximum Speed (knots)............ 530/SL
Max speed at 34,000 ft............ 460 knots
Service Ceiling.................. 43,000 ft

Armament............................
Forward Fuselage - One 20/37mm gun mounted below intake, fixed. Fires 800 or 400 rpm.



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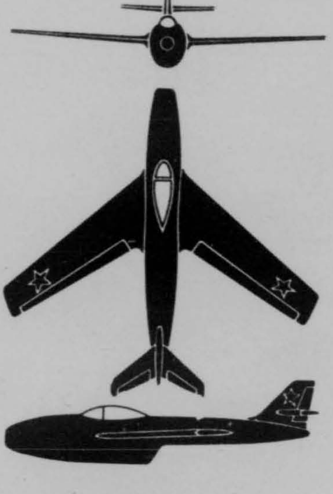
Sukhoi Swept-Back Wing Aircraft (Experimental)



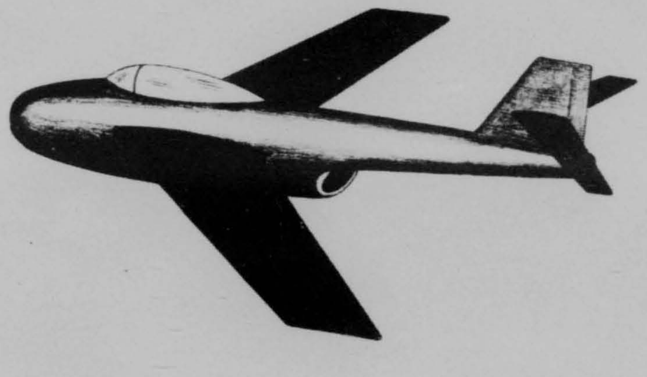
Power Plant........................
One Jumo 004B or BMW 033 appear to be the logical choice.

Performance........................

Maximum Speed (knots)............ 435/SL

Service Ceiling.................. 37,500 ft

Armament...........................
No armament reported.



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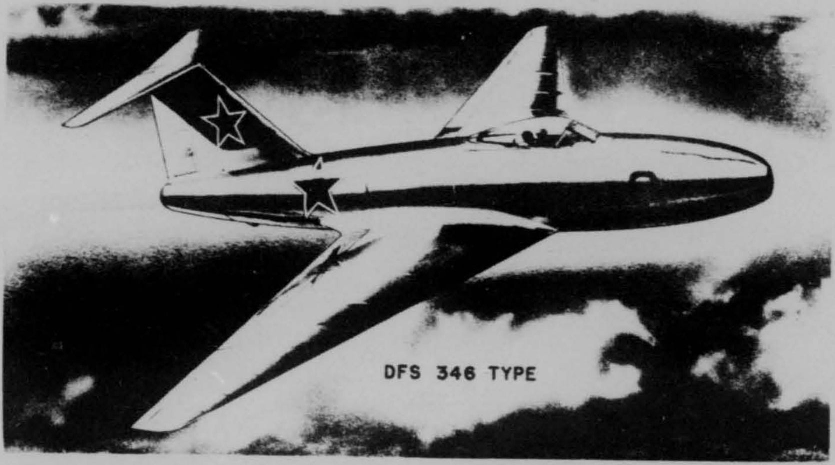
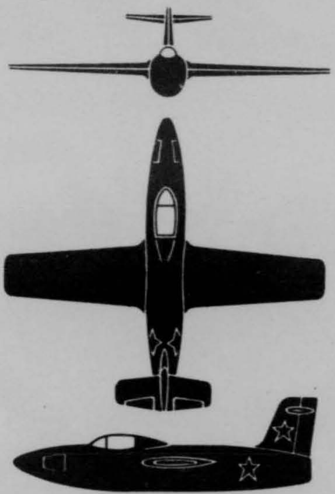
DFS-346 Type Rocket Aircraft





Power Plant..........................
Two Walther rockets developing
2200 lbs thrust each.

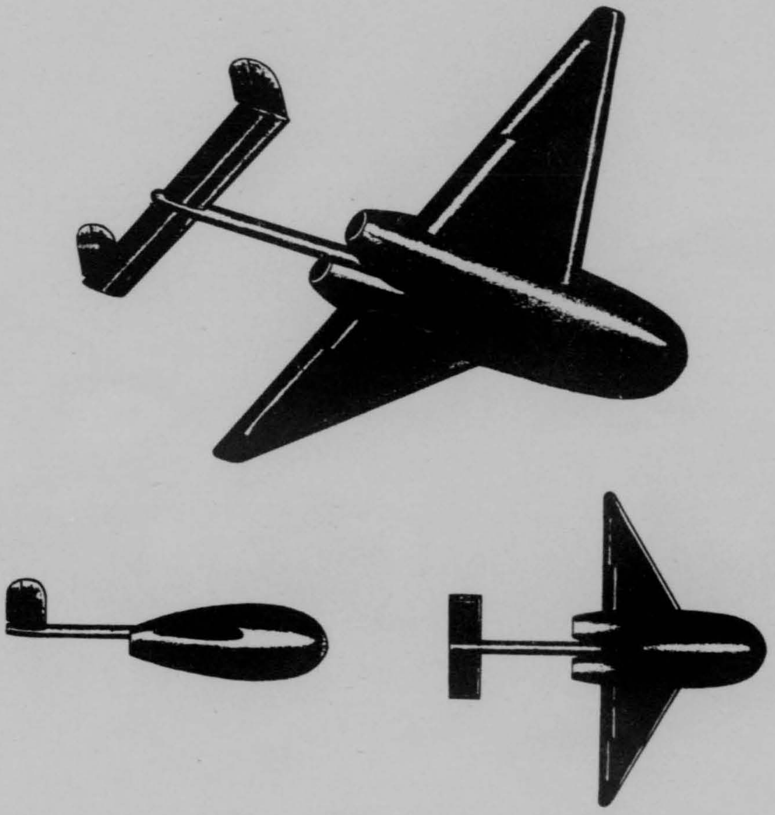
Performance..........................
Max estimated speed..............
1,215 knots S/L

Estimated capable of Machine number..............2.0 at 65,000 ft

Armament............................
Probably none.

Remarks.............................
Believed to be a transonic supersonic research aircraft. Will probably parallel performances of U.S. XS-2 and U.S. "Skyrocket".

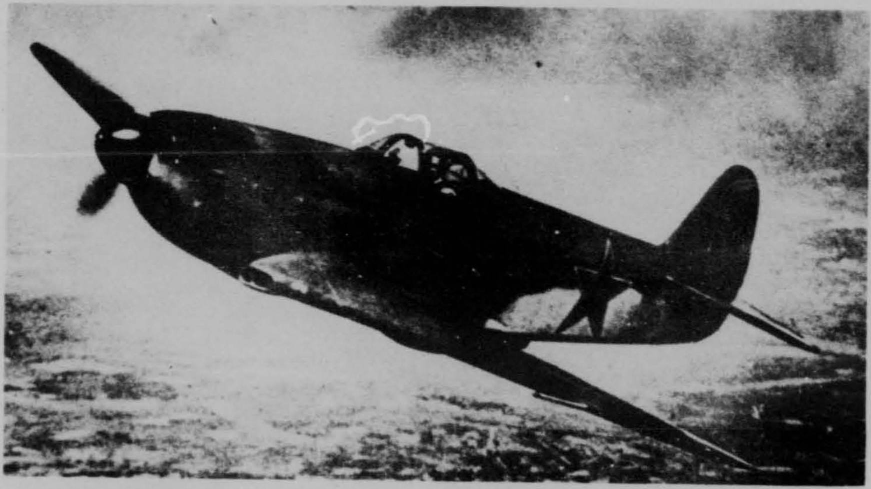
23 August 1947 Type - Jet Fighter



Power Plant		Two BMW 003A Developing 1,760 lb static thrust at S/L.
Performance	Climb Time/Alt (min/ft)	7.6/20,000
	Maximum Speed at 15,000 ft	380 knots
	Service Ceiling	40,000 ft.
Armament		Unknown.

FIGHTERS, RECIPROCATING ENGINE POWERED

Yak-3



Power Plant..........................
One M-105 PF-2 developing 1,250 hp S/L.

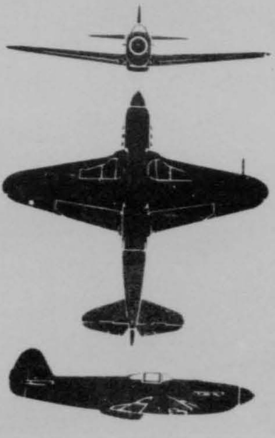
Performance..........................

Climb Time/Alt (min/ft)........... 5.0/16,000

Maximum Speed at 16,000 ft........ 325 knots

Service Ceiling................... 34,000 ft

Armament.............................
Two 12.7mm fires 800 rpm. One 20mm fires 800 rpm.



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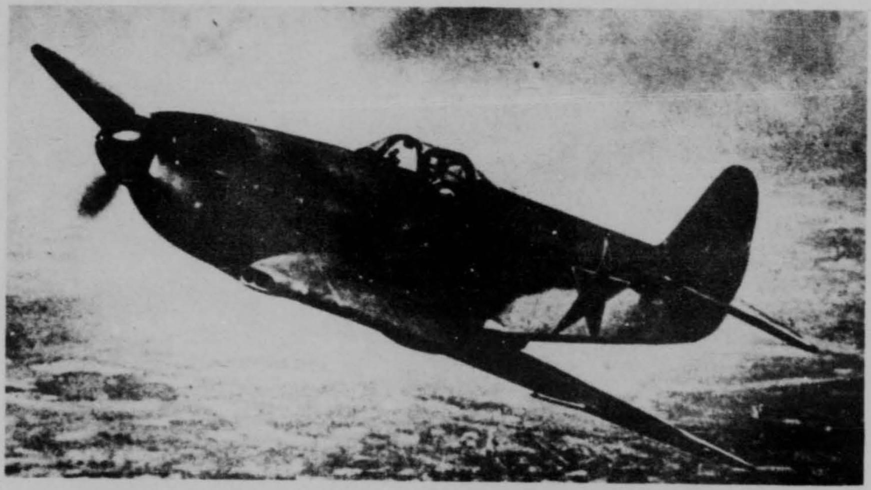
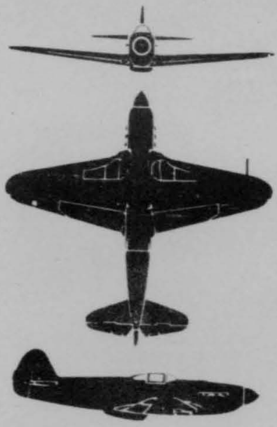
FIGHTERS, RECIPROCATING ENGINE POWERED

Yak-3





Power Plant........................
One M-105 PF-2 developing 1,250 hp S/L.

Performance........................

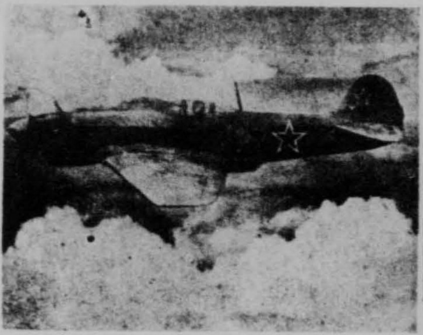
Climb Time/Alt (min/ft)...........
5.0/16,000

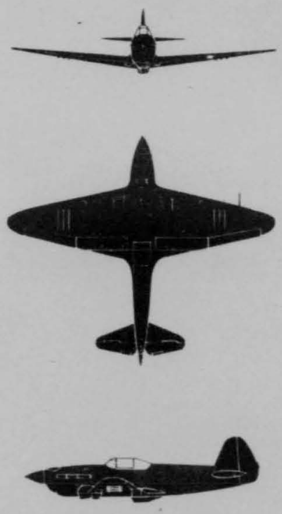
Maximum Speed at 16,000 ft........
325 knots

Service Ceiling...................
34,000 ft

Armament...........................
Two 12.7mm fires 800 rpm. One 20mm fires 800 rpm.

Yak-9





Power Plant........................

One M-105 PF developing 1,250 hp at S/L.

Performance........................

Climb Time/Alt (min/ft).......... 5.5/16,400

Maximum Speed at 13,100 feet...... 318 knots

Service Ceiling.................. 32,000 ft

Armament...........................

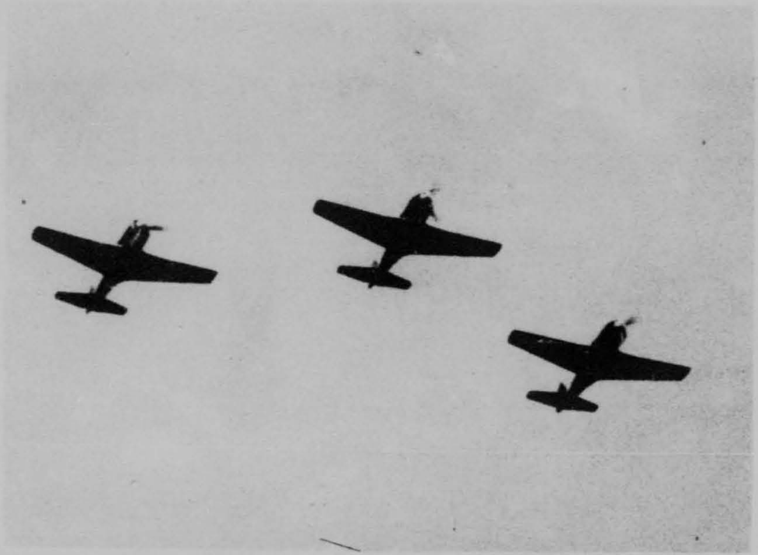
One 12.7mm fixed. One 37mm fixed.

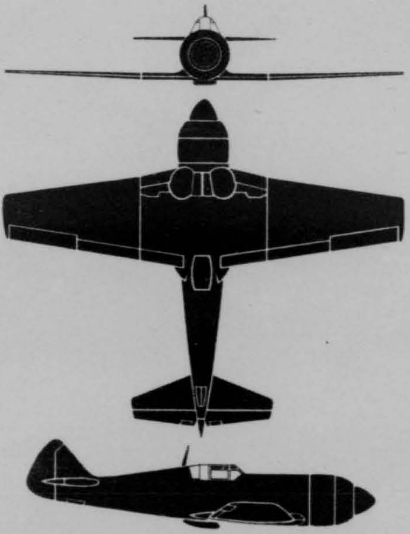
Remarks............................

Recoil from 37mm is reported to have detrimental effects on structural and firing qualities.

2 1 2 3

La-9 Reciprocating Engine Fighter





Power Plant........................

One M-71 engine developing 2,200 hp at S/L.

Performance........................

Climb Time/Alt (min/ft).......... 10/25,000

Maximum Speed at 24,000 ft........ 374 knots

Service Ceiling.................. 40,000 ft

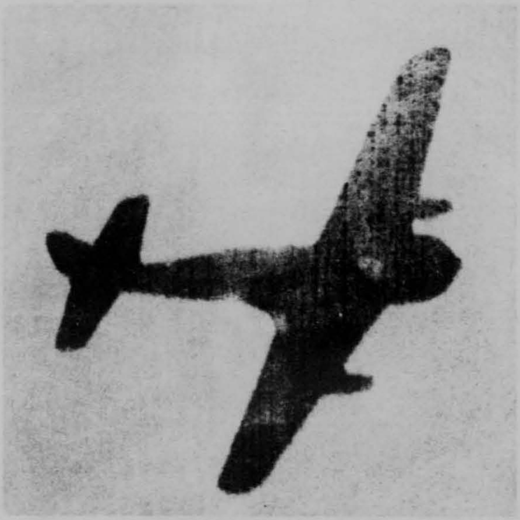
Armament...........................

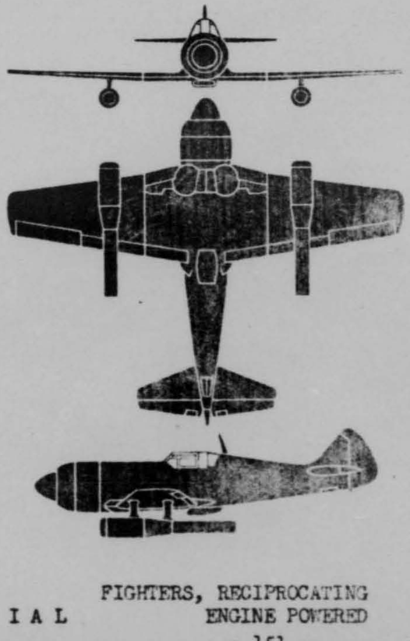
Two 23mm guns each firing 600 rpm.

Remarks............................

May be fitted with a turbo supercharger.

La-9 Reciprocating Engine Fighter with Pulse Jets





Power Plant.........................

One M-71 engine developing 2,000 hp at S/L.
Two Ar 044 Pulse Jets developing 1,100 lb thrust at S/L.

Performance.........................

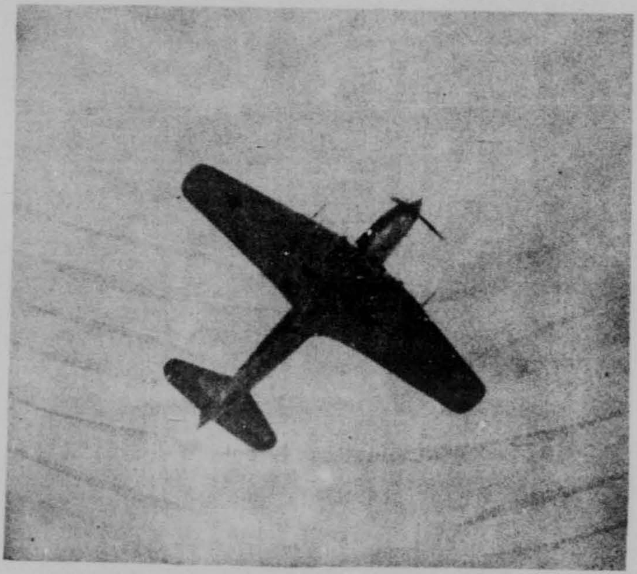
Maximum Speed (knots)............ 410/SL

Service Ceiling.................. 30,000 ft

Armament...........................

Four 23mm guns firing 100 rpm per gun.

Il-10 Reciprocating Engine - Attack



Power Plant...........................
One AM-42F developing 2,000 hp S/L

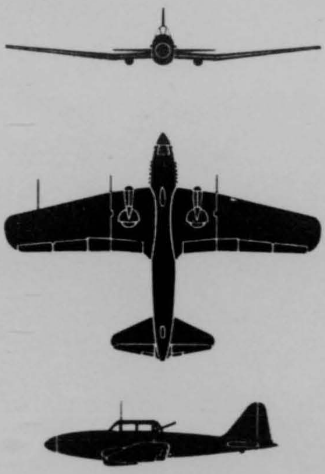
Performance..........................
Climb Time/Alt (min/ft)...........
5.5/10,000

Maximum Speed at 10,000 ft........
269 knots

Service Ceiling...................
29,000 ft

Armament............................
Forward fuselage - Two 23mm and two 7.62mm guns. Dorsal - One 12.7mm gun turret. Rockets - 8x132mm under wing.

Remarks............................
Engine and pilot are protected by armor plate but wireless operator gunner has no protection.



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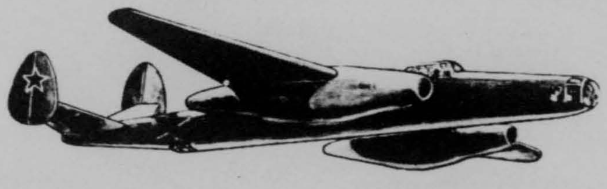
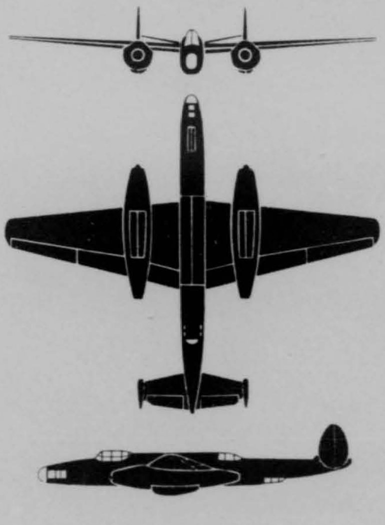
BOMBERS, JET POWERED

Tu-? Jet Bomber





Power Plant........................

Two Derwent V developing 3,600 lb static thrust at S/L.

Performance........................

Climb Time/Alt (min/ft)...........
25/30,000

Maximum Speed (knots).............
375/SL

Service Ceiling...................
35,000 ft

Armament...........................

Two 12.7mm ventral turret guns. Possible fixed tail guns. Carries 4400 lb bomb load.

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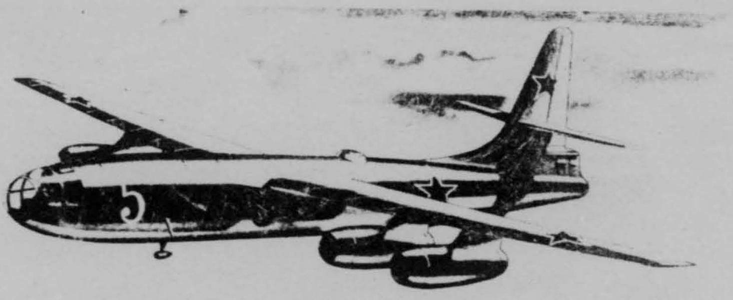
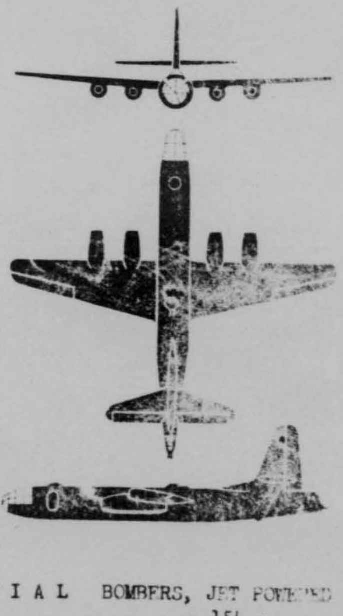
Il-? Jet Bomber



ILYUSHIN-4 JET BOMBER



Power Plant........................
Four Jumo 004H.

Performance........................

Climb Time (min/ft)..............
13/20,000

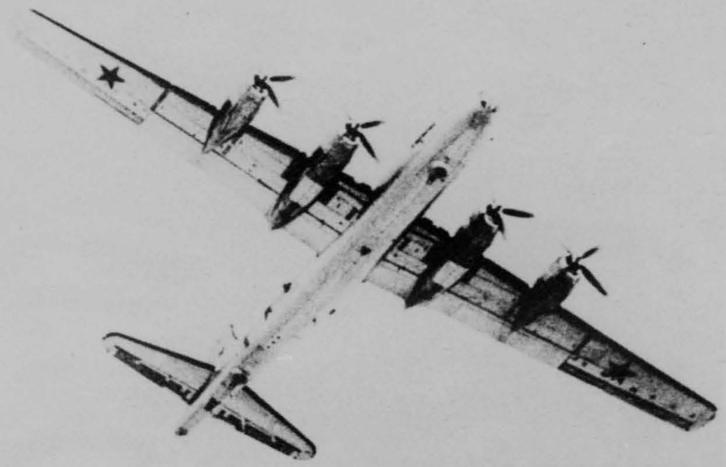
Maximum Speed (knots)............
400/SL

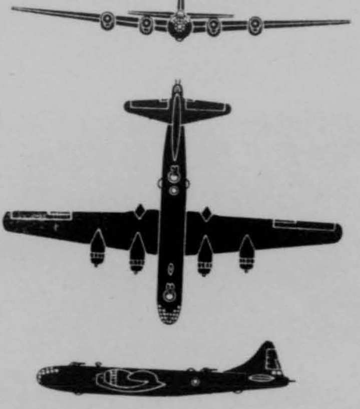
Service Ceiling..................
35,000 ft

Armament...........................

Four 12.7mm ventral and dorsal turrets. Carries 13,200 lb bomb load maximum.

USSR B-29 Type Reciprocating Engine Bomber





Power Plant.........................

Four R3350 developing 2,320 hp at S/L for take-off.

Performance.........................

Climb Time/Alt (min/ft)..........
40/20,000

Maximum Speed-Speed/Alt (knots)...
305/30,000

Service Ceiling.................
34,000 ft

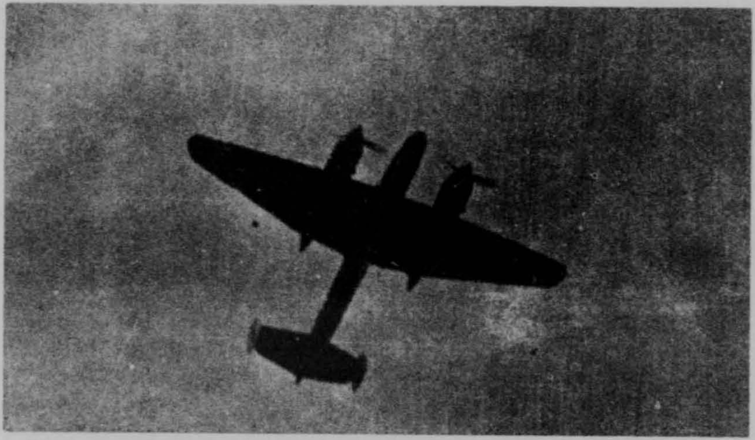
Armament...........................

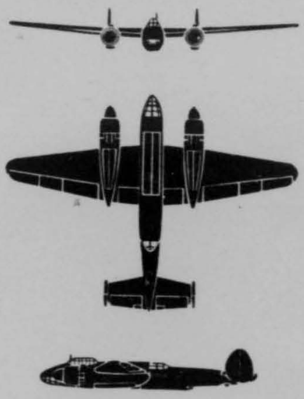
Two lower turrets fitted with two guns each. Tail mount carries three machine guns which are probably 12.7mm Beresen. Carries maximum of 20,000 lb bomb load.

Remarks...........................

Believed to be an exact copy.

Tu-2 Reciprocating Engine Bomber





Power Plant................Two M-82 FNW Developing 1,825 hp at S/L.

Performance.........................

Climb Time/Alt (min/ft).......... 9.5/18,000

Maximum Speed-Speed/Alt (knots).. 304/19,000

Service Ceiling.................. 32,800 ft

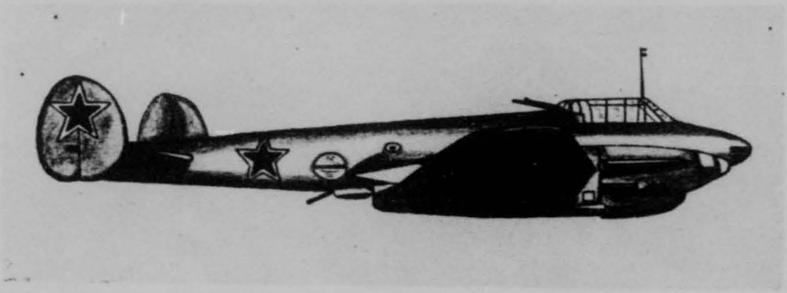
Armament............................

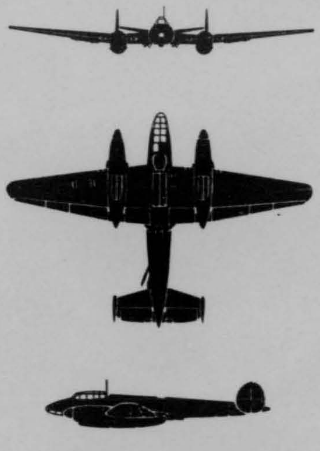
Two fixed forward firing 20mm cannon (250 rpg) installed in the wing roots and three free firing manually operated 12.7mm machine guns (250 rpg) mounted in one ventral, and two dorsal positions. Bomb bay permits storage for a maximum 3,300 lb bomb load.

Remarks.............................

Standard twin-engine tactical bomber of the SAF. Can be operated either as a horizontal or dive bomber.

Pe-2 Reciprocating Engine Bomber





Power Plant........................
Two M-105R developing 1,085 hp at S/L.

Performance........................
Climb Time/Alt (min/ft)..........
10.0/16,400

Maximum Speed-Speed/Alt(knots)....
290/16,400

Service Ceiling...................
29,600 ft

Armament...........................

Forward fuselage - one 7.6mm and one 12.7mm fixed gun. Aft of cockpit - one 7.6/12.7 free gun. Lateral - Two 7.6mm free guns. Ventral - One 12.7mm free gun. All heavy bombs are carried externally.

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Pe-4 Reciprocating Engine Bomber

ILLUSTRATION NOT AVAILABLE

Power Plant........................
Two MAX B1 developing 1,750 hp at S/L.

Performance........................

Climb Time/Alt (min/ft)........ —

Max Speed -Speed/Alt (knots)......
340/20,000

Service Ceiling..................
37,700 ft

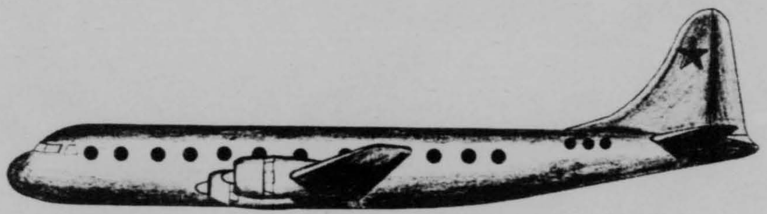
Armament..........................

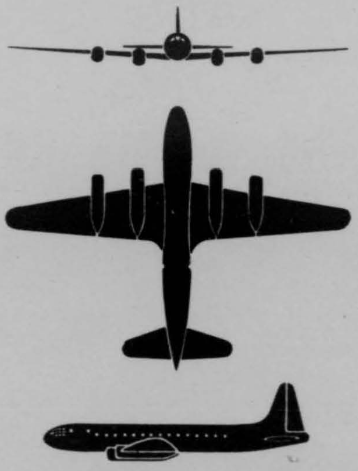
Reported to be armed with four 7.6mm machine guns and to have a maximum bomb load of 4,400 lbs.

2132

TRANSPORTS, RECIPROCATING ENGINE POWERED

Il-18





Power Plant..........................

Four M-82 RMW developing 1,825 hp at S/L.

Performance..........................
Maximum Speed - Speed/Alt(knots)...
270/20,000

Range (nautical miles)............
2,000 with 20,000 lb pay load

Passenger Capacity..................
67 passengers.

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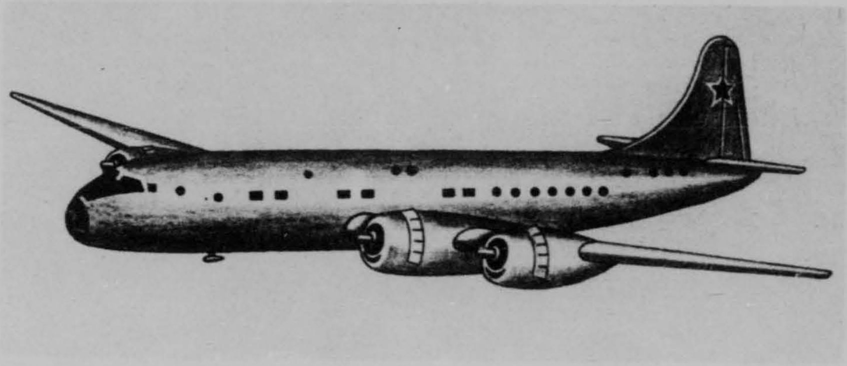
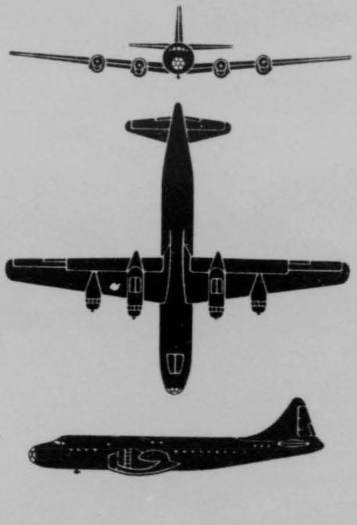
Tu-70 Reciprocating Engine Transport





Power Plant.........................

Four, believed to have retained same engines as USSR B-29.

Performance.........................

Maximum Speed-Speed/Alt (knots)... 260/SL

Range (nautical miles)............ 3,000 with 20,000 lb cargo

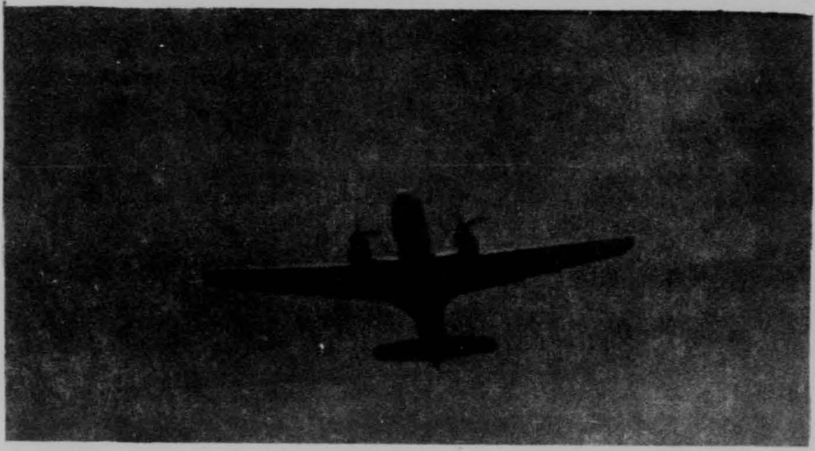
Passenger Capacity.................

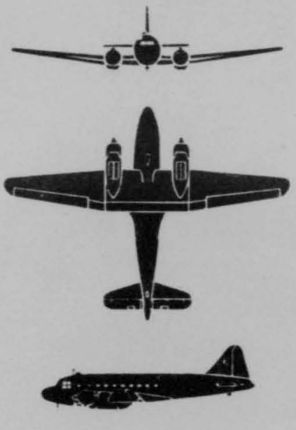
72 passengers.

Remarks............................

Transport version of the USSR B-29. Has retained the bombardier's nose. It could incorporate an internal bomb bay, which would probably be smaller than the B-29 bomb bay because of the lower wing design.

Il-12 Reciprocating Engine Transport



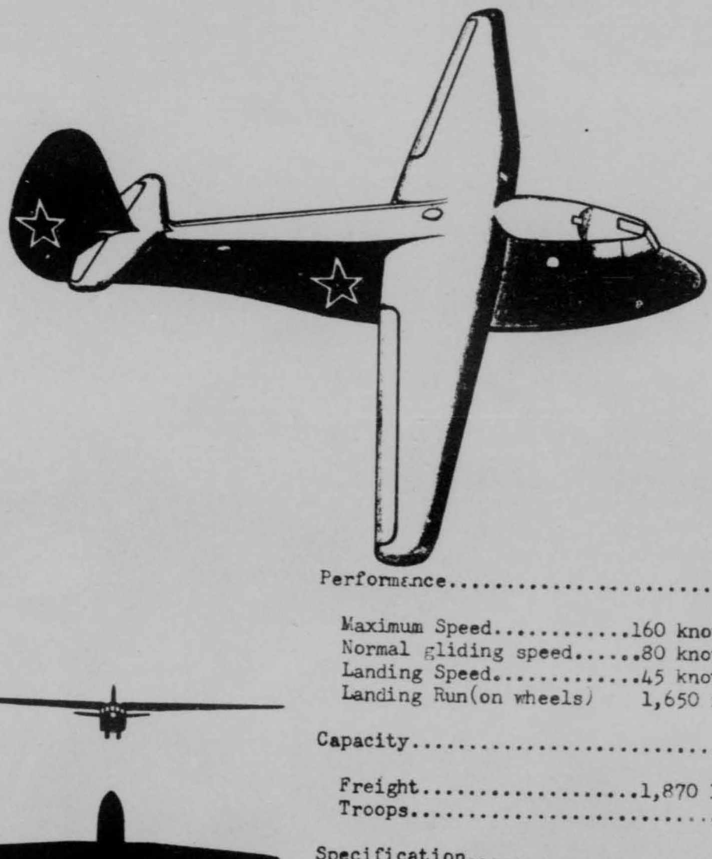


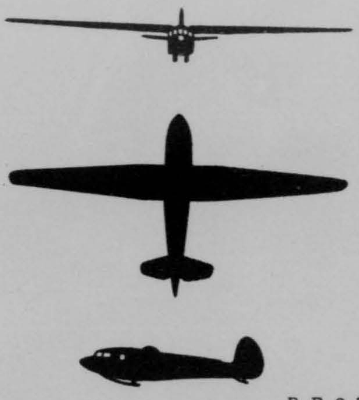
Power Plant..........................
Two ASH 82 developing 1,680 hp at S/L.

Performance..........................
Climb Time/Alt (min/ft)...........
10.5/10,000
Max Speed-Speed/Alt (knots).......
220/8,800
Range.............................
1,080 with 27 passengers

Passenger Capacity..................
27 passengers.

A-7 TRANSPORT GLIDER

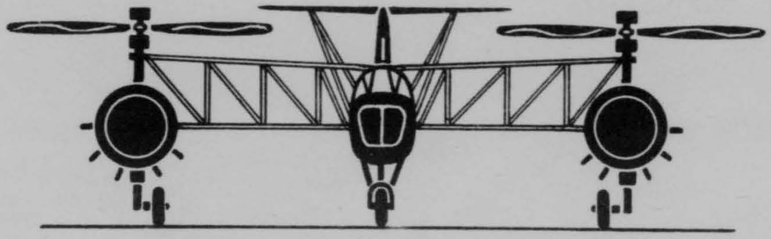




Performance	
Maximum Speed	160 knots
Normal gliding speed	80 knots
Landing Speed	45 knots
Landing Run(on wheels)	1,650 ft
Capacity	
Freight	1,870 lb
Troops	6
Specification	
Weight w/normal load	4,200 lb
Remarks	
Wood construction.	

Omega - Helicopter

BRATUKHIN OMEGA TWIN-ROTOR HELICOPTER



Power Plant........................

Two engines mounted below extremities of open box girder, tubular membered outrigger which extends transversely across top of fuselage.

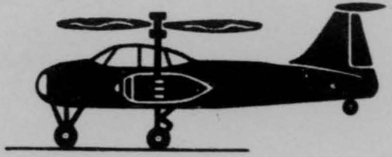
Performance........................

Maximum Horizontal Speed..........
90 knots at S/L

Rate of Climb (ft/min)............
1080 at S/L

Remarks...........................

Reportedly has good stability, will remain motionless in the air, and is safe in the event of engine failure.



AIRCRAFT ARMAMENT

GENERAL

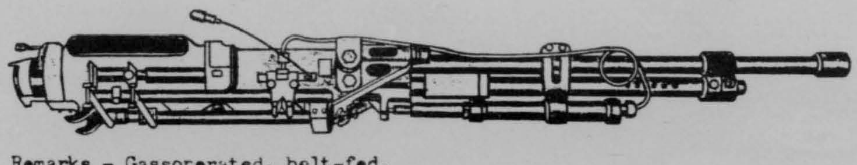
World War II Soviet offensive aircraft armament was primarily installed for ground-support purposes, and this tactical requirement determined the selection of guns and gun arrangements. The fixed forward-firing fighter and fighter-attack type aircraft were usually armed with automatic weapons conventionally installed in the fuselage and wings. In the majority of cases, small-caliber (7.9 and 12.7mm) were combined with large-caliber guns, (20mm and larger) in a single arrangement. In addition to multi-caliber selection, fuselage mounting appeared to be favored over the internal wing gun installation. Where possible, the big gun was mounted to fire through the propeller hub and the small-caliber guns were mounted to fire through the propeller arc, and were therefore synchronized. Provisions for heavy armor were stressed to protect vital aircraft components and the pilot in the ground-support mission. Reliable report by U. S. representatives observing U. S. materiel in the USSR during the war stated that the Russians preferred to remove wing guns whère practicable, and to depend on the fuselage installations.

The present estimate of Soviet aircraft armament is based on the assumption that the weapons in use at the end of World War II are still being used. Complete technical details of World War II standard equipment are not available.

GUNS - GENERAL

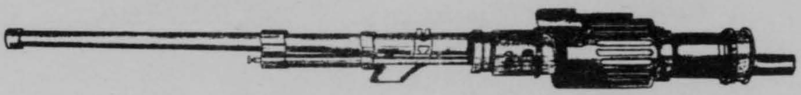
The USSR is as eager as other countries to possess large-caliber, high performance aircraft weapons. It is probable that the Soviets are investigating the latest German guns. They may be producing some of them already, such as the 30mm MK213, the 55mm MK112, and the 50mm MK214. These three guns are simply constructed and have high performance characteristics for aerial combat.

12.7mm BS (Beresin) Machine Gun



Remarks - Gassoperated, belt-fed.
World War II rate of fire - 800 to 1,000 rpm. (Rate may now be accelerated to 1,000 to 1,200 rpm without much modification.
Weight with pneumatic charger and other accessories - 56 pounds.
Ammunition slightly larger than U. S. caliber .50 round.

Schwak 20mm Automatic Gun



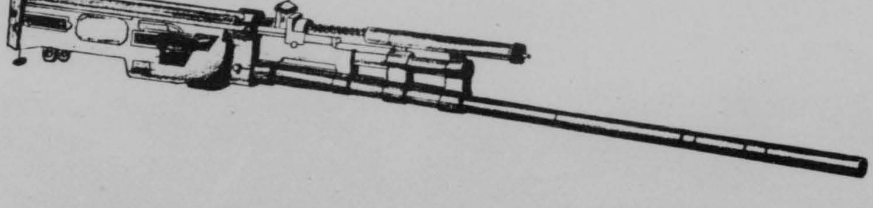
Performance.......About the same performance as U.S. M24, 20mm gun although 88 pounds lighter.

Rate of fire......750 to 800 rpm, fired at about 2,630 feet per second.

Projectiles.......High explosive-incendiary (HE-I) and armor piercing-incendiary, (AP-I) rounds with about 1,500-grain projectiles usually loaded 1:1 in disintegrating link belts.

Remarks...........Several models of this gun were developed, each for a specific purpose. The models developed included short-barreled, free-firing guns for using installations, a long-barreled version for firing through a propeller hub, a synchronized version for firing through the propeller arc, and a gun suitable for flexible installations.

WJa 23mm Automatic Gun



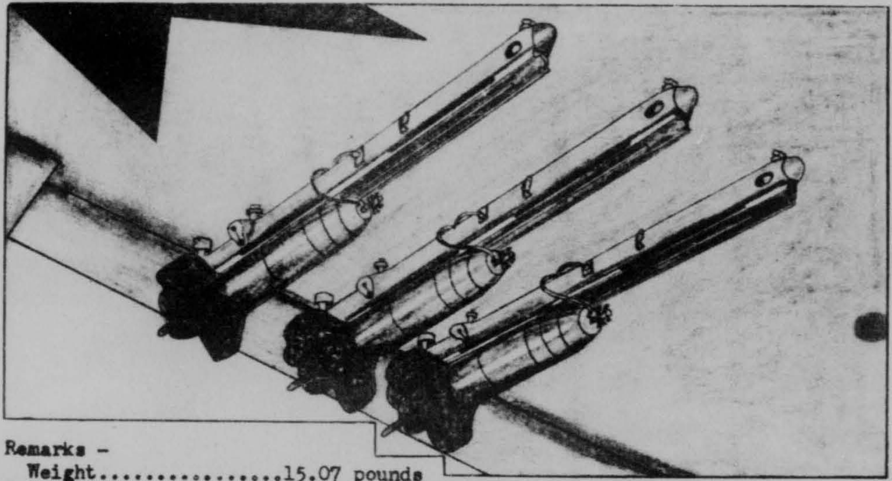
Rate of Fire.........Adjustable from 370 to 600 rounds per minute - depending on the diameter of the gas orifice.

Weight...............151 pounds

Overall length.......69.3 inches - used in fixed installations only.

Projectiles..........3,055 grain HE-I projectile at about 2,970 feet per second. Also uses AP-I.

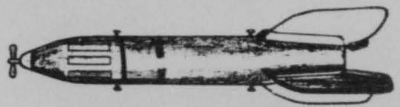
RS-82 (82mm) Rocket

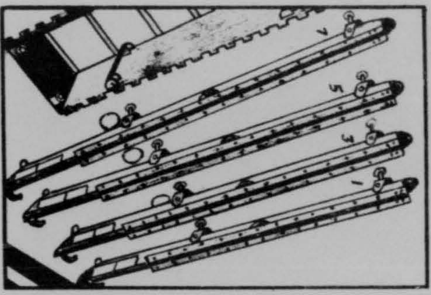


Remarks -

Weight................15.07 pounds
Overall length.........21.8 inches
Explosive carried......1.29 pounds
Propellant carried.....2.22 pounds
Velocity.........810 ft per second
Effective burst range..525to559 ft

RS-132 (132mm) Rocket





Remarks -

Weight....................50 pounds
Overall length.........33.7 inches
Explosive carried.......4.95 pound
Propellant carried.....8.25 pounds
Velocity.........810 ft per second
Effective burst range..580 to 656 feet

RFOS-132 (132mm) Rocket

ILLUSTRATION NOT AVAILABLE

Remarks -

Weight	92.5 pounds
Overall length	54.6 inches
Explosive carried	Unknown
Propellant carried	15.5 pounds
Velocity	Unknown
Burst Range	Unknown

BOMBSIGHTS

OPB-2

Remarks - Used for horizontal bombing. Optical sight copied from the Goery-Bogkow (German). In principle, the OPB-2 is a drift meter with accommodation for range computatioh. The only means of stabilization is a reference bubble level. It was standard in all Soviet bombers until 1942. Replaced by NKPB-3.

NKPB-3

NKPB-3 Bombsight

Remarks - Used for horizontal bombing. Installed in small quantities in World War II bombers. It replaced the OPB-2. Its operation was based on the impact-predicting principle. The dropping angle was determined from ballistic tables using the prevailing conditions -i.e., altitude, velocity, lateral drift, etc. An automatic pilot was not used; the pilot followed a directional indicator linked to the sight. The target was tracked manually, and when the sighting angle coincided with the dropping angle, the bomb release switch was closed.

BOMBS

The Soviets had a standard family of bombs during World War II.

Demolition.......110 to 2,200 pounds
Armor-piercing...440 to 2,200 pounds
Fragmentation........5 to 110 pounds
Incendiary...........2 to 110 pounds
Rotating Cluster-550 to 2,200 pounds
Chemical..........22 to 1,100 pounds
Flare.................6 to 25 pounds

Photo flash, propaganda and parafrag bombs were available also.

FIRE CONTROL EQUIPMENT

Reports obtained since World War II indicate that the Soviets are exploiting German fire control devices. The Soviets have been credited with complete exploitation of all fire control and bomb control devices obtained from the Western Powers through Lend Lease, surplus sales and technical information released in unclassified publications.

LOGISTICS

The Soviet Air Force maintains two types of centralized rear area stores: Special Air Force Stores, which are stocked with aircraft engines, spare parts, ammunition, and other types of specialized equipment used solely by air force units; and General Stores, from which the air force is supplied with food, clothing, gasoline and other non-specialized supplies.

These central depots in the rear areas are linked through the Air Army Depots with the Advanced Supply Stores (GAS) which are attached to each Regional Command of Aviation Ground Services (RAB). The main function of the GAS is to provide supplies exclusively designed for the use of the air units. The Airfield Servicing Battalions (BAO's) maintain five-days' supplies of various types of stores, obtaining replenishment from the GAS supplies.

Fuel is an example of a type of supply which does not pass through the GAS. Daily reports on the fuel situation in each unit are forwarded by the BAO to the RAB headquarters. Supplies are transported by rail from the Central Stores for Fuel and Oil to the distributing stations, from which the fuel is issued direct to the various ground organization units in the area. The BAO and OATB are responsible for the transportation of fuel from the distributing stations to the airfields.

During the war, the regiments of the air armies obtained new aircraft in several ways. The most common method was for ferrying squadrons attached to the Replacement Air Brigades (ZAB's) to pick the aircraft up at the factories and fly them to the airfields of the subordinate Replacement Air Regiments (ZAP's) which were located relatively close to the production centers. The ZAP's then served as temporary storage depots from which the required aircraft were taken to the front by replacement crews.

Another method employed was for front-line units to fly their aircraft direct from the factory. Although both new type and replacement aircraft were preferably flown to the front, units not actively engaged in operations received appreciable numbers by rail near the end of the war.

Very little information is available on the specific methods employed by the air force to evacuate equipment and personnel of its own and of the Army. It is believed, however, that the Soviet Air Force is at least responsible for the evacuation of its own men and materiel when circumstances require such action.

Soviet statements indicate that hundreds of thousands of Red Army wounded were moved by the Medical Ambulance Squadrons of the militarized Civil Air Fleet.

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GENERAL

USSR Naval Policy is dictated by the unique geographical position of the Soviet Union. It differs, of necessity, from that of other powers. The wide physical separation of the USSR's maritime frontiers and inadequate Soviet-controlled water routes between these areas necessitate the maintenance of separate forces together with a decentralized system of logistic support. The present lack of overseas bases is another factor tending to tie each of these separate naval forces or fleets to its respective maritime frontier area. The Soviet Navy is thus handicapped, in that it lacks the strategic mobility enjoyed by other navies.

Under current cohditions, it would be virtually impossible to effect a rapid wartime concentration of Soviet naval forces, drawn from the various fleets, in any given critical area. This handicap confers a corresponding advantage on adversaries capable of great flexibility in the strategic deployment of their forces. For this reason, comparative total fleet strength summaries of the USSR and other powers are meaningless, unless the geographical distribution of the former is taken into account.

The Soviet Government has attempted to offset this strategic disadvantage of developing inland and coastal waterways in areas under it's control and by building up fleet strength on a planned priority basis, corresponding to its strategic interests. The Stalin Canal, permitting the transfer of destroyers and submarines (in a lightened condition), and lesser craft between the Baltic and Arctic Ocean, and the development of the Northern Sea route linking the Arctic and Far Eastern Fleets are notable examples of the attempt to gain strategic mobility.

Another is the river and canal network of European Russia, which is being developed to permit the eventual shifting of light naval vessels between the Black, Baltic, and Caspian Seas. Even so, possible transfers of naval strength by these routes are time consuming and not immune to damaging attacks.

The regular ocean routes between Europe and the Far East, and European waters linking the three western Soviet Fleets are under the potential control of other world powers. They are available to the USSR only during peacetime, or with the consent of the controlling powers during time of war. In the past, security considerations have induced the Soviet Government to make a minimum use of these routes.

Coastal defense is definitely part of the navy's mission rather than that of a unit analogous to U. S. Coast Artillery, as the Soviets believe that knowledge of naval gunnery is required to fire on floating targets. The navy, therefore, is responsible for the defense of an area fifty miles inland from the coastline.

STRENGTH AND DISPOSITION

BB (Battleships)	5
BM (Monitor)	1
CV (Aircraft Carrier)	1 (reported scuttled)
CA (Heavy Cruiser)	20
CL (Light Cruiser)	3
DD (Destroyer)	100
DE (Destroyer Escort)	49
SS (Submarine)	308
PG (Sloop)	12
PF (Frigate)	28
AM (Minesweeper)	316
PC (Large Submarine Chaser)	24

ARCTIC FLEET	BALTIC FLEET	BLACK.SEA FLEET	FAR EASTERN FLEET
BB.........1	BB.........3	BB............1	BB........0
CA.........1	CA........10	CA............5	CA........4
CL.........1	CL.........1	CL............1	CL........0
DD........20	DD........42	DD...........20	DD.......18
DE.........3	DE........24	DE............9	DE.......13
SS........28	SS.......124	SS...........46	SS......108
PG.........1	PG.........3	PG............7	PG........1
AM........17	AM.......235	AM...........25	AM.......32
PC........14	PC.........0	PC............0	PC.......10
	BM.........1		PF.......28
	CV.........1*		

*Reported scuttled.

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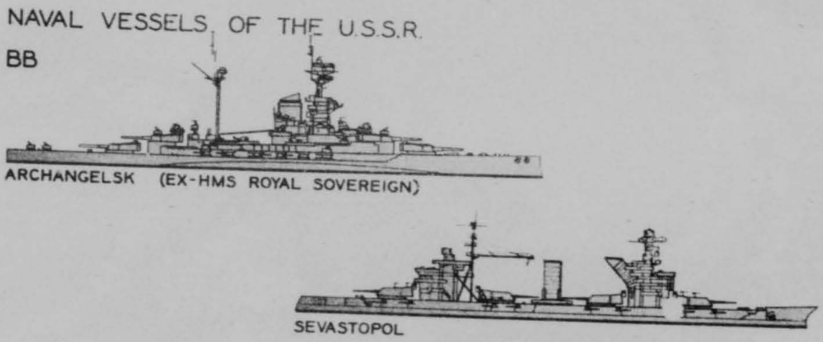
SHIPS

BATTLESHIPS - LK (U.S. BB)


NAVAL VESSELS OF THE U.S.S.R.
BB
ARCHANGELSK (EX-HMS ROYAL SOVEREIGN)
SEVASTOPOL

The most powerful capital ship flying the Soviet Navy's commission **pennant today is the** ARCHANGELSK, formerly the British ROYAL SOVEREIGN. Although obsolescent, she mounts a powerful battery of 15-inch guns and retains residual fighting value as a heavy convoy escort and coastal bombardment unit.

The only other existing Soviet battleships are the three units of the GANGUT class. The GANGUT class was begun prior to World War I and must be regarded as obsolete.

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AIRCRAFT CARRIERS - AN (U.S. CV)

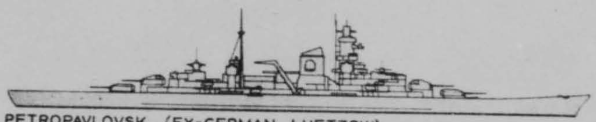
ILLUSTRATION NOT AVAILABLE

The most outstanding deficiency of the Soviet Fleet is the lack of aircraft carriers.

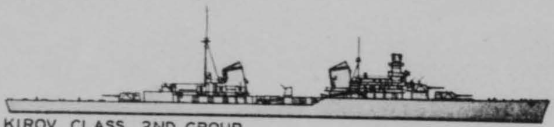
Positive steps to build and acquire carriers may be expected in the normal course of expanding the Soviet Fleet.

The former German aircraft carrier GRAF ZEPPELIN, has been reported as scuttled.

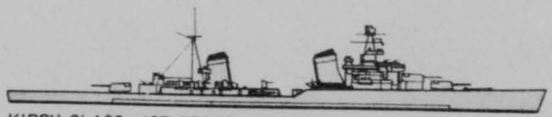
HEAVY CRUISERS - KR (U.S. CA)



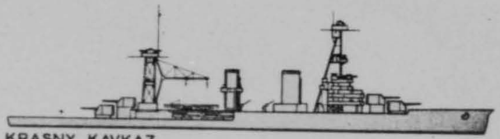
PETROPAVLOVSK (EX-GERMAN LUETZOW)



KIROV CLASS. 2ND. GROUP



KIROV CLASS. 1ST. GROUP



KRASNY KAVKAZ

The only new large surface warships completed to date in Soviet Russia are heavy cruisers. All belong to the KIROV class. Rated as "light cruisers" by the Soviets, their 7.1-inch main battery guns definitely place them in the heavy cruiser category by most accepted standards of cruiser classification.

An important heavy cruiser in the Soviet navy is the PETROPAVLOVSK, a unit of the German PRINZ EUGEN class.

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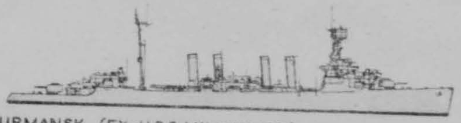
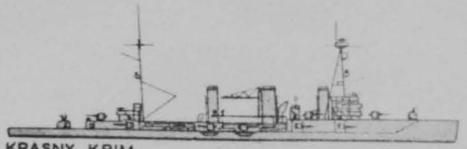
LIGHT CRUISERS - KRL (U.S. CL)



MURMANSK (EX-U.S.S. MILWAUKEE)

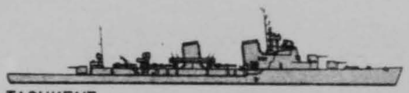


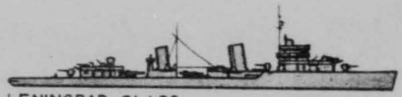
KRASNY KRIM

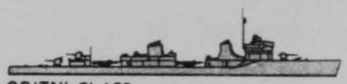
To date, the Soviet navy has shown little interest in light cruisers and none are known to be under construction or projected. Of the existing ships of this type, the most powerful is the MURMANSK, formerly the U.S.S. MILWAUKEE.

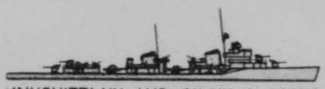
The other light cruiser is the KRASNY KRIM, laid down in 1913. Her design was well in advance of contemporary cruiser construction. Except that she has been fairly active in peacetime exercises, little is known of her performance.

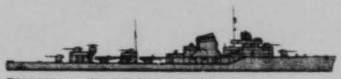
DESTROYERS - EM (U.S. DD)

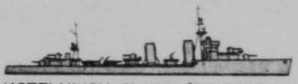

TASHKENT

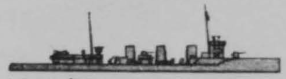

LENINGRAD CLASS

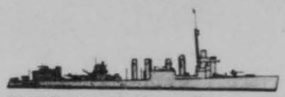

OPITNI CLASS

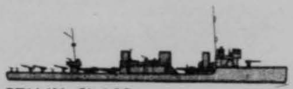

VNUSHITELNY AND SILNY CLASSES


RYANY AND GORDI CLASS


KOTELNIKOV CLASS (EX-ROUMANIAN)


LOVKI (EX-ROUMANIAN MARASTI)


DERZKI CLASS (EX-U.S."FLUSH-DECKERS")


STALIN CLASS

The largest known Russian destroyer is the Italian designed and built TASHKENT, delivered to the Black Sea in 1939. The TASHKENT is particularly interesting, as her design will probably exert considerable influence on future Soviet large destroyers.

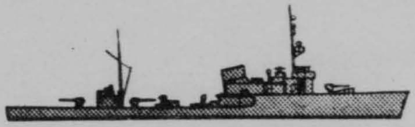
The seven or more units of the LENINGRAD class constitute the balance of the Soviet large or "super" destroyer force. This class has been successfully employed as cruisers, fast minelayers and flotilla craft.

The newer fleet destroyers, the VNUSHITELNY and SILNY classes appear to be standard wartime construction. Often referred to as "improved Gordi's", they combine the machinery arrangement of the LENINGRAD with general design of the GORDI.

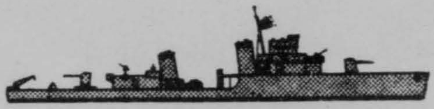
Immediately following the LENINGRADS, the GORDI and RYANY classes emerged as the USSR'S second new destroyer design and first group of genuine fleet destroyers. They are very maneuverable, and, although very lightly built, stand up well to the shock of their own gunfire.

The balance of the Soviet destroyer force is made up of older units of limited fighting value.

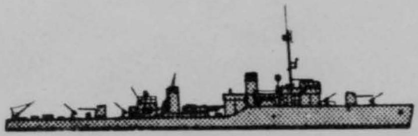
DESTROYER ESCORTS - SKR (U.S. DE)



DZERZHINSKY CLASS



POLUKHIN CLASS



SHTORM CLASS

Four classes constitute what might be termed the Soviet equivalent to the American DE or destroyer escort category. Little is known about the newest design, believed to be either projected or in the earlier stages of construction. Known as the "BIRD" class, these units are said to be very similar to the Swedish MJOELNER class of coastal destroyers in appearance and general arrangement. Next in order of age are the DOLUKHIN and an undetermined number of sister ships. They appear to be a development of the SHTORM class, with better watertight integrity, stability and sea-keeping ability. They are believed fitted for minelaying and minesweeping in addition to their escort and patrol duties.

Best known of Soviet destroyer escort type vessels are the twenty-seven or more units of the SHTORM class.

Oldest of effective Soviet destroyer escorts are the DZERZHINSKY and KIROV designed and built in Italy in 1933-34. They appear to be an escort version of the typical Italian one-stack fleet destroyer, and large enough for independent cruising.

SUBMARINES - GENERAL

The primary function of Soviet ocean patrol and seagoing submarines would be to attack and, if possible, cut the sea communications of maritime opponents. Some of the seagoing units and most or all coastal submarines may be expected to defend Russian sea frontiers, and, in addition, to engage in reconnaissance, special missions, and supply operations in support of other naval, air, and ground forces.

The USSR has at present a minimum of 271 submarines, of which 169 are in Europe and the Near East (37 in the Arctic area, 81 in the Baltic, 42 in the Black Sea, and nine in the Caspian Sea). By type, these 169 units in Europe and the Near East are comprised of four fast ocean patrol submarines, 65 ocean patrol, 32 seagoing, and 68 coastal defense boats. Maximum estimates for all areas vary from 308 to 360; between 195 and 245 of these units are believed to be in Europe and the Near East.

Known Soviet submarine types do not incorporate such features as Schnorkel, high capacity batteries, or gas turbine engines developed by the Germans late in the war. While some of this equipment could be installed in existing classes, their full benefit can be realized only in boats which accommodate the improvements in their basic design.

Soviet naval construction during the next few years will stress submarines and light combat vessels, with the former being developed and manufactured under the effective German influence. Any increases in submarine strength will be achieved through continuation of the current construction program of standard Russian classes and completion of captured or salvaged German units (primarily in fast ocean patrol type XXI and ocean patrol type VII C). It is estimated that by 1950 the minimum totals mentioned above may be increased by six to fifty-seven fast ocean patrol units, one to fifteen ocean patrol, up to eighteen seagoing submarines, and from thirty to eighty-three coastal defense unit. Most of the latter would be in established Soviet classes, whereas the larger subs would be principally German types.

PL "K" Class - Ocean Patrol Type

Units of this class are the largest submarines yet designed and built by the Soviets. Their design represents an improvement of the "P" class submarines. They are referred to by the Russians as "submarine cruisers" and are believed capable of extended oceanic operations. This class was built between 1939 and 1944.

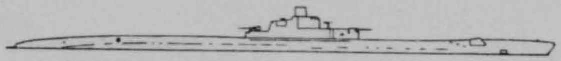
Dimensions:	Displacement	1,120 tons (standard)
	Length	282'2" at water line
	Beam	22' 2"
	Draft	11'11" (mean)

	No.	Size & Type	Max Elev.	Max Range	Max Ordinate	Ammunition
Armament:	2	3.9"/51AA	45°	23,300 yd	16,800	--
	2	45mm AA	85°	10,900 yd	5,900	--
	6	21" torpedo tubes in the bow				
	4	21" torpedo tubes in the stern				

May carry 18 mines.

Propulsion: Deisgned: 18 knots (surfaced) 4,200hp
8.5 knots (submerged)
Screws : 2
Endurance: 7,000 miles at 9 knots (surfaced)
125 miles at 5 knots (submerged)

Eight 21" submerged torpedo tubes and two 21" tubes above water. Tubes arranged six at bow, four at stern. Total of 24 torpedoes or 20 mines carried. Two periscopes; 1) attack, 2) sky search.

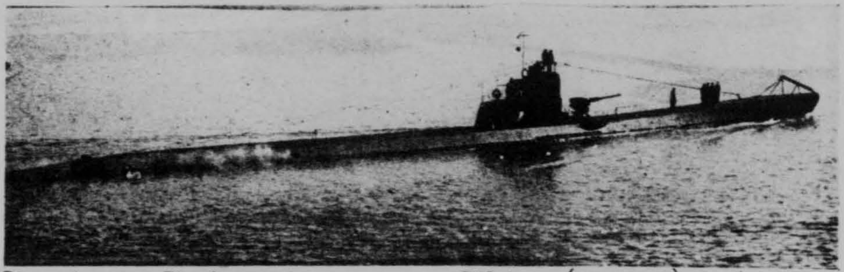


Referred to in the Red Navy as "Submarine Cruisers", "K" class units represent the largest and most powerful submarines built to date in the USSR. They are not large boats by American Standards; nevertheless, they have impressed observers as being well constructed and maintained, though lagging somewhat technologically. For example, considerable wood has been used in furnishing the boats.

The "K" class represents a considerable advance over the "P" type, which it replaces. With a large endurance, well laid out and equipped- particularly as regards stores and accommodations - they appear capable of opertating far from their bases. To date, all identified "K" class submarines have been built in Baltic yards.

PL-S Class - OceanPatrol Type

This class represents the standard Russian ocean-patrol and fleet type submarine. Units are considered to be very successful and it is highly probable that construction is being continued. This class was built between 1940 and 1944. Complement comprises 45 officers and men.



Dimensions: Displacement..............750 tons (standard)
1,000 tons (submerged)
Length....................248'10" at water line
Beam......................21'
Draft.....................12'6" (mean)

Armament :

No.	Size & Type	Max Elev	Max Range	Max Ordinate	Ammunition
1	3.9"/51	45°	23,300yds	16,800	200
1	45mm AA	85°	10,900yds	5,900	500
4	21" torpedo tubes (bow)				
2	21" torpedo tubes (stern)				
2	12.7mm MG				

Propulsion: Designed..................20 knots (surfaced) 4,000 hp
8.5 knots (submerged)
Screws....................2
Fuel......................40 tons
Endurance.................7,000 miles at 9 knots (surfaced)
115 miles at 5 knots (submerged)

Torpedo tubes also reported as four bow and four stern, and six bow and two stern. Some units differ from others in that they have full-welded hull plating of thinner but stronger steel.

Reported to have been built to a German design, the "S" class is generally regarded as the most successful type of Soviet ocean patrol submarine. A good proportion of these boats is believed to have been built at the Sormovo yards at Gorki on the upper Volga River (east of Moscow), whence they were transferred by inland waterways to the Baltic and Arctic, while a few are reported to have been floated down that river to the Caspian Sea. They were also built at Nikolaev and in Far Eastern yards; in the latter case the boats may have been assembled from prefabricated parts shipped out overland. More "S" class boats are believed under construction.

PL "L" Class - Ocean Patrol Type

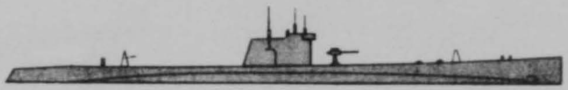
This design was the forerunner of the "S" class and was intended for the same general duties. The 3-inch guns were not mounted in all the units. It is reported that boats carry 12 torpedoes and 20 mines. Class was built between 1936 and 1941. Complement totals 50 officers and men.

Dimensions: Displacement..................1,100 tons (standard)
1,450 tons (submerged)
Length........................240' (overall)
Beam..........................24'
Draft.........................13'9" (maximum)

Armament: 1..............3.9"/51
2..............3"
1..............45mm AA
6..............21" torpedo tubes (bow)
2..............21" torpedo tubes (stern)

Propulsion: Designed......................14 knots surfaced, 2,900hp
8 knots submerged
Screws........................2
Fuel..........................40 tons
Endurance.....................6,000 miles at 9 knots surfaced. 110 miles at 5 knots submerged.

PL "L-1" Class - Ocean Patrol Type



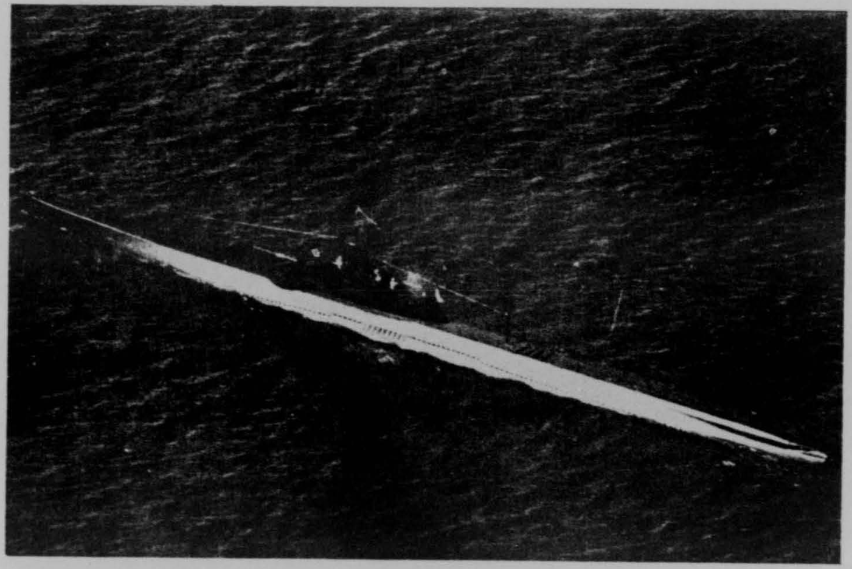
Armament:	No.	Size & Type	Max Elev	Max Range	Max Ordinate	Ammo
	1	3.9"/45	45°	23,300 yds	16,800	122
	1	45mm/46 AA	85°	10,900 yds	5,900	250

Six 21" bow torpedo tubes, total of 12 torpedoes and 20 mines carried. Two periscopes; 1) attack, 2) sky search.

Propulsion:.................Drive: Diesel and electric, two each.
Fuel........................Diesel oil; capacity, 98.6 tons (max), 38.6 tons (normal)
Submerged endurance.........72 hours (max)
Sea endurance...............42 days
Diving depth................295'(max) 246'(normal). Crash dive in 30 sec.
Diameter of turning circle..364 yards at 25° rudder angle (surf); 1052 yards at 25° rudder angle (submerged).

The "L-1" class is believed to have been the first group of submarines built in the USSR under the Soviet regime. Reports indicate that their design is based on that of British submarine L-55, sunk off Kronstadt during the Baltic operations of 1919. The L-55 was subsequently salvaged and restored to service in the Red Baltic Fleet. Submarines of this class were originally given names and subsequently numbered "L-1" through "L-6" and "D-1" through "D-6". There may be minor variations in their characteristics, but they were especially fitted as minelayers. The class is now obsolescent, the last units reportedly having been built in 1933-34.

PL"L-2" Class - Ocean Patrol Type



Armament:

No.	Size & Type	Max Elev	Max Range	Max Ordinate	Ammo
1	3.9/55 AA	85°	23,300 yds	--	--
1	45mm/46 AA	85°	10,000 yds	--	--

Two machine guns. Eight 21" torpedo tubes; six bow and two stern. Eighteen torpedoes and 20 mines carried.

Propulsion: Drive......Diesels and electric motors; two screws.

These are a minelayer version of the ocean patrol type of submarine. The origin of their design is obscure, although it might be based on that of the "L-1" class. Contrary to opinion prevailing abroad, it appears that these boats may be contemporaries rather than predecessors of the "S" class, and may still be included in current building programs. They are definitely not sisters of "L-1" class boats. Most "L-2" class boats identified to date appear to have been built or assembled in Far Eastern yards.

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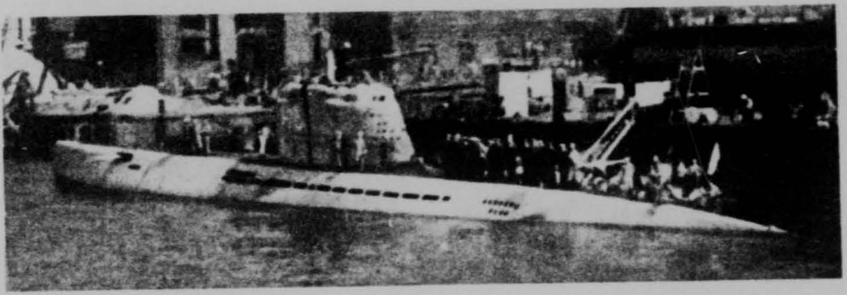
PL Ex-German Type XXI - Fast Ocean Patrol Type



"Type XXI" Submarine

Armament:	No.	Size & Type	Max Elev	Max Range	Max Ordinate	Ammo
	4	30mm Flak 44	90°	--	--	4,000

Six 21" bow torpedo tubes; total of 20 torpedoes carried. Time for reload, 20 minutes; for second reload, 20 mines. Mines: 18 TBM mines or 12 TMC mines may be carried instead of torpedoes. Launched through torpedo tubes. Three periscopes; 1) attack, 2) sky search, and 3) observation.

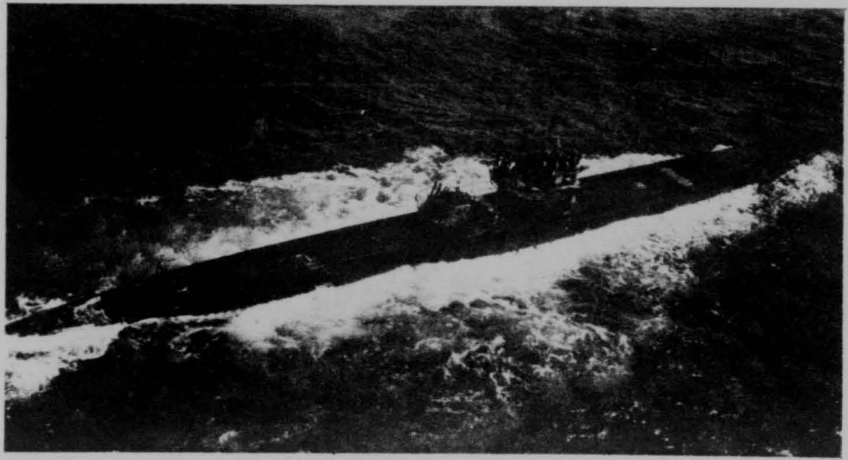
Fire Control and Electronics:	Radar: Location type for direction and distance of air/sea targets; observation type for directional detection of enemy radar transmission. Hydrophones: Forty-eight receiver units near keel.
Propulsion:	Drive: Two 6-cylinder, 4-stroke diesels, two electric motors and two additional electric motors for "creeping" speeds.
Fuel:	Heavy diesel oil; capacity, 250 tons (max), 228 tons (normal). Fitted with Schnorkel.
Diving depth:	443' (max), 376' (normal)

Characteristics given are those for the original German design; they are subject to modification by the Russians.

In addition to the number of boats listed, the Russians may well have seized an undertermined number of completed sections and sub-assemblies.

These submarines were designed by the Germans for high submerged speed; accordingly, surface characteristics were sacrificed where necessary. The boats were mass-produced by assembly line methods with plants throughout Germany contributing to the program. The design was not perfect, and because of difficulties, particularly with the hydraulic control system, none of the boats ever made a war patrol. This class will probably form the basis for the Russian development of other high speed types of submarines.

PL Type IX-C/40 Class - Ocean Patrol Type (Baltic Only)



Armament:

No.	Size & Type	Max Elev	Max Range	Max Ordinate	Ammo
*1	37mm Flak 42	90°	7,200 yds	9,000	2,600
4	20mm Flak 38	90°	5,200 yds	12,000	8,500

* Projectile weight of 37mm guns: 1 lb., 6 oz.

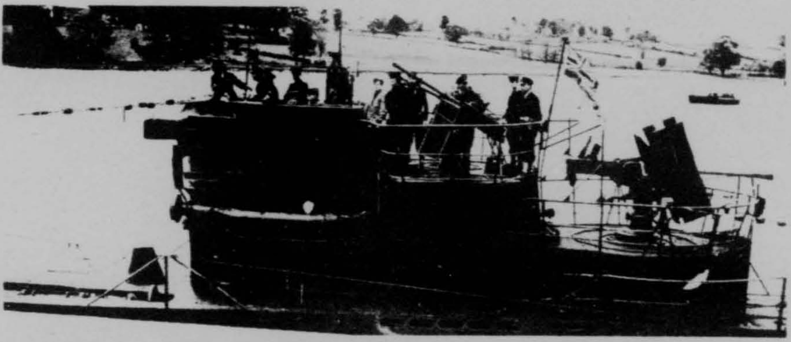
Six 21" torpedo tubes; four bow, two stern. Total of 19 (normal) or 22 (maximum) torpedoes carried. Mines: Can carry 66 TMB mines (maximum) with no torpedoes, or various combinations of mines and torpedoes. Two periscopes.

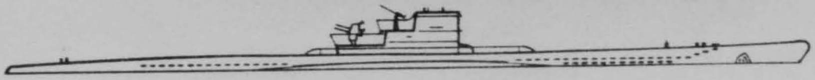
Fire Control and Electronics:	Radar: Surface search and radar detection gear. Radio: Extensive long, short and ultrashort transmitter/receiver equipment. Hydrophones: "Balkan type", with 48 hydrophones of 3" diameter.
Propulsion:	Drive: Diesel and electric, two each. Two screws. Fitted with Schnorkel. Fuel: Heavy diesel oil; capacity, 214 tons (max), 159.6 tons (loaded), 63.3 tons (normal). Diving depth: 329 feet. Diving time: One minute to periscope depth at four knots. Diameter of turning circle: 520 yds in three minutes, 21 seconds at 20° rudder angle.

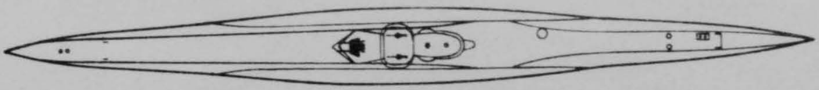
This type has also been known as "740 tonners." Characteristics given are those for the original German design, and are subject to modifications by the Russians. Deck armament is known to have varied widely in this design.

These vessels were conservatively designed and constructed, and, in general, are inferior to comparable American boats. The IX-C boats were fitted with Schnorkel during the latter part of the war.

PL Type VII-C Class - Ocean Patrol Type







Armament:	No.	Size & Type	Max Elev	Max Range	Max Ordinate	Ammo
	1	37mm Flak42	90°	7,200 yds	9,000	1,195
	4	20mm Flak38	90°	5,200 yds	12,000	4,380

Projectile Weight of 37mm gun:	1 lb., 6 oz. Four bow and one stern 21" torpedo tubes; will carry 12 (normal) or 14 (maximum) torpedoes. Mines: Can carry 39 (maximum) with no torpedoes, or various combinations of mines and torpedoes. Two periscopes; 1) attack; 2) navigation.
Propulsion:	Drive: Diesel and electric, two each. Two screws; fitted with Schnorkel. Fuel: Heavy diesel oil; capacity, 113, tons (maximum), 105 tons (loaded)Diving Depth: 309 feet.*
Remarks:	Up to around 50 additional German submarines, the majority presumably of the Type VII-C design, may have been acquired by the USSR through seizure or salvage. Individual identity and status are not known at the present time.

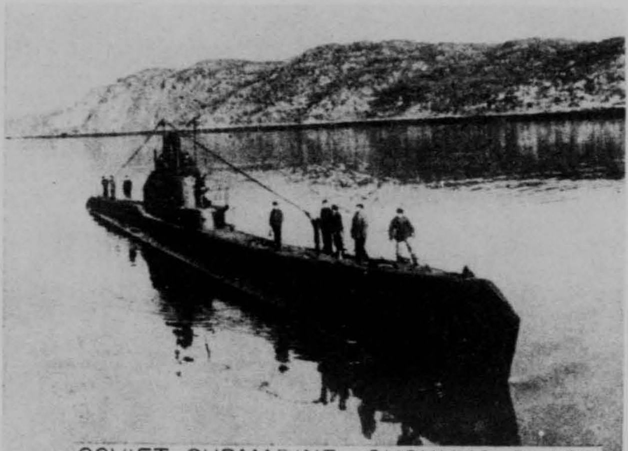
* U-1064 has a diving depth of 394 feet, but is otherwise similar to the other boats of this type.

PL Shchuka (SHCH) Class - Ocean Patrol Type

This class represents one of the most successful Soviet submarine designs evolved to date. Units are well suited to the seagoing operations along Russia's maritime frontiers. Considerable external variations exist in this class, although the basic design is believed similar for all units. Class was built between 1934 and 1938. Complement comprises 40 officers and men.

Dimensions:	Displacement:	660 tons standard 820 tons submerged
	Length:	220' to 225' overall
	Beam:	20' 4"
	Draft:	12' 10" maximum

Armament:
2 - 45mm size, type AA/46
85° maximum elevation
10,900 yards maximum range
5,900 maximum ordinate
1,000 Ammunition
4 - 21" torpedo tubes - bow
2 - 21" torpedo tubes - stern
(Torpedo tubes also reported as 6 bow, 2 stern.)
2 Periscopes.



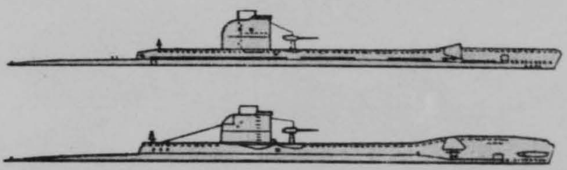
SOVIET SUBMARINE - SHCHUKA CLASS

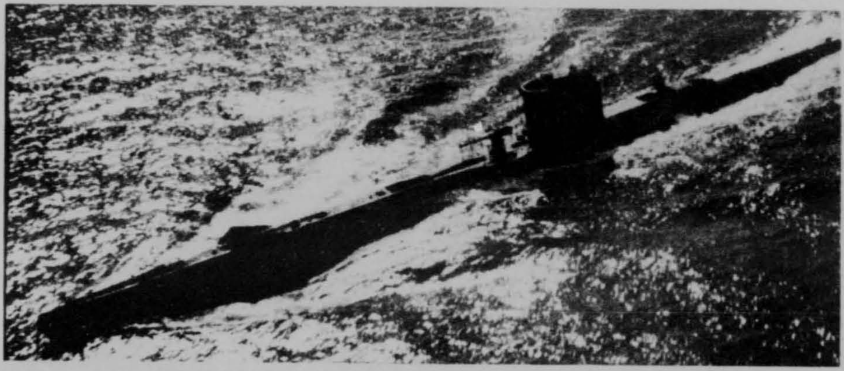
Propulsion:	Designed:	18 knots surfaced, 1,600 hp 8.5 knots submerged
	Screws:	2
	Fuel:	25 to 58 tons - Diesel oil
	Endurance:	72 hours submerged (Maximum) 5,000 miles or 40 days

It has been reported that these boats cannot fire their forward tubes in one salvo, as the trim of the boat is altered radically. Two torpedoes is the maximum that can be fired per salvo.

This class includes a numerous series of medium-sized Soviet submarines, built to successively improved variations of the original 1929 design. They have a reputation of being very successful and popular boats, and are supposed to have scored the highest percentage of Soviet submarine successes during the recent war. They are essentially coastal boats, apparently well suited to operations off the Soviet' Union's maritime frontiers. None has ever been reported transferred from one Red Navy Fleet to another, except by inland waterway route. More boats are believed to be under construction.

PL Unity Class - Seagoing





Three British submarines, Unbroken, Unison, and Ursula are on loan from the Royal Navy to the Soviet Navy. They are designated as B-2, B-3, and B-4, respectively, by the Russians. They are designed essentially for operations in narrow seas. Class was built between 1938 and 1942.

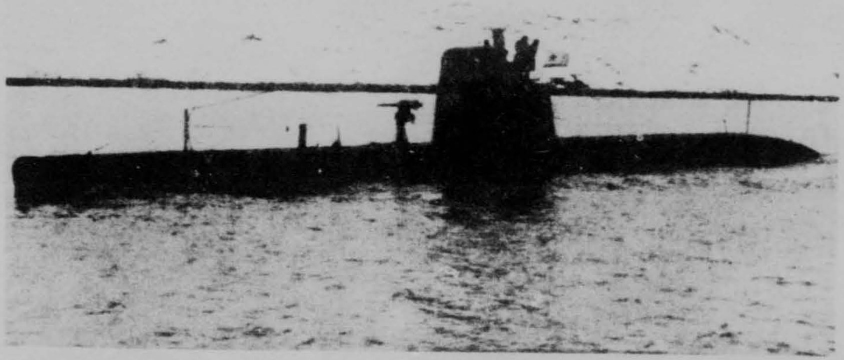
Dimensions: 646 tons (standard)
732 tons (submerged)
Length: 196' 11" overall
Beam: 16' 1"
Draft: 15' 2" (maximum)

Armament: 1 - 3" guns
4 - 21" torpedo tubes (bow)
8 - 10 torpedoes
Capable of carrying 6 mines in lieu of torpedoes.

Propulsion: Designed: 11 knots (surfaced) 615 hp (surfaced)
10 knots (submerged) 825 hp (submerged)
Tested depth: 200' (des)
Screws: 2
Fuel: 55 tons

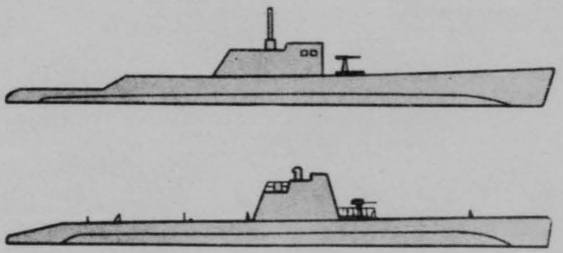
B-4 varies somewhat in appearance. These submarines are on loan from the Royal Navy to the Soviet Navy, and are designed essentially for operations in narrow seas.

PL "M" Class - Coastal Defense

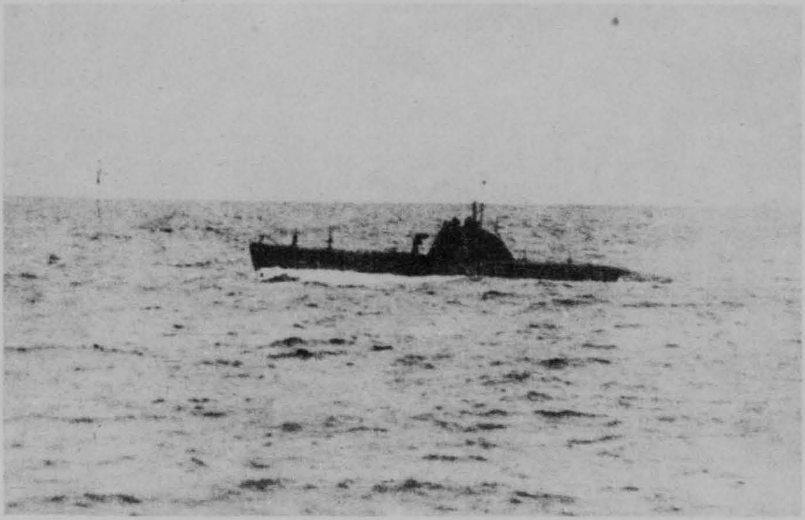


This class is the standard Russian coastal submarine with limited radius of action. A considerable number were constructed. They are the nearest mass produced equivalent to the German 250-ton design. Units are equipped with good air purification systems and air conditioning. The air is excellent, even after being submerged for 16 hours. Class was built between 1935 and 1942. Complement totals 20 officers and men.

Dimensions:	Displacement:	188 tons (standard)
	Length:	142' 9" (water line)
	Beam:	10' 10"
	Draft:	8' 2" (mean)



Variations within the M Class.



Armament:

No.	Size & Type	Max Elev	Max Range	Max Ordinate	Ammo
1	45or47mm AA	85°	10,900yds	5,900	—

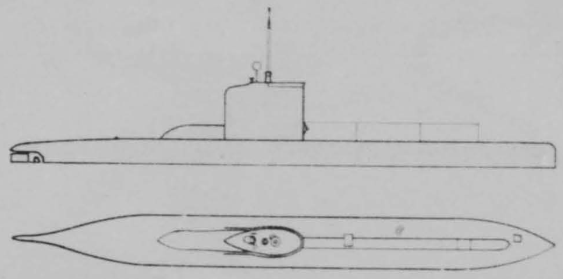
Two 21" torpedo tubes (bow); no spare torpedoes carried. No mines. One periscope.

Propulsion:	
Designed:	14 knots (surfaced), 800 hp (surfaced), 7 knots (submerged)
Endurance:	500 miles. 40 miles (submerged) at 5 knots. Submerged endurance 48 hours (max). Sea endurance 16 days.
Drive:	Diesel and electric, one each.
Fuel:	Diesel oil; capacity 5.5 - 15 tons.
Diving Depth:	197' (max) 164' (normal). Crash dive in 20 seconds.
Diameter of turning circle:	303 yds (surf) and 607 yds (subm) both at 25° rudder angle.

Early units (M 73, 77, 79 and 83) are somewhat smaller and slower. Later units reported to have a cruising endurance of 3,440 miles.

These are small coast defense submarines of limited endurance and offensive power. Built in great numbers and apparently capable of overland transhipment in sections by rail, their value does not appear to exceed that of harbor or inshore defense craft by any appreciable degree. Their war record was not outstanding, considering their numerical strength. Except for the residue of prewar programs, this type may be discontinued in favor of much larger coastal units or a Russian derivative of the German Type XXIII.

PL Type XXIII Class - Coastal Defense



Dimensions: Displacement: Standard: 232 m. tons (surf.)
256 m. tons (subm.)
Full Load: 274 m. tons (subm.)
Length: 114' 6" (oa.)
Beam: 9' 10" (hull) 13' 2" (over fins)
Draft: 12' (mean)

Armament: Guns: None
Two 21" bow torpedo tubes. No spare torpedoes carried.

Propulsion:	Speed (knots)	Endurance (naut. mi.)	HP (total)
Designed (surf)	9.75	9.75	630
Max. sust. (surf.)	9.7	1,350	575
Cruising (surf.)	6	4,300	...
Pres. Max. (subm)	12.5	12.5	550
Economical (subm)	4.0	175	...

Drive: One diesel, one electric motor for high submerged speeds, and one electric motor for economical speeds. One screw. Fitted with Schnorkel. Fuel: heavy diesel oil; capacity, 18 tons (max). Diving depth: 330'.

Type XXIII was the only class of German submarines designed after mid-1943 which actually got into operation. A prefabricated coastal type with a fairly high submerged speed, it was built for Black Sea and Mediterranean duty. The Germans did not consider these boats as a successful design. Their hull shape, patterned for high submerged speed, made them difficult to handle on the surface.

PL "P" Class

ILLUSTRATION NOT AVAILABLE

This class was the first Russian-built large ocean-going type, and was the prototype of the more successful "K" class. Units were built between 1934 and 1937.

Dimensions:	Displacement:	1,200 tons (standard)
	Length:	295' 3" at water line
	Beam:	26' 3"
	Draft:	10' (mean)
Armament:	2 - 3.9"/51	
	1 - 45mmAA	
	4 - 21" torpedo tubes (bow)	
	2 - 21" torpedo tubes (stern)	
Propulsion:	Designed:	20 knots (surfaced) 5,400 hp 10 knots (submerged) 1,000 hp
	Screws:	2
	Fuel:	90 tons

PL Swordfish Class

ILLUSTRATION NOT AVAILABLE

HMS Sunfish, designated B-1 by the Russians, is a British submarine on loan to the Soviet Navy. This boat belonged to the first class of intermediate British Submarines, a prototype for the British "S" class. It was built in 1937.

Dimensions:	Displacement:	768 tons (standard) 960 tons (submerged)
	Length:	208' 8" (overall)
	Beam:	24' 0"
	Draft:	12' 10" maximum
Armament:	1 - 3" gun 6 - 21" torpedo tubes (bow) 12 torpedoes carried. Capable of carrying 12 mines in lieu of torpedoes.	
Propulsion:	Designed:	15 knots (surfaced) 1,900 hp (surfaced) 10 knots (submerged) 1,300 hp (submerged)
	Tested depth:	200'
	Screws:	2
	Fuel:	40 tons

ILLUSTRATION NOT AVAILABLE

Among minor combatant types, the standardized mass-produced "T" class minesweepers are the most outstanding. In a displacement of 450 tons standard, their 3,000 horsepower Diesel engines can drive them at 21 knots, making them the fastest minesweepers in the world for their size. "T" class units have also been employed as coastal minelayers, escorts and patrol vessels. Other modern minesweepers include 10 ships of the American ADMIRAL class transferred to the Soviet Fleet under Lend-Lease.

The inland waterway naval forces of the USSR are the largest in the world. A type not generally found elsewhere is the river monitor, an armored, mobile gun platform. The DRASNY VOSTOK class of eight or more Amur River monitors are probably the best known. Displacing 965 tons standard, they mount eight 4.7-inch, 50-caliber guns in twin turrets.

A newer class is believed to be even more powerful; on 1,900 tons they are said to mount four 5.1-inch guns in turrets.

SOVIET MARINES

Included in the Coastal Defense are the Soviet Marines. It is believed that the Marines are responsible for amphibious operations and defense against enemy landings. Perhaps they have also been given additional duties such as manning midget submarines, explosive torpedo boats, swimming sabateurs and so forth. Nothing definite is known.

AMPHIBIOUS UNITS

Nothing is known of the Soviet's ability to wage amphibious warfare. Quite a few landing craft are in Soviet possession. Landing exercises and training operations have been conducted in the Baltic and Black Seas.

NAVAL AIR FORCES

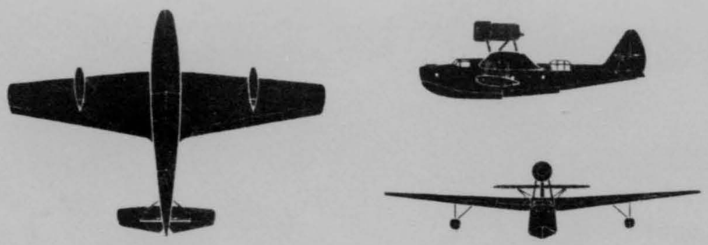
The Naval Air Force is an integral part of the Navy. It consists of a number of Fleet Air Forces, each of which is operationally subordinate to the surface fleet it supports. Administrative subordination probably is both to fleet headquarters and to Naval Air Force headquarters in Moscow, depending on the matter involved. Supply and maintenance of the navy's air units is provided by fleet and naval air agencies.

The mission of the Naval Air Forces includes responsibilities such as antishipping and antisubmarine attacks, convoy and port defense, support of Soviet amphibious operations, and defense against enemy amphibious operations.

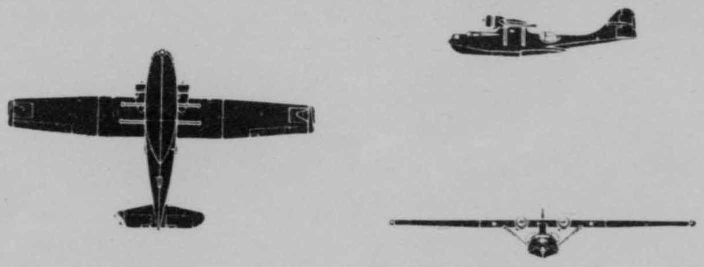
The Naval Air Force is organized in practically all echelons very much like corresponding air army units; the Fleet Air Forces may be considered, in effect, as coastal air armies. Limitations imposed by a complete lack of aircraft carriers will keep naval air units confined to shorebased operations in the foreseeable future. In brief, the Naval Air Force will remain of little or no value in long-range naval warfare but should be effective against targets within operational range of Soviet-controlled areas.

Aircraft Used - The Naval Air Force employs generally the same types of aircraft and equipment as the Tactical Air Armies. Other specialized aircraft utilized by the Navy include the MBR-2, reconnaissance bomber; GST, reconnaissance bomber; KOR-1, reconnaissance; MDR-6, reconnaissance; BV-138 (German), reconnaissance; and the DO-18E (German) flying boat, transport.

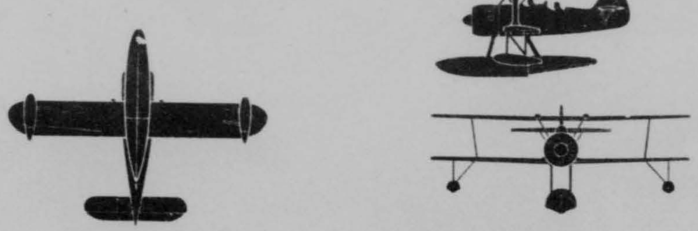
MBR-2 Operational Reconnaissance Bomber



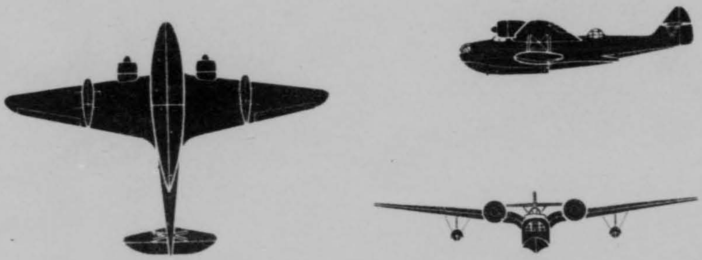
GST U.S. PBY "Catalina" built under license in the USSR.



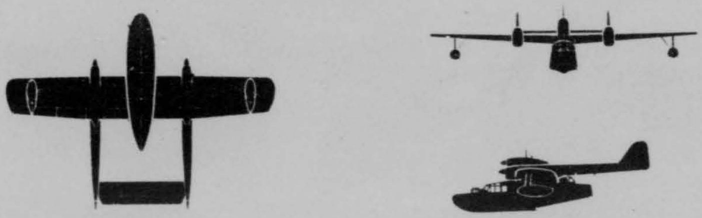
KOR-1 Obsolescent shipborne reconnaissance floatplane.



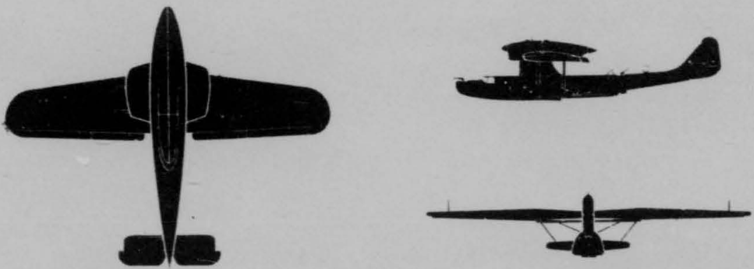
MDR-6 Currently operational reconnaissance flying boat.



BV-138 Reconnaissance flying boat.



DO-18E Transport flying boat.



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LOGISTICS

No information is available as the method of supplying the fleet, except that inasmuch as the Soviet Fleet has been operating close to its shore bases, a fleet train in the American sense has been superflous.

Each fleet area, i.e., the Northern, Baltic, Black Sea and Far Eastern Fleets, maintains such operating bases as are necessary for the refueling, repair and general supply activities.

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CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

DOMESTIC EMERGENCY PLAN, BASIC-1949
(ConAC-DEP-49)

1. The following "Domestic Emergency Plan, Basic-1949" is published for the information and compliance of all concerned.

2. This RESTRICTED document rescinds Domestic Emergency Plan, Basic-1948. Complete instructions covering the disposition to be made of its predecessor, will be found on the (next following) title page hereof.

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

Neal J. O'Brien
NEAL J. O'BRIEN
Colonel, USAF
Adjutant General

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HEADQUARTERS
CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

DOMESTIC EMERGENCY PLAN, BASIC-1949
(ConAC-DEP-49)

1. This is a RESTRICTED DOCUMENT. (Paragraph 23, Air Force Regulation 205-1, 14 March 1949.)

2. The SHORT TITLE of this document is: ConAC-DEP-49.

3. This "Domestic Emergency Plan, Basic-1949", Headquarters Continental Air Command supersedes Air Defense Command Domestic Emergency Plan, Basic-1948, which will be destroyed in accordance with Air Force Regulation 205-1, 14 March 1949 with reports of destruction submitted to this headquarters

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Commanding General, Fourth Army	2
Commanding General, Fifth Army	2
Commanding General, Sixth Army	2
Commanding General, Military District of Washington	1
Commandant, Eastern Sea Frontier	2
Commandant, Western Sea Frontier	2
Commandant, First Naval District	2
Commandant, Third Naval District	2
Commandant, Fourth Naval District	2
Commandant, Fifth Naval District	2
Commandant, Sixth Naval District	2
Commandant, Eighth Naval District	2
Commandant, Ninth Naval District	2
Commandant, Eleventh Naval District	2
Commandant, Twelfth Naval District	2
Commandant, Thirteenth Naval District	2
Commander, Eastern Area, U. S. Coast Guard	2
Commander, Western Area, U. S. Coast Guard	2
Commander, First Coast Guard District	2
Commander, Second Coast Guard District	2
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Inspector General, Third Region	1
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CONTINENTAL AIR COMMAND DOMESTIC EMERGENCY PLAN, BASIC-1949

SECTION I - GENERAL

1. PURPOSE.

a. To establish plans and procedures for the participation of all United States Air Force commands in domestic emergencies (including disaster relief) and to provide for the implementation of such plans to minimize or end such emergencies. Each United States Air Force installation, irrespective of major air command to which assigned, will participate in planning for and, in emergency or when requested by a Continental Air Command air force commander, will conduct domestic emergency and disaster relief operations.

b. In the event of domestic emergencies requiring employment of air force personnel and equipment, this plan is designed to:

(1) Establish the relationship of the Continental Air Command and subordinate units, with other major air force commands and their subordinate units, with Army areas, with Naval districts, with Coast Guard Districts, with agencies of the Federal, State and Municipal Governments, and with civil organizations which might be concerned.

(2) Standardize planning and operational procedure for all Continental Air Command air forces including all air force installations within their territorial jurisdiction irrespective of major air command to which assigned.

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2. REFERENCES.

The following regulations, orders and directives currently apply to activities contemplated under this plan. In addition, pertinent extracts from the Constitution and Statutes of the United States are set forth in Annex I. Examples of use of Federal troops and equipment in domestic emergencies are attached in Annex V.

a. Department of the Army Regulation 500-50, "Employment of Troops, Aid of Civil Authorities", 17 August 1948.

b. Army Regulation 500-60, "Employment of Troops and Supplies, War Department Activities in Connection with Disaster Relief", 1 December 1939.

c. Articles of War 81 and 82.

d. Part III, "Domestic Disturbances" of WD Basic Field Manual, Volume VII, "Military Law".

e. Book, "Military Aid to the Civil Power", prepared by the General Service Schools, Fort Leavenworth, Kansas, 1925.

f. WD Memorandum 500-50-2, "Deomestic Disaster", 29 January 1947, as amended by change #2, 8 October 1947.

g. Field Manual 19-15, "Domestic Disturbances", July 1945.

h. Circular 64, Department of the Army 1948 as amended.

i. Department of the Army Emergency Plan, White, Basic - 1948.

j. AF Regulation 23-1, 11 January 1949.

3. DEFINITIONS.

a. White Domestic Emergency Plan or Emergency Plan White is the title most frequently used by Army commands and installations in plans for domestic emergencies and disaster relief.

b. The term Domestic Emergency used in this plan, will include and pertain to the two general types as defined below:

(1) The term disaster pertains to the loss and endangering of civil life and property of pestilence, famine, fire, floods, explosions and other major calamities.

(2) The term disturbance pertains to the loss or endangering of life and property, either government or civil, by local demonstrations, labor actions, racial friction, mutiny and other civil or military disorders.

4. RESPONSIBILITIES.

a. General - The protection of life and property and the maintenance of law and order within the territorial jurisdiction of any state is the primary responsibility of state and local authorities. Intervention with federal troops, pursuant to the provisions of AR 500-50, will take place only after state and local authorities have utilized all of their own forces and are unable to control the situation, or when the situation is beyond the capabilities of state or local authorities, or when the state or local authorities will not take appropriate action, and under such other situations as outlined in AR 500-50.

b. Army (as provided by AR 500-50 and AR 500-60.)

(1) The Commanding General, each Army Area will be prepared to:

(a) Assist civil authorities in the control of domestic emergencies either in the event of imminent necessity or on order of the President.

(b) Intervene and suppress domestic disturbances wherever such intervention is authorized by law and/or directed by the President.

(2) When domestic emergency activities are undertaken, the Army commander within the territorial limits of whose Army area the affected area is located will assume immediate control of all participation in the relief activities by the Regular Army, Navy and Air Force except such activities occurring on a Navy or Air Force installation. When the catastrophe covers an area included in more than one Army area, each Army commander will assume control of relief activities in his Army area; or, in the event that circumstances warrant, a single Army commander will be designated by higher authority to control the activities. Army commanders are authorized to call upon appropriate ConAC Air Force commanders for such assistance as may be deemed necessary. (See Annex II for ConAC Air Forces and Army Areas of responsibility, and Annex IV for channels of coordination and communication.)

c. Air Force (as provided by AF Regulation 23-1, 11 January 1949)

(1) The Commanding General, Continental Air Command has been designated as the responsible Air Force agent in planning for and directing activities concerning domestic emergencies involving the employment of Air Force personnel and equipment in coordination with Army commanders.

(2) The Commanding Generals, Major Air Commands are responsible for:

(a) Directing their Air Force installations to participate in domestic emergency activities as requested by the Continental Air Command Air Force commander within whose area of responsibility the installation is located. (See Annex II, "ConAC Air Force Areas of Responsibility".)

(b) Furnishing such other assistance and information as may be requested by the Commanding General, Continental Air Command.

(3) The Commanding Generals, Continental Air Command Air Forces are responsible:

(a) To the Commanding General, Continental Air Command for Air Force Domestic Emergency activities within their assigned area of responsibility subject to regulations and directives of higher authority and the provisions of this plan.

(b) For evaluating the importance of the current operations being conducted by installations and/or units within their assigned area of responsibility and take such operation in full consideration in making final decision as to the participation required of those installations and/or units in connection with domestic emergencies.

(4) The Base Commanders of all United States Air Force installations are responsible for the safety and defense of their bases and for providing such assistance in domestic emergency situations as may be requested by the Commanding General, Continental Air Command Air Force within whose area of responsibility the installation is located. Such assistance requested by a Continental Air Command Air Force Commander may necessitate the temporary curtailment of the primary mission of the installation and/or unit concerned.

5. SCOPE:

a. Section II ("Information") presents the principles for the employment of troops during any domestic emergency situation and the essential substance of the more important laws relating to the employment of military forces in assisting civil authorities. Also included are the applicable policies of the Departments of the Armed Forces.

b. Section III ("Operations") establishes in detail the requirements of the Air Forces in planning for and implementing domestic emergency activities.

SECTION II - INFORMATION

6. Intervention with Federal Troops: is governed as follows:

a. To aid State authorities at the request of the State. Article IV, Section 4, of the Constitution (See Annex I, Section 1) makes it the duty of the Federal Government, at the request of the legislature of any State (or of the governor, if the legislature cannot be convened) to protect the State against domestic violence. Congress, by Section 5297, Revised Statutes, (see Annex I, Section 2a), has recognized the authority of the President, on such request, to utilize for this purpose such forces of the United States as he deems necessary. (See Annex V, Tab. A).

b. To enforce the laws of the United States within any State. Article II, Section 3, of the Constitution (see Annex I, Section I) makes it the duty of the President to see that the laws of the United States are faithfully executed. Congress, by Section 5298, Revised Statutes, (see Annex I, Section 2b) has recognized the authority of the President whenever, in his judgment, it is impracticable by reason of unlawful obstructions, combinations, assemblages or persons, or rebellion, to enforce the laws of the United States within any State by the ordinary course of judicial proceedings, to utilize such forces of the United States to enforce those laws as he deems necessary. (See Annex V, Tab B.)

c. To protect the civil rights of citizens within any State. The 14th Amendment to the Constitution (See Annex I, Section I) forbids any State to deny equal protection of the laws to any persons within its jurisdiction. Congress, by Section 5299, Revised Statutes, (See Annex I, Section 2c), has provided that whenever insurrection, domestic violence, unlawful combinations, or conspiracies in any State so obstruct the execution of the laws of that State, and of the United States, as to deprive any of the population of that State of rights, privileges and immunities named in the Constitution, and the authorities of that State are unable, or fail, or refuse to provide such protection, it shall be deemed a denial by that State of the equal protection of the laws. Thereupon, it becomes the duty of the President to take such measures, by the use of forces of the United States, as he may deem necessary to suppress such disturbances. No application or request of the State authorities is required.

d. To protect the property of the United States: The right of the United States to protect its property by intervention with Federal troops in case of emergency is an accepted principle of our government. The exercise of this right is an executive function (Annex I, section 1a) and extends to all Government property of whatever nature and wherever located, including premises in the possession of the Federal Government. (Annex V - Tabs C and D). Intervention is warranted where the need for protection of Federal property exists and the local authorities cannot or will not give adequate protection.

e. To protect vital national defense materials, premises and utilities. By Executive Order 8972, as amended, the Chief of Staff, United States Air Force; Commanding General, Military District of Washington; Chief, Army Field Forces; and the chiefs of technical and administrative services are authorized and directed to establish and maintain military guards and patrols and to take other appropriate measures to protect from injury or destruction national-defense material, national-defense premises, and national-defense utilities, as defined in Executive Order 8972, in any case where action is necessary or desirable for such protection.

7. BASIC POLICIES.

a. The protection of life and property and the maintenance of law and order within the territorial jurisdiction of any State are the primary responsibility of that State. Intervention with Federal troops will take place only after the State has utilized all of its own forces and is unable to control the situation, or when it is apparent that the situation is beyond the capabilities of the State, and when such action is in accord with the Posse Comitatus Act (See Annex I, Section 2f, and paragraph 6d, above).

b. Intervention with Federal troops will take place for the purposes indicated in paragraphs 6a, b and c above, only after so ordered by higher authority. No such order will be issued until after the President has published the proclamation, required by Section 5300, Revised Statutes, demanding that the insurgents disperse and retire peaceably to their respective abodes within a specified limited time.

c. No Presidential action or proclamation (other than the Executive Order in the case of Government seizure of private property, described in paragraph 6d, above) is necessary for intervention with Federal troops for the purposes expressed in paragraphs 6d and 6e, above. Under War Department Memorandum 500-50-1, 25 October 1946, appropriate measures may be taken to protect vital national defense materials, premises, and utilities (paragraph 6e, above) without express instructions from higher authority, unless a labor dispute is involved. In the latter case, instructions must be obtained, through the appropriate Army Area commander, unless damage or destruction is imminent. Measures that may be taken, in addition to establishing military guards and patrols, are those appropriate to the circumstances in order to provide full protection.

d. In appropriate cases, action may be taken pending receipt of instructions from the appropriate army commander. Paragraph 4, AR 500-50, 17 August 1948, provides, in substances, as far as it concerns this plan, that in case of sudden and unexpected invasion, insurrection, or riot endangering the public property of the United States, or of attempted or threatened robbery or interruption of the mails, or of earthquake, fire, or flood, or other public calamity disrupting the normal processes of government, or other equivalent emergency so imminent as to render it dangerous to await instructions requested through the speediest means of communication, an officer of the Air Force in command of troops may take such action, before the receipt of instructions, as the circumstances of the case reasonably justify. Such action, without prior authorization, of necessity may be prompt and vigorous, but should be designed for the preservation of order and the protection of life and property until such time as instructions from higher authority have been received, rather than as an assumption of functions normally performed by civilian authorities. In such a case, the action taken will be no more than the circumstances require, and will be reported as indicated below in paragraph 13c(2), in order that appropriate instructions can be issued.

e. When intervention with Federal troops has taken place, the military commander will assume charge only to the extent necessary to accomplish his mission. When intervention is under paragraphs 6a, b or c, above, the action will be designed to support, or reinstate and sustain, the civil officials. Action under paragraph 6e, above, will be within the power delegated by higher authority. In the accomplishment of his mission, necessity is the measure of the authority of the military commander. Federal Forces will ordinarily exercise police powers previously inoperative in the affected area, restore and maintain order, maintain the mechanism of distribution, transportation, and communication, and inaugurate such relief measures as the situation demands.

f. The military commander will cooperate to the fullest possible extent with the governor and other local and State authorities and forces. While the military commander is subject to no authority but that of his military superiors, he will bear in mind that the suppression of violence, when accomplished without bloodshed, is a worthy military achievement, and will employ only such force as is necessary to accomplish his mission. The population of the affected area will be informed of the rules of conduct and other restrictive measures to be enforced by the military. These will be announced by all available media.

g. Martial rule, or martial law, will not be proclaimed except by express direction of the President. When martial law is advisable, the Air Force commander will so inform the appropriate Army Area commander.

8. STATE GUARD AND NATIONAL GUARD

State Guard or National Guard troops (not in the Federal Service) cannot be commanded by United States Army or United States Air Force officers except with the consent of the State. Army or Air Force commanders will therefore obtain, wherever possible, written agreements from governors or other appropriate State officials, to assure full cooperation of the State Guard or National Guard (not in the Federal service) with the military commander in the affected area in the event of intervention with Federal Troops.

SECTION III - OPERATIONS

9. THE AREAS OF RESPONSIBILITY:

a. Numbered United States Armies and Continental Air Command Air Forces are as shown in Annex II. Air Force installations within the District of Columbia are considered under the jurisdiction of the Ninth Air Force Commander for Domestic Emergency Plans and Operations.

b. Naval Districts are as shown in Annex III.

10. CHANNELS OF COMMAND AND COORDINATION are as shown in Annex IV. The inter-Navy - Air Force channels of coordination are not shown on this chart; however, each Continental Air Command Air Force Commander will coordinate and plan jointly (par. 12a) with the commanders of Naval districts and Army Areas whose areas of responsibility are, in part or in whole, within the area of responsibility of the Continental Air Command Air Force Commander.

11. TYPES OF OPERATIONS:

For the purpose of this plan, domestic emergency activities involving the United States Air Force are classified into three distinct types of operations.

a. Operation A - Operations wholly within the limits of an Air Force installation.

b. Operation B - Emergency operations outside the limits of Air Force installations involving assistance to the Army and/or Navy.

c. Operation C - Emergency operations outside the limits of an Air Force installation involving immediate independent action by units of the United States Air Force.

In discussing these types of operations in this plan, they will be referred to as Operations A, B, and C.

(Note: Air Force plans and operations, under the requirements stated herein, will include the personnel and equipment from all Air Force installations within each Continental Air Command Air Force area irrespective of major air command to which assigned.)

12. PREPARATIONS BY CONTINENTAL AIR COMMAND AIR FORCES

The Commanding General of each Continental Air Command Air Force will:

a. Prepare and maintain a Domestic Emergency Plan for his area. This plan will be prepared in coordination with commanders of appropriate Army areas and Naval districts.

b. Establish and maintain continuous liaison with commanders of appropriate Army areas and Naval districts.

c. Appoint a Domestic Emergency Control Officer, requirements and duties of which are shown in Annex VI.

d. Require the commanders of each Air Force installation within his area, irrespective of major air command to which assigned, to:

(1) Prepare and maintain a Domestic Emergency Plan to include plans for the participation of all units assigned to that base.

(2) Appoint a Base Emergency Control Officer whose duties and responsibilities will be similar to those of the Continental Air Command Air Force Domestic Emergency Control Officer (Annex VI).

(3) Simulate local emergency conditions and practice emergency operations utilizing the assigned personnel and equipment thereon in accordance with the existing Base Emergency Plans as the installation commander deems necessary.

(4) Furnish such other information and assistance as may be required by the Air Force commanders

e. Take appropriate action to assure receipt of early and accurate information of events within his area that may result in civil disturbances requiring intervention with air force troops.

f. Make frequent visits to ascertain that the plans and preparations of each Air Force installation within his area are adequate and are in accordance with the provisions of the air force plan.

13. ACTION BY CONTINENTAL AIR COMMAND AIR FORCES. The Commanding General of each Continental Air Command Air Force will:

a. In Operation A

(1) Require the appropriate base commander(s) to place in operation the Domestic Emergency Plan for his base, either on receipt of instructions or in any domestic emergency situation requiring action by the base commander prior to receipt of instructions from the Air Force commander with such variations as, in his opinion, the special circumstances of the situation required. In the latter case, the decision as to when a situation constitutes a domestic emergency, as outlined in this plan, rests with the base commander concerned.

(2) Require the base commander to notify him, by the speediest means of communications available, the full particulars of

the situation when the Domestic Emergency Plan has been put into operation or when such operations appear to be imminent.

(3) Make available to the base commander such assistance as may be necessary to end the emergency situation.

(4) Furnish the appropriate Army Commander the full particulars and request assistance if necessary.

(5) Request, by direct communications, assistance from other Continental Air Command Air Forces as required, with an information copy of the correspondence addressed to the Commanding General Continental Air Command.

(6) Render immediate report of any action taken to this Headquarters by the most expeditious means possible.

(7) Furnish assistance to adjacent Continental Air Command Air Force commanders, upon request.

b. In Operation B

(1) Furnish available assistance as may be requested by an Army commander when the Army has been designated by Executive Order as the responsible agent or when the Army has undertaken Domestic Emergency activities. If the entire assistance requested is not available within the local Air Force area of responsibility, additional assistance will be requested by direct communication with other Continental Air Command Air Force commanders, with an information copy of the correspondence addressed to the Commanding General Continental Air Command. If the emergency extends over

more than one Air Force-Army Area, but remains under the operational control of a single Army commander or the officer-in-charge (designated by the Army Area Commander or by higher authority) then the Air Force Commander initially designated to cooperate with the Army Commander or officer-in-charge will continue to be responsible for all air force coordination and assistance.

(2) When the Navy has been designated as the responsible agent, similar procedure as outlined above will be followed except that the request for assistance ordinarily will be made through the appropriate Army Commander; however, if the situation is critical and the request is made by direct communication between a Naval District commander and a Continental Air Command Air Force commander, assistance will be rendered immediately, followed by a report of the full particulars to the appropriate Army commander.

(3) Requests for assistance received by ConAC Air Force Commanders from sources other than Army Area commanders or other ConAC Air Force Commanders will be turned over to the respective Army Area commander for action unless the request for assistance comes under the concepts of Operation C as outlined in paragraph 13c below.

(4) Report the full particulars to this headquarters within twenty-four hours after initial action has been undertaken.

c. In Operation C

(1) Place in operation the Domestic Emergency Plan with such variations as the special circumstances of the situation justify (paragraphs 7c and 7d above), until such time as the responsibility can be turned over to the appropriate Army commander.

(2) Report the full particulars by the most expeditious means possible to the appropriate Army commander and to this headquarters.

(3) Request, by direct communications, from other Continental Air Command Air Forces any required assistance, with an information copy of the correspondence addressed to the Commanding General, Continental Air Command.

(4) Furnish upon call of adjacent Continental Air Command Air Force commanders such assistance as can be provided.

14. ACTION BY CONTINENTAL AIR COMMAND

a. Review and approve all Continental Air Command Air Force Domestic Emergency Plans.

b. Make frequent inspections to insure that the plans and preparations of each Continental Air Command Air Force are adequate and are in accordance with the provisions of this plan.

c. Relay full particulars to the Chief of Staff, United States Air Force, when intervention with Air Force troops and equipment is contemplated or has been undertaken (paragraph 13a(6), b(3) and c(2).)

15. MISCELLANEOUS REQUIREMENTS.

a. Personnel

(1) The number and type of personnel assigned for domestic emergency activities and the duty to be performed by each will be included in each Continental Air Command Air Force Domestic Emergency Plan.

(2) In order to standardize the accounting of the personnel assigned for domestic emergency activities, the sample form (Annex VII) will be adopted by each Continental Air Command Air Force and will be included as an "annex" to each Domestic Emergency Plan. This annex will reflect the maximum number of troops to be employed with a minimum retained to maintain internal security and administrative functions. If necessary, this may mean the curtailment of the primary missions of the installations concerned.

(3) Each Continental Air Command Air Force Commander should require a survey to be conducted every six months, at each Air Force installation within his area of responsibility, and reports submitted on 1 January and 1 July of each year. This would allow each commander to amend his annexes to reflect the true status of assigned personnel at all times. In obtaining this information from the Air Force installations, reports control procedure may be applied in accordance with AF Regulation 11-5 by each Continental Air Command Air Force Commander.

(4) In case of death of military personnel, casualty procedure will be as described in AR 30-1820 as amended and AR 600-550 as amended.

b. Logistics

(1) There will be included in each Continental Air Command Air Force Domestic Emergency Plan the type, location, number or amount assigned (less minimum retained for internal security and administrative functions), and other pertinent information regarding transportation and equipment which will be available in Domestic Emergency situations. In order to standardize the accounting of this transportation and equipment, the sample form as shown in Annex VIII will be adopted and included as an annex to each Continental Air Command Air Force Domestic Emergency Plan.

(2) This sample form is not all-inclusive and each Air Force Commander may make additions where he considers them necessary to the plan.

(3) This annex will be amended on 1 January and 1 July of each year, or more often if major changes occur within an Air Force Area, similar to the personnel annex, as required by paragraph 15a(3).

c. Maps and Charts

Maps and charts of installations, localities, landing fields, railroads, highways, waterways, etc. should be made an intergral part of all domestic emergency plans.

d. Public Relations

(1) In nearly all cases of domestic disturbances or disasters, the events in connection therewith are newsworthy items which are normally disseminated by press, radio and

newsreel. The public is entitled to such news. The legitimate activities of news agencies toward that end are to be respected by military personnel.

(2) In conformity with this policy and in order to facilitate proper liaison and establish responsibility, the officer dispatching military personnel to the scene of the emergency will at the same time also dispatch qualified public information officers. It will be the responsibility of the latter, under direction of the commanding officer of military personnel so assigned, to lend appropriate and expeditious assistance in the legitimate activities of representatives of news agencies who are present. If public information officers are not available, it will be the responsibility of the dispatching officer to require observance of and adherence to the policy outlined in sub-paragraph (1) above.

(3) The classified nature of the Continental Air Command Domestic Emergency Plan and of subordinate domestic emergency plans will be maintained rigidly in all public or quasi public relationships.

(4) Public reference to "race riots", "strikes", or "domestic violence" will be avoided; instead, terms such as "emergency" or "disaster" will be used.

e. Supply - The issue, sale, receipt, purchase, and shipment of supplies will be governed by AR 500-60.

f. Funds - The use and reimbursement of alloted funds will be governed by AR 500-60.

16. STATUS OF AIR FORCE RESERVE IN DOMESTIC EMERGENCIES

a. Personnel

The ordering to active duty of Air Force Reserve personnel for assistance in domestic emergency situations will not exceed fifteen days. Active duty orders will be issued under the authority of ConAC Letter 45-7.

b. Equipment

Subject to the provisions of this plan, the equipment of the Air Force Reserves can be utilized in domestic emergency activities; therefore, each Continental Air Command Air Force plan should include the possible use of such equipment.

17. HURRICANE EVACUATIONS

The plans for the evacuation of military aircraft within a hurricane danger zone do not fall within the concepts of Domestic Emergency Plans and activities. Such plans and operations are governed by AF Regulation 55-4. However, relief activities undertaken as a result of a hurricane disaster fall within the concepts of this plan.

18. COMMUNICATION WITH RESPONSIBLE AGENCIES

The Commanding General of each Continental Air Command Air Force and the commanders of each Air Force installation will be prepared to maintain communications on a twenty-four hour basis in the event of domestic emergency. Emergency communications facilities will be periodically checked. This will include such mobile communications facilities as may be available.

19. REPORTS

Reports required in conjunction with Domestic Emergency activities will be submitted in accordance with instructions contained in Annex IX.

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- Section 2 - Provisions of the Statutes of the United States relating to intervention with Federal troops

ANNEX II - NUMBERED UNITED STATES ARMIES AND CONTINENTAL AIR COMMAND AIR FORCES.

ANNEX III - NAVAL DISTRICTS.

ANNEX IV - CHANNELS OF COMMAND AND COORDINATION.

ANNEX V - EXAMPLES OF INTERVENTION WITH FEDERAL TROOPS.

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- Tab B - Whiskey Rebellion.
- Tab C - Lake Charles, Louisiana, Refinery Strike.
- Tab D - Forest Fire Fighting.
- Tab E - North American Aviation Strike.
- Tab F - Philadelphia Municipal Transit Strike.
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Tab C - Composition of Food Service Teams.

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ANNEX VIII - TRANSPORTATION AND EQUIPMENT CHART.

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Tab B - Domestic Emergency Action and Situation Report.

ANNEX I

PROVISIONS OF THE CONSTITUTION AND LAWS OF THE UNITED STATES RELATING TO INTERVENTION WITH FEDERAL TROOPS

Section 1: Provisions of the Constitution relating to intervention with Federal troops.

Section 2: Provisions of the statutes of the United States relating to intervention with Federal troops.

PROVISIONS OF THE CONSTITUTION AND LAWS OF THE UNITED STATES RELATING TO INTERVENTION WITH FEDERAL TROOPS.

Section 1. Provisions of the Constitution relating to intervention with Federal troops.

a. Article II of the Constitution.

Sec. 1. "The executive power shall be vested in a president of the United States of America."

b. Article II of the Constitution.

Sec. 2, Clause 1. The President shall be commander in Chief of the Army and Navy of the United States, and the Militia of the several States, when called into the actual service of the United States.."

c. Article II of the Constitution.

Sec. 3.. "....he (the President) shall take care that the laws be faithfully executed....."

d. Article IV of the Constitution.

Sec. 4. "The United States shall guarantee to every State in the Union a republican form of government, and shall protect each of them against invasion; and on application of the legislature, or of the executive (when the legislature cannot be convened) against domestic violence."

e. XIV Amendment to the Constitution.

"....nor shall any State ... deny to any person within its jurisdiction the equal protection of the laws."

Section 2. Provisions of the Statutes of the United States relating to intervention with Federal troops.

a. Section 5297, Revised Statutes. (U.S. Code, Title 50, sec. 201; Military Laws of the U. S. (1939), sec 502).

"Sec. 5297. In case of an insurrection in any State against the government thereof, it shall be lawful for the President, on application of the legislature of such State, or of the executive, when the legislature cannot be convened, to call forth such number of the militia of any other State or States, which may be applied for, as he deems sufficient to suppress such insurrection; or, on like application, to employ, for the same purposes, such part of the land or naval forces of the United States as he deems necessary."

b. Section 5298, Revised Statutes. (U. S. Code, Title 50, sec. 202; Military Laws of the U. S. (1939), sec. 503).

"Sec. 5298. Whenever, by reason of unlawful obstructions, combinations, or assemblages of persons, or rebellion against the authority of the Government of the United States, it shall become impracticable, in the judgment of the President, to enforce, by the ordinary course of judicial proceedings, the laws of the United States within any State or Territory it shall be lawful for the President to call forth the militia of any or all the States, and to employ such parts of the land and naval forces of the United States as he may deem necessary to enforce the faithful execution of the laws of the United States, or to suppress such rebellion, in whatever State or territory thereof the laws of the United States may be forcibly opposed, or the execution thereof forcibly obstructed."

Annex 1 (Cont'd)

c. Section 5299, Revised Statutes. (U. S. Code, Title 50, sec. 203; Military Laws of the U. S. (1939), sec. 504).

"Sec. 5299. Whenever insurrection, domestic violence, unlawful combinations, or conspiracies in any State so obstructs or hinders the execution of the laws thereof, and of the United States, as to deprive any portion or class of the people of such State of any of the rights, privileges, or immunities, named in the Constitution and secured by the laws for the protection of such rights, privileges, or immunities, and the constituted authorities of such State are unable to protect, or from any cause, fail in or refuse protection of the people in such rights, such facts shall be deemed a denial by such State of the equal protection of the laws to which they are entitled under the Constitution of the United States; and in all such cases, or whenever any such insurrection, violence, unlawful combination, or conspiracy, opposes or obstructs the laws of the United States, or the due execution thereof, or impedes or obstructs the due course of justice under the same, it shall be lawful for the President, and it shall be his duty, to take such measures, by the employment of the militia or the land and naval forces of the United States, or of either, or by other means, as he may deem necessary, for the suppression of such insurrection, domestic violence, or combinations."

d. Section 5300, Revised Statues. (U. S. Code, Title 50, Sec. 204; Military Laws of the U. S. (1939), sec. 505).

"Sec. 5300. Whenever, in the judgment of the President, it becomes necessary to use the military forces under this Title, the

President shall forthwith by proclamation, command the insurgents to disperse and retire peaceably to their respective abodes, within a limited time."

e. Section 5301, Revised Statutes. (U. S. Code, Title 50, sec. 205; Military Laws of the U. S. (1939), sec. 2173).

"Sec. 5301. Whenever the President, in pursuance of the provisions of this Title, has called forth the militia to suppress combinations against the laws of the United States, and to cause the laws to be duly executed, and the insurgents shall have failed to disperse by the time directed by the President, and when the insurgents claim to act under the authority of any State or States, and such claim is not disclaimed or repudiated by the persons exercising the functions of government in such State or States, or in the part or parts thereof in which such combination exists, and such insurrection is not suppressed by such State or States, or whenever the inhabitants of any State or part thereof are at any time found by the President to be in insurrection against the United States, the President may, by proclamation, declare that the inhabitants of such State, or of any section or part thereof where such insurrection exists, are in a state of insurrection against the United States; and thereupon all commercial intercourse by and between the same and the citizens thereof and the citizen of the rest of the United States shall cease and be unlawful so long as such conditions of hostility shall continue; and all goods and chattels, wares and merchandise, coming from such State or section into the other parts of the United States, or proceeding from other parts of the

United States to such State or section, by land or water, shall, together with the vessel or vehicle conveying the same, or conveying persons to or from such State or section, be forfeited to the United States."

f. Posse Comitatus Act. (U. S. Code, Title 10, sec. 15; Military Laws of the U. S. (1939), sec. 480).

"Sec. 15. It shall not be lawful to employ any part of the Army of the United States, as a posse comitatus, or otherwise, for the purpose of executing the laws, except in such cases and under such circumstances as such employment of said force may be expressly authorized by the Constitution or by act of Congress; and any person willfully violating the provisions of this section shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by fine not exceeding $10,000 or imprisonment not exceeding two years or by both such fine and imprisonment**."

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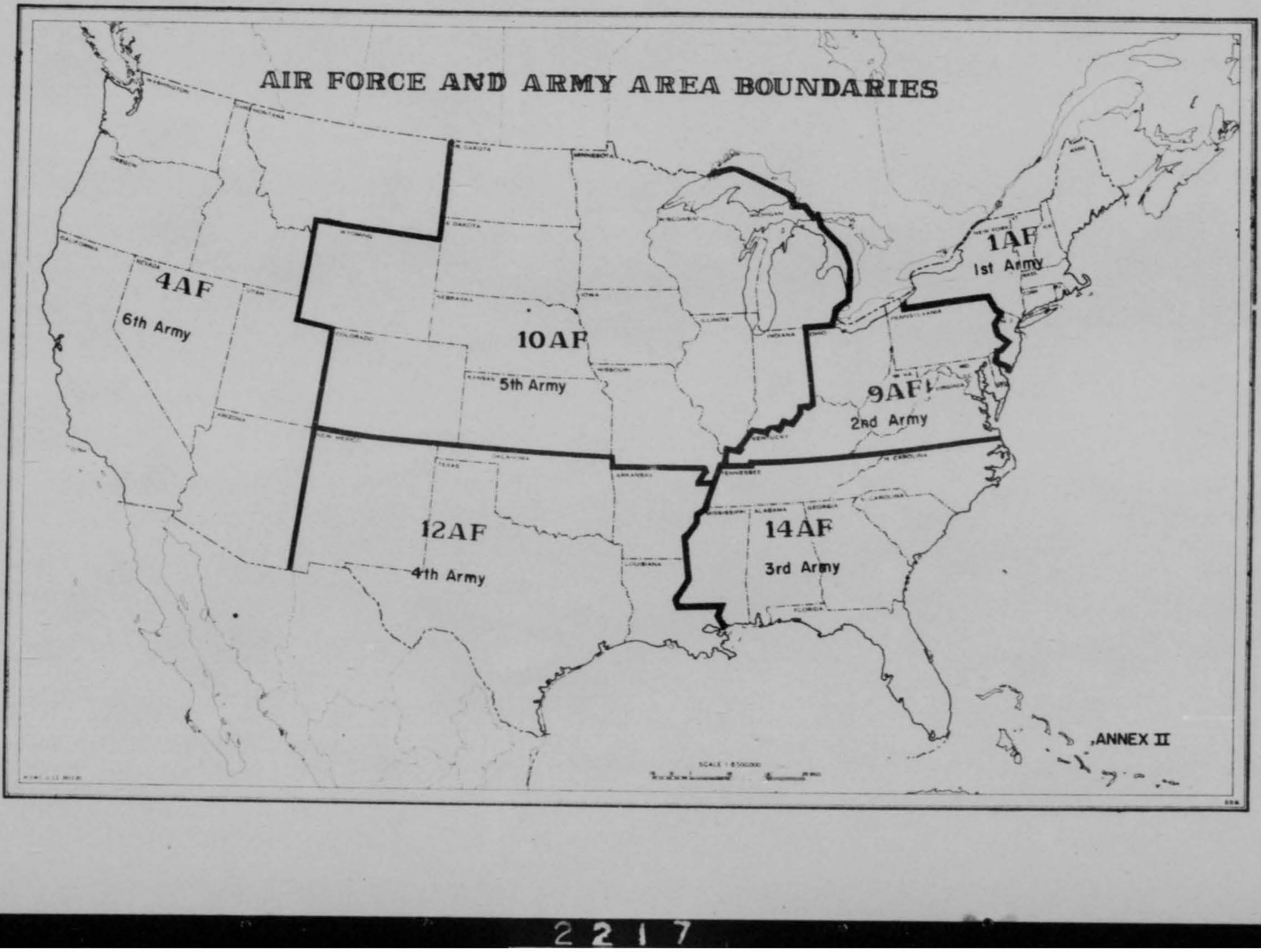

AIR FORCE AND ARMY AREA BOUNDARIES

4AF
6th Army
10AF
5th Army
12AF
4th Army
14AF
3rd Army
9AF
2nd Army
1AF
1st Army

ANNEX II

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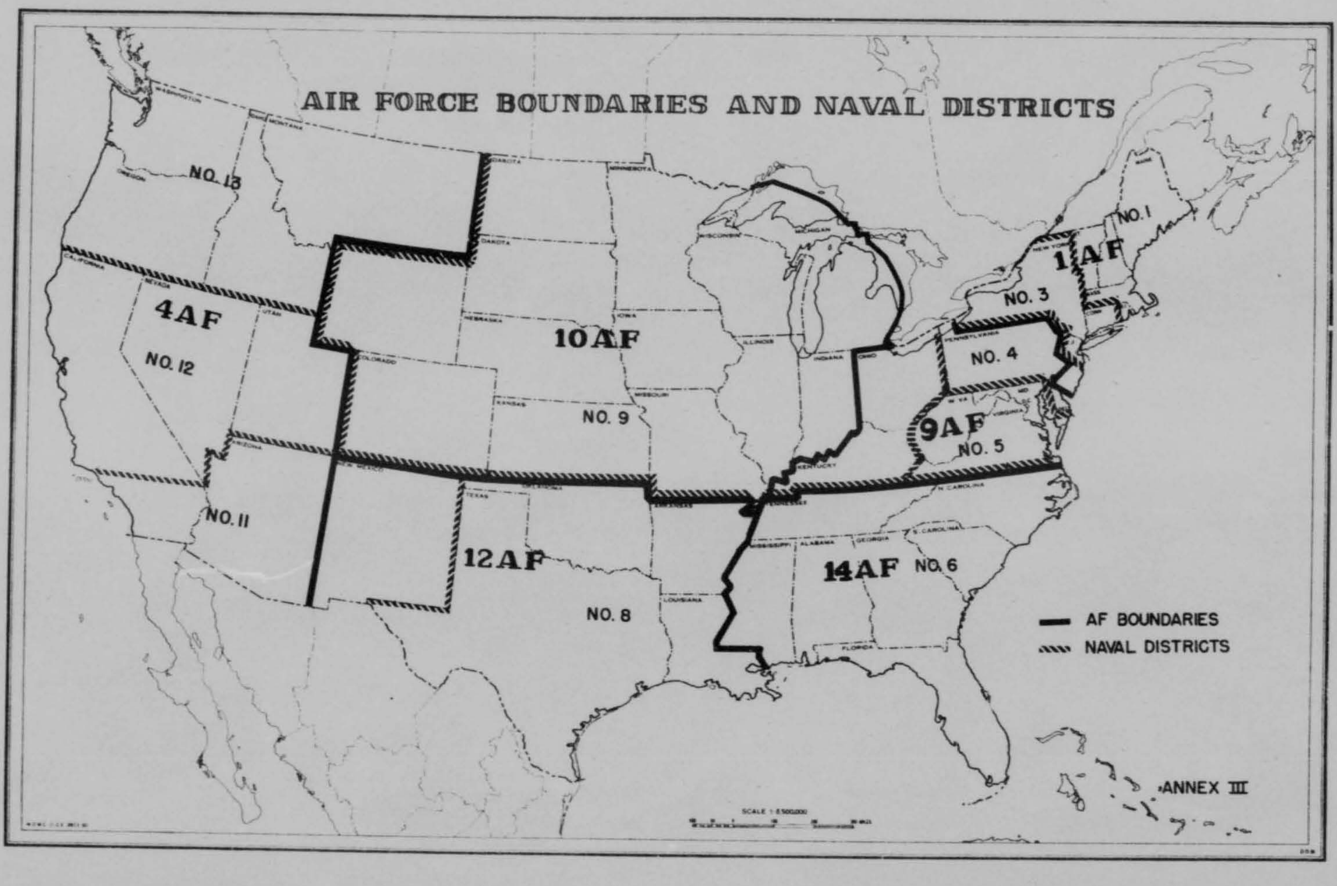
AIR FORCE BOUNDARIES AND NAVAL DISTRICTS
NO. 13
4AF
NO. 12
NO. 11
10AF
NO. 9
12AF
NO. 8
14AF
NO. 6
1AF
NO. 1
NO. 3
NO. 4
9AF
NO. 5
AF BOUNDARIES
NAVAL DISTRICTS
ANNEX III

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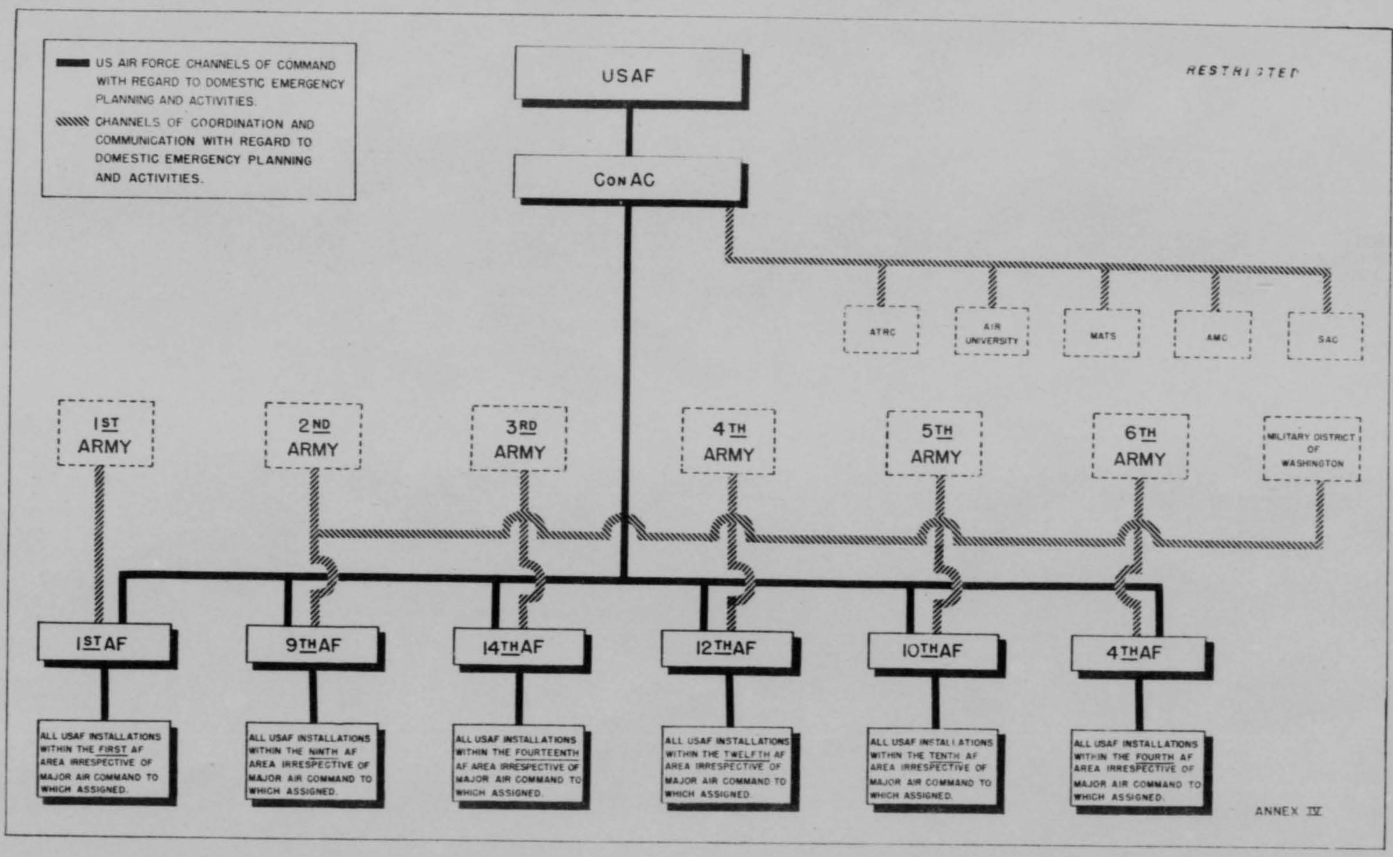
▬ US AIR FORCE CHANNELS OF COMMAND WITH REGARD TO DOMESTIC EMERGENCY PLANNING AND ACTIVITIES.
▨ CHANNELS OF COORDINATION AND COMMUNICATION WITH REGARD TO DOMESTIC EMERGENCY PLANNING AND ACTIVITIES.
USAF
ConAC
ATRC
AIR UNIVERSITY
MATS
AMC
SAC
1ST ARMY
2ND ARMY
3RD ARMY
4TH ARMY
5TH ARMY
6TH ARMY
MILITARY DISTRICT OF WASHINGTON
1ST AF
9TH AF
14TH AF
12TH AF
10TH AF
4TH AF
ALL USAF INSTALLATIONS WITHIN THE FIRST AF AREA IRRESPECTIVE OF MAJOR AIR COMMAND TO WHICH ASSIGNED.
ALL USAF INSTALLATIONS WITHIN THE NINTH AF AREA IRRESPECTIVE OF MAJOR AIR COMMAND TO WHICH ASSIGNED.
ALL USAF INSTALLATIONS WITHIN THE FOURTEENTH AF AREA IRRESPECTIVE OF MAJOR AIR COMMAND TO WHICH ASSIGNED.
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ALL USAF INSTALLATIONS WITHIN THE TENTH AF AREA IRRESPECTIVE OF MAJOR AIR COMMAND TO WHICH ASSIGNED.
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ANNEX IV

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ANNEX V

EXAMPLES OF INTERVENTION WITH FEDERAL TROOPS

Tab A: Detroit Race Riot.

Tab B: Whiskey Rebellion.

Tab C: Lake Charles, Louisiana, Refinery Strike.

Tab D: Forest Fire Fighting.

Tab E: North American Aviation Strike.

Tab F: Philadelphia Transportation Strike.

Tab G: Chicago Teamsters Strike.

Tab H: Executive Order 8972.

Tab I: President's War Power.

Tab J: War Powers Act.

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DETROIT RACE RIOT

On the night of 20 June 1943, a fist-fight between a white man and a negro at Belle Isle amusement park in Detroit served as a spark to set off a disturbance which quickly spread to the negro section of war-crowded Detroit. Widespread rioting by gangs of white hoodlums and groups of negroes ensued, resulting finally in 31 dead, more than 600 injured, and tremendous property damage in looted stores, wrecked automobiles, etc. It was soon apparent that the situation had gotten beyond the control of State and local authorities and that a request for Federal aid was likely, probably from the Governor, since the legislature was not in session.

At 1100, 21 June 1943, the Provost Marshal General was informed by the Commanding General, Sixth Service Command, that two Military Police Battalions had been alerted but that he desired authority to call for additional ground force troops. The Provost Marshal General informed the Commanding General, Army Service Forces, and through Operations Division, WDGS, arranged for the alerting of the 2nd Division at Camp McCoy, Wisconsin. The Provost Marshal General, in coordination with the Judge Advocate General, prepared a proclamation for the President's signature to be signed in the event the Governor of Michigan requested Federal assistance in quelling the disorders, and a proclamation to be issued by the Commanding General, Sixth Service Command, only if the Presidential Proclamation was issued.

The Governor of Michigan having requested the aid of Federal troops, these proclamations were duly issued and Federal troops moved into the affected areas quelling the disorders efficiently and quickly. The troops actually employed were the 728th Military Police Battalion and later the 792nd Military Police Battalion from Fort Custer, Michigan, a provisional battalion made up of three (3) ZI Military Police Companies from Fort Custer and Selfridge Field, and later the 9th Infantry (of the 2nd Division) from Camp McCoy, Wisconsin. All disorders having subsided, all Federal troops were ordered out of Detroit on 8 July 1943, except two military police battalion (728th and 792nd) which remained in Detroit on an alert status.

WHISKEY REBELLION

In 1791, as part of his financial program, Alexander Hamilton secured the passage of an excise tax on the distilling of liquor. Shortly after its passage, the excise was protested in the Pittsburg area. The excise notice was torn down and the sign with the picture of the President's head thereon was filled with bullet holes. Discontent was also brewing in North and South Carolina.

President Washington took official notice of the opposition on 15 September 1792 when he issued a proclamation stating that all persons should refrain and desist from all unlawful combinations, the object of which was to obstruct the operation of law. He also stated that all lawful means would be used to bring to justice anyone who obstructed the operation of the law.

There was little opposition to the excise evidenced during the remainder of 1792 or during 1793. However, in the spring of 1794, a series of attacks on the revenue collectors occurred near Pittsburgh. In July 1794, these attacks culminated in a violent attack on the home of one of the inspectors. A small garrison of troops from Pittsburgh was sent to aid him but the troops were forced to surrender to a larger armed body. The mail from Pittsburgh was robbed by the insurgents and meetings continued to be held. An attack on the Fort at Pittsburgh was feared.

The President, counseled by Hamilton, determined to send an imposing force to enforce the law, and, if possible, deter the opposition from fighting by reason of the size of the force opposing them. The President ordered the Governors of New Jersey, Pennsylvania, Maryland and Virginia to raise over 12,000 troops to be used against the insurgents.

The Army was assembled at Carlisle, Pennsylvania, and President Washington went to the assembly area and counseled both officers and men as to the duties they were to perform. He emphasized the need for proper conduct on the part of the troops. General Lee of Virginia was placed in command and, at Washington's suggestion, published another proclamation inviting "all good citizens, friends of the Consitution and laws, to join the standard of the United States."

The troops proceeded to the area where the disturbance had occurred and rounded up all suspects in a raid conducted in one day. This ended the opposition by the citizens of western Pennsylvania. Within a short time, all of the troops except a garrison of about 2,500 men were removed from the area.

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LAKE CHARLES, LOUISIANA, REFINERY STRIKE

On 10 April 1945, the Eighth Service Command reported a strike at the Lake Charles Refinery, operated by Cities Service. This refinery was a Government-owned facility, title to which was held by the Defense Plant Corporation, leased to Cities Service for operation.

On 11 April 1945, it was reported that picketing was taking place and minor incidents had occurred, but there had been no physical damage to the plant.

On his own initiative, the service commander directed that one company of the 76th Military Police Battalion be dispatched from Camp Claiborne, Louisiana, to the Lake Charles area. The troops arrived at 2000 on 11 April 1945. A guard was posted at the main gate and a patrol maintained inside the perimeter of the plant area immediately upon arrival at the area, purely to protect the government-owned property.

On 12 April 1945, a civilian guard was fired upon and all the troops were then moved to the plant from the Air Base where they had been quartered.

On 18 April 1945, the President's order directing seizure and operation of the refinery was issued and posted at the plant. Pickets dispersed shortly thereafter, and within a few days, the workers returned to their jobs.

No action by the troops was necessary at any time except to maintain a guard at the plant in order to protect the property before the seizure, as well as after.

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FOREST FIRE FIGHTING

In the Fall of 1944, it was discovered that the Japanese were launching paper balloons into the stratosphere where they would be carried by prevailing winds to the United States. The balloons were equipped with automatic ballast dropping devices to keep them in flight until they reached this country where incendiary and occasionally high explosives were to be dropped automatically, after which a further device would destroy the balloon. After numerous sightings and some recoveries of the balloons, which appeared in increasing numbers in the early months of 1945, it was established that the "pay load" of a majority of the balloons were incendiary bombs. The War Department consulted the Forest Service of the U. S. Department of Agriculture and was advised that these bombs from the balloons constituted a grave threat of serious forest fires in the vast wooded areas in the Western United States, where because of a manpower shortage, an unusually low precipitation in 1945, and a large accumulation of slash on the ground in the forests (due to the emphasis on lumber production in the war effort) the natural hazards were already unusually great. The Forest Service, which with the State and local forest agencies was primarily responsible for the prevention and control of forest fires, requested the War Department to assist it in the formulation of a plan, and in manpower, supply, and equipment, so that during the summer months of 1945 (the forest fire season) a trained force could be ready to combat the expected forest fires. The internal security responsibility as regards forest fires started from the balloons was a responsibility of the Provost Marshal General and the War Department authorized him to coordinate forest fire protection matters. Working closely with the Forest Service, the Commanding General, Ninth Service Command, and all other interested War Department agencies, the following was accomplished:

(1) Secured the assignment of the 555th Parachute Infantry Battalion to Pendleton Army Air Field, Oregon, where it received specialized training (under the technical supervision of the Forest Service) in advanced methods of combatting forest fires as "smoke jumpers". When the battalion completed its training it became an initial striking force for use in fighting forest fires. Incidental, but necessary to this assignment was considerable planning and work in regard to special equipment necessary for this battalion, for "spotting" planes, and for transport aircraft.

(2) Secured the activation of ten Provisional Engineer Fire Fighting companies (269 enlisted men and four officers, each) to be specially earmarked for duty in fighting forest fires. Considerable time was devoted to the problem of equipment necessary for these companies and the equipment, which was finally authorized, was considered adequate for their mission. However, as activation and training of these companies was accomplished, other needs became apparent and at the request of the Commanding General, Ninth Service Command, the Emergency Protection Branch initiated steps to secure the enlargement of this authorization.

(3) Formulated an overall forest fire fighting plan for the War Department.

NORTH AMERICAN AVIATION STRIKE - 1941

A jurisdictional labor dispute occurred at the North American Aviation Plant at Los Angeles, on 5 June 1941. Despite an agreement with the company, to the effect that no stoppage of work would take place pending the settlement of the dispute, the local without authorization from the national union or the CIO, called the strike. The shutdown affected 9.000 production workers and over 2,200 office and other employees.

National labor leaders denounced the action of the local union and called upon them to return to their jobs but they refused to do so. The strike occurred less than ten (10) days after President Roosevelt had proclaimed an unlimited national emergency in which he had called upon all citizens engaged in defense work to give precedence to the needs of the nation.

Federal intervention was rumored immediately, but, despite the rumor, the local union refused to go back to work. Troops from Camp Hunter Liggett and Fort MacArthur were alerted and sent to the Los Angeles area. No action was taken by them, however, at this time.

On the following Monday morning, at which time it was rumored that the plant would resume operations, pickets and workers crowded about the plant, fighting broke out and police attempted to open the picket lines. Tear gas was used but the lines were not broken.

Meanwhile, having been apprised of the situation, the President ordered the troops to take over. They moved in immediately, just in time to prevent a second outburst of disorder. Within a few minutes roads were cleared and the plant gates were opened. The military commander guaranteed safe conduct for workers to and from their homes, and set up patrols in the outlying areas to insure protection for those who returned to work. Within 36 hours nearly 90 percent of the workers had returned.

To enforce the takeover, picketing was forbidden within a mile of the plant, the sale of liquor was banned within the same area and only residents and workers bound for the plant were allowed into the strike zone; patrols were set up inside and outside the plant and the main gate was guarded.

In less than a month, the President terminated the Government possession and all troops were removed from the area. Prior to this time, however, over half of the troops originally detailed to the area were relieved when it became apparent that further disorder was unlikely.

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PHILADELPHIA MUNICIPAL TRANSIT STRIKE

On 1 August 1944, a general strike of the operators of the Philadelphia Transportation Company occurred, as car and bus operators refused to work in protest against the company's employment and training of eight negro street car operators, which action the company was taking in compliance with a series of directives from the Fair Employment Practices Committee and the War Manpower Commission. Appeals to the strikers to return to work having failed, acts of violence being feared, and continued operation of this transportation system being vital to the war effort, the President, by Executive Order, directed the Secretary of War to take possession of and operate the Philadelphia Transportation Company. Major General Hayes, Commanding General, Third Service Command, was designated as the War Department Representative. The seizure was effected immediately without the necessity for the use of any force.

The conditions existing at the time of the seizure indicated the necessity for troops to guard the properties and facilities of the company and the probable need for military transportation and troops possessed of the requisite skill to act as operating personnel. Accordingly, troops consisting of the necessary operating units, overhead units, and field forces, as well as military vehicles adaptable for action in the company's transportation system, were secured. Officer observers were assigned to the seventeen car barns and garages and a system of hourly reports from these observers to the commander of troops was established.

General Hayes issued an order on 4 August to all employees that they would have to report for duty at their first regular assigned runs on 7 August, or suffer immediate dismissal. They were informed that selective service would be requested to cancel deferments for those not reporting and the War Manpower Commission would be requested to refuse certificates of availability to strikers, thus making it impossible to obtain employment elsewhere. Full publicity from newspapers and radio stations was given these orders. On 5 August, the Department of Justice obtained warrants for the arrest of four (4) principal strike leaders for alleged violation of the War Labor Disputes Act. These men were arrested and later released on bond. By 7 August, normal operations had been resumed although armed guards were assigned to every car, bus, and subway train to prevent acts of violence, a total of 2665 being so assigned with 375 held in reserve.

On 9 August, the company and the union involved reached an agreement covering wages, hours, and terms and conditions of employment, and normal operations continued until 17 August 1944, at which time possession, control, and operation by the War Department of the transportation system were terminated.

During this operation, reports from the War Department Representative to the War Department were processed through the Provost Marshal General's Office.

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Tab "F" to Annex V

CHICAGO TEAMSTERS STRIKE

At 0001 on 16 June 1945, pursuant to Executive Order of the President, The Director of the Office of Defense Transportation took possession of and began operating the strike bound trucking industry in Chicago. On refusal of the strikers to return to work, ODT, in accordance with provisions of the Executive Order which authorized it, requested military assistance, responsibility for which was delegated to the Commanding General, Sixth Service Command. Numerous personnel was necessary in order to drive the trucks and to provide adequate protection for drivers, trucks and cargo. After utilizing three of his four Military Police Battalions, the Commanding General, Sixth Service Command, procured two additional battalions from the Fifth Service Command, and requested the Provost Marshal General's assistance in obtaining two more. The Emergency Protection Branch telephoned the Commanding Generals of the First and Second Service commands and arranged for the movement to Chicago of one battalion (the 804th) from Fort Devons, Massachusetts (First Service Command), and one (the 722nd) from Fort DuPont, Delaware (Second Service Command). In addition to the personnel of the Military Police Battalions, the Commanding General, Sixth Service Command, was furnished by the War Department with drivers and guards from Army Ground Forces and Army Air Forces from all parts of the country. The total troops strength as operations progressed approximated 16,000. The Provost Marshal General sent the Chief, Emergency Protection Branch, to Chicago to observe Army operations, and, at the request of the service commander, sent two safety officers to assist the Sixth Service Command in organizing an adequate motor vehicle safety program. At the direction of the Commanding General, ASF, the Commanding General, Sixth Service Command, provided the Provost Marshal General with a daily report of operations, which was processed in Emergency Protection Branch, and distributed to the Commanding General, ASF, and to all interested War Department agencies. This report was terminated with the report of 27 June when it became apparent that the truck drivers' strike was over and that the military personnel could be released for return to their permanent stations.

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EXECUTIVE ORDER

Authorizing the Secretary of War and the Secretary of the Navy to Establish and Maintain Military Guard and Patrols, and to Take Other Appropriate Measures to Protect Certain National-Defense Material, Premises, and Utilities from Injury or Destruction

WHEREAS the United States is now at war; and

WHEREAS there exists a serious and immediate potential danger of sabotage to national-defense material, national-defense premises, and national-defense utilities which may menace our maximum productive effort; and

WHEREAS it is considered necessary in the interests of national defense that, in particular situations where hazardous, dangerous, or other unfavorable conditions may from time to time exist, special precautionary measures be taken by establishing and maintaining military guards and patrols or other appropriate means to protect from injury or destruction national-defense material, national-defense premises, and national-defense utilities;

NOW, THEREFORE, by virtue of the authority vested in me as President of the United States, and Commander-in-Chief of the Army and Navy of the United States, I hereby authorize and direct the Secretary of War, whenever he deems such action to be necessary or desirable, and the Secretary of the Navy, whenever he deems such action to be necessary or desirable, to establish and maintain military guards and patrols, and to take other appropriate measures, to protect from injury or destruction national-defense material, national-defense premises, and national-defense utilities, as defined in the act of April 20, 1918, 40 Stat. 533, as amended by the act of November 30, 1940, 54 Stat. 1220, and the act of August 21, 1941, 55 Stat. 655.

This order shall not be construed as limiting or modifying the duty and responsibility of the Federal Bureau of Investigation, Department of Justice, with respect to the investigation of alleged acts of sabotage.

FRANKLIN D. ROOSEVELT

THE WHITE HOUSE
December 12, 1941
(No. 8972)
(F.R. Doc. 41-9380; Filed, December 12, 1941; 4:12 p.m.)

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Tab "H" to Annex V

PRESIDENT'S WAR POWER

This power was first exercised by President Roosevelt in 1941 in the North American Aviation strike (Tab "E"). The basis of the President's power was stated by Attorney General Robert Jackson to be an exercise of the "aggregate of the President's power derived from the Constitution itself and from the statutes enacted by Congress." The Attorney General pointed out that Congress had appropriated money "to equip and enlarge the Army and to provide for a strengthened Navy", and that, as a consequence, it was the duty of the President to find the means to carry out the Congressional intent. Using this argument as a basis for federal intervention, the President in June, 1941, ordered federal troops to take over the North American Aviation Corporation. The arguments set forth by the Attorney General have never been tested in a court action. However, although some persons have questioned the argument, it is believed that during wartime it can legally be sustained.

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WAR POWERS ACT

In addition to the President's constitutional power to wage war, in some seizures, the First War Powers Act and Selective Service Act have been cited as authority for intervention by the President in seizing private facilities and operating them. These two statutes were admitted by some authorities to be of questionable strength in supporting these seizures. However, they were not cited as exclusive authority, but were included in addition to a statement of the President's general constitutional power, and his powers as Commander-in-Chief.

The defects have since been cured by the War Labor Disputes Act, which was enacted by Congress in 1943. This Act amended the Selective Service Act and empowers the President to take possession of, use, and operate by the United States whenever he finds "after investigation, and proclaims that there is an interruption of (a) plant, mine, or facility, as a result of a strike or other labor disturbance, that the war effort will be unduly impeded or delayed and that the exercise of such power and authority is necessary to insure the operation of such plant, mine, or facility in the interest of the war effort."

Such a seizure is normally accomplished by the issuance of a Presidential Executive Order. A late example of such action occurred in the recent meat packing strike where under Executive Order 9605, 24 January 1946, President Truman ordered the Secretary of Agriculture to take possession of and operate certain plants and facilities engaged in the production, processing, transportation, sale and distribution of livestock, meat, meat products and by-products. Under the Executive Order the Secretary of Agriculture was empowered to request the Secretary of War to furnish protection for such plants and to protect all persons employed or seeking employment therein, their families and their homes and to furnish equipment, manpower, and other facilities or services deemed necessary by the Secretary of Agriculture to carry out and accomplish the purposes of the Order. The Secretary of War was directed to furnish necessary manpower to effect the purposes stated above.

The War Labor Disputes Act prohibits taking possession of a plant, mine, or facility after the President proclaims the termination of the war.

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Tab "J" to Annex V

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ANNEX VI

Domestic Emergency Control Officer

1. Each ConAC air force commander will designate an "Air Force Domestic Emergency Control Officer." This officer will be thoroughly familiar with the plans and operating principles of the Continental Air Command Domestic Emergency Plan, the appropriate Army area plans, the Naval District plans and the local air force plan.

2. The Domestic Emergency Control Officer will be prepared to:

(1) Advise and assist the ConAC air force commander in implementing the plan and fulfilling the responsibilities outlined therein.

(2) In the event of a domestic emergency, coordinate the action of the air force with those of appropriate Army and Navy commands, as directed by the air force commander.

(3) Advise and assist other staff officers in carrying out action required by their respective division.

(4) Periodically review Domestic Emergency Plans for his area and the Base Plans of air force installations within his area and recommend appropriate changes to the air force commander.

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ANNEX VII

PERSONNEL INSTRUCTIONS

1. When practicable, the personnel assigned for Domestic Emergency activities at each installation will be organized into teams such as Communications Teams, Medical Teams, Administrative Teams, Police Squadrons, etc. The accounting of personnel assigned for Domestic Emergency activities will be by the number of teams at each installation and on a form similar to that which is attached hereto as Tab A. The composition of each type team (Type Personnel, MOS, Number of Officers and Number of Airmen) will be indicated as a part of the personnel annex (see Tabs B through L).

2. It can be noted in Tab A that a number of specialized personnel cannot be organized into teams or considered part thereof. Such personnel should be reported by number in the miscellaneous specialist columns.

3. Personnel that cannot be classified either as a member of a specialized team or as a miscellaneous specialist should be detailed as a member of a Police Squadron (Tab E). These squadrons will be used for dispersing rioters, guard duties, quelling uprisings and other miscellaneous duties that are ordinarily connected with major disasters. Police Squadrons will be the type unit used most frequently in Domestic Emergency activities.

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ANNEX NO ______ TO ______ AF DOMESTIC EMERGENCY PLAN

PERSONNEL REPORT FORM

REPORT AS OF ________
DATE

AF INSTALLATIONS	COMMUNICATION TEAM (1)		FOOD SERVICE TEAM (2)			ADMINISTRATIVE TEAM (3)	POLICE SQ (4)		A C MAINTENANCE TEAM (5)		MEDICAL TEAM (6)			CONSTRUCTION TEAM (7)	SUPPLY TEAM (8)	TRANSPORTATION TEAM (9)		ORDNANCE TEAM (10)	OPERATIONS TEAM (11)	MISCELLANEOUS											REMARKS
	TYPE A	TYPE B	TYPE A	TYPE B	TYPE C	TYPE A	TYPE A	TYPE B	TYPE A	TYPE B	TYPE A	TYPE B	TYPE C	TYPE A	TYPE A	TYPE A	TYPE B	TYPE A	TYPE A	AUTOMOTIVE EQUIPMENT OPERATOR [illegible]	CONSTRUCTION MACHINE OPERATOR [illegible]	CRANE OPERATOR [illegible]	HEAVY AUTO EQUIPMENT OPERATOR [illegible]	SPECIAL VEHICLE OPERATOR [illegible]	AUTO EQUIPMENT MECHANIC [illegible]	FACSIMILE OPERATOR [illegible]	FACSIMILE TECHNICIAN [illegible]	INTERPRETER [illegible]	COUNTER INTELLIGENCE [illegible]		
TOTAL																															

(1) SEE TAB B OF ANNEX XII
(2) SEE TAB C OF ANNEX XII
(3) SEE TAB D OF ANNEX XII
(4) SEE TAB E OF ANNEX XII
(5) SEE TAB F OF ANNEX XII
(6) SEE TAB G OF ANNEX XII
(7) SEE TAB H OF ANNEX XII
(8) SEE TAB I OF ANNEX XII
(9) SEE TAB J OF ANNEX XII
(10) SEE TAB K OF ANNEX XII
(11) SEE TAB L OF ANNEX XII

NOTE: THE COLUMNS WILL REFLECT THE NUMBERS OF TEAMS ON EACH INSTALLATION

TAB A
OF ANNEX XII

TAB B TO ANNEX VII

COMPOSITION OF COMMUNICATIONS TEAMS

JOB DESCRIPTION	MOS	TYPE "A"		TYPE "B"	
		OFFICERS	AIRMEN	OFFICERS	AIRMEN
Communications Officer	0200	1		1	
Communications Chief	542		1		1
Wire Technician	261		1		1
Radio Repairman	648		1		1
Telephone Switchboard Operator	650		3		2
Installer-Repairman	097		1		
Lineman, Telephone and Telegraph	238		2		1
Cable Splicer	039		1		1
Radio Operator	776 or 777		3		2
Messengers (Clerk Non-Typist)	055		3		1
Message Center Clerk	667		1		1
TOTAL		1	17	1	11

1. Purpose - The communications team is responsible for establishing and maintaining electrical communications within the emergency area and to higher headquarters within the limits of its capabilities.

2. Responsibilities and Duties of the Team Commander:

a. Will direct the operations of his team and determine its policy and procedure for efficient functioning.

b. Will be responsible for establishing and maintaining communications within the emergency area.

c. Will be responsible for the requisitioning, receipts and storage of Air Force communications equipment necessary in the emergency area.

d. Will determine the types of communications equipment necessary for efficient operation at the scene of the emergency.

3. Capabilities:

a. Type "A" Communications Team can provide the following services indefinitely and the Type "B" Team can provide similar services for a period of seventy-two hours:

(1) Establish and maintain radio communications with higher headquarters, local authorities, etc.

(2) Establish and maintain local telephone service in the emergency area.

(3) Establish and maintain a message center.

TAB C TO ANNEX VII

COMPOSITION OF FOOD SERVICE TEAMS

JOB DESCRIPTION	MOS	TYPE "A"		TYPE "B"		TYPE "C"	
		OFF	AM	OFF	AM	OFF	AM
Mess Officer	4110	1		1		1	
Assistant Mess Officer	4110					1	
Food Service Steward	824		1		1		1
Assistant Food Service Stewart	824				1		1
Cook	060		4		8		11
Food Service Attendant	062		4		8		12
TOTAL		1	9	1	18	2	25

1. Purpose - The Food Service Team is responsible for the requisitioning, receiving, storage, preparation and serving of emergency rations (ten-in-one) in the emergency area, within the limits of its capabilities.

2. Responsibilities and Duties of the Team Commander:

a. Will direct the operations of his team and determine its policies and procedures for efficient functioning.

b. Will be prepared to furnish minimum food requirements for the appropriate number of personnel indicated for his type team.

c. Will be responsible for establishing and maintaining adequate facilities for the preparation and serving of the required meals. This includes the requisitioning, receipt and storage of the required rations.

3. Capabilities - These teams are capable of providing emergency food service for the number of individuals indicated below providing only one field mess is established for each team committed.

a. Type "A" is capable of feeding up to 1000 persons.

b. Type "B" is capable of feeding 1000 to 2500 persons.

c. Type "C" is capable of feeding 2500 to 5000 persons.

TAB D TO ANNEX VII

COMPOSITION OF AN ADMINISTRATIVE TEAM

JOB DESCRIPTION	MOS	TYPE "A"	
		OFFICERS	AIRMEN
Team Commander (See Para 2 below)		1	
Assistant Team Commander	2120	1	
*Chaplain	5310	1	
Public Information Officer	5401	1	
Administrative Specialist	502		1
Clerk-Typist	405		4
**Chauffeur	345		2
Information Specialist	274		1
Photographer	152		1
TOTAL		4	9

* Will accompany team only on team commander's request

** To act as runner or messenger in addition to duty as chauffeur

1. Purpose - The administrative team is responsible for supervising and coordinating the activities of other USAF emergency teams placed under its control by proper authority; for acting as a liaison agent for these teams in the event coordination with other military, naval or civilian agencies is indicated, and for providing Public Information coverage.

2. Responsibilities and Duties of the Team Commander - Normally, the team commander will be in charge of all air force participation and therefore, should not be below the grade of Lt. Colonel. In this case, no MOS is specified; however, if an administrative team is committed to an operation where there is need for administrative assistance, only, then the team commander should have an MOS of 2120 and would not need to be above the grade of Major. Normally the Team Commander will:

a. Direct the operations of the Administrative Team and determine its policy and procedure for efficient functioning.

b. Supervise and coordinate the activities of other USAF emergency teams within the emergency area.

c. Place the resources of his emergency teams at the disposal of the senior army or navy officer present in the event USAF emergency teams are furnishing aid under Operation B to the Army or Navy.

d. Maintain liaison with interested military and civilian agencies within the emergency area.

e. Require all emergency teams under his supervision to maintain a record of action taken, supplies dispensed, etc., and will maintain a consolidated

TAB D TO ANNEX VII (Cont'd)

log of action taken by USAF teams in the area.

3. Capabilities - This team is capable of supervising and coordinating the action of other USAF emergency teams; of acting as a liaison agent for USAF teams in the event coordination with other agencies is indicated; and providing public information coverage.

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TAB E TO ANNEX VII

COMPOSITION OF EMERGENCY POLICE SQUADRONS

JOB DESCRIPTION	MOS	TYPE "A"		TYPE "B"	
		OFFICERS	AIRMEN	OFFICERS	AIRMEN
Squadron Commander	9100 or 9110	1			
Flight Commander	9100 or 9110	2		1	
First Sergeant	502		1		
*Flight Sergeant	677		2		1
*Squad Leader	677		6		3
*Squadron Personnel	677		72		36
TOTAL		3	81	1	40

*Personnel need not possess above MOS; however, it is desirable that they be familiar with MP duties.

1. Purpose - The police squadron is responsible for suppressing crime and violence and re-establishing and maintaining law and order in the emergency zone within the limits of its capabilities. This specifically includes riot control, prevention of looting, the establishment and maintenance of traffic control, and guarding critical areas in the emergency zone, together with other duties normally associated with military police functions.

2. Responsibilities and Duties of the Squadron Commander:

a. Will direct the operations of his unit and determine its policies and procedures for efficient functioning. He will be responsible to the Air Force Officer-in-Charge of Air Force participation for the efficient operation of his police squadron.

b. Will require each individual assigned to the squadron to become familiar with the duties connected therewith.

c. Will secure detailed maps of the emergency area and plan the deployment and utilization of his forces prior to arriving at the scene of the emergency.

3. Capabilities - These police squadrons are capable of effectively accomplishing their mission in areas of the approximate population indicated below:

a. Type "A" squadron can perform the above duties in an area of approximately 20,000 population.

b. Type "B" squadron can perform the above duties in a community of approximately 10,000 population.

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TAB F TO ANNEX VII

COMPOSITION OF AIRCRAFT MAINTENANCE TEAMS

JOB DESCRIPTION	MOS	TYPE "A"		TYPE "B"	
		OFFICERS	AIRMEN	OFFICERS	AIRMEN
Maintenance Officer	4823	1			
Line Chief	750		1		1
*Airplane and Engine Mechanic	747		12		6
**Fire Fighters (A/C Crash Rescue)	1383		6		6
***Special Vehicle Operator	932		2		2
TOTAL		1	21		15

*Where possible, should include one each Airplane Propeller Mechanic, Airplane Electrical Mechanic and Radio Mechanic, Air Force.

**Required only if team is stationed where there are no Fire Fighters.

***Required only if refueling is necessary and will be committed with one refueling unit (complete).

1. Purpose - The Aircraft Maintenance Team is responsible for providing emergency maintenance of aircraft and crash fire facilities (where necessary) in the emergency area within the limits of its capabilities.

2. Responsibilities and Duties of the Team Commander:

a. Will direct the operations of his team and determine its policies and procedures for efficient functioning. He will be responsible to the Air Force Officer-in-Charge of Air Force participation, for efficient operation of his team.

b. Will provide required emergency maintenance of aircraft in an emergency area. This maintenance might be performed at a temporary landing strip or in conjunction with other maintenance personnel at other USAF bases.

3. Capabilities - These teams are capable of providing emergency maintenance of aircraft in an emergency as follows:

a. The type "A" team can maintain six (6) C-47's or similar type aircraft.

b. The type "B" team can maintain three (3) C-47's or similar type aircraft.

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TAB G TO ANNEX VII

COMPOSITION OF MEDICAL TEAMS

JOB DESCRIPTION	MOS	TYPE "A" OFF	TYPE "A" EM	TYPE "B" OFF	TYPE "B" EM	TYPE "C" OFF	TYPE "C" EM
Medical Officer, General Duty	3100	4		2		1	
Administrative Assistant	2120	1		1			
Medical Administrative Specialist	673		1		1		
Surgical Technician	861		3		2		1
Medical Technician	409		5		3		1
*Medical Corpsman	657		8		5		2
TOTAL		5	17	3	11	1	4

*Where possible, should be qualified as a 345

1. Purpose - The Medical Team is responsible for furnishing routine and emergency medical care and advice on medical sanitation for personnel of the emergency area, within the limits of its capability.

2. Responsibilities and Duties of the Team Commander:

a. Will provide routine and emergency medical care and advice on medical sanitation.

b. Will direct the operations of his team and determines its policy and procedure for efficient functioning. He will be responsible to the Air Force Officer-In-Charge of Air Force participation for the efficient operation of his team.

3. Capabilities - These teams are capable of providing emergency medical service for the approximate number of individuals as indicated.

a. Type "A" team is capable of serving approximately 2000 people.

b. Type "B" team is capable of serving approximately 1000 people.

c. Type "C" team is capable of serving approximately 300 people.

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TAB H TO ANNEX VII

COMPOSITION OF A CONSTRUCTION TEAM

JOB DESCRIPTION	MOS	TYPE "A"	
		OFFICERS	AIRMEN
Team Commander	*	1	
Assistant Team Commander	*	1	
Construction Foreman	059		2
Motor Transportation Foreman	014		1
Automotive Equipment Operator	345		5
Automotive Mechanic	014		1
Carpenter	050		10
Clerk-Typist	405		1
Supply Clerk	835		1
Construction Equipment Mechanic	319		1
Construction Worker	188		10
Plumbers	164		2
Tractor Operator	359		1
Welder, Combination	256		2
Electrician	078		2
Powerman	166		1
Power Shovel Operator	359		1
Road Grader Operator	359		1
Tool Room Keeper	242		1
Water Supply Technician	727		2
Sanitary Technician	196		1
Duty Soldier	590		3
DEMOLITION SQUADRON			
Squadron Commander	*	1	
Demolition Foreman	533		1
Air Compressor Operator	081		1
Demolition Specialist	533		2
Electrician	078		1
Tractor Operator	359		1
FIRE FIGHTING SQUADRON			
Squadron Commander	*	1	
Crew Chief	1383		2
Fire Fighters	1383		10
TOTAL		4	67

*Suggested MOS: 1337, 7010, 7015, 7025, 7120, 7970

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TAB H TO ANNEX VII (contd)

1. Purpose - The Construction Team is responsible for providing shelter, utility and sanitary facilities, fire control, and necessary construction to minimize damage in the emergency area within the limits of its capabilities.

2. Responsibilities and Duties of the Team Commander:

a. Will direct the operations of his team and determine its policy and procedure for efficient functioning. He will be responsible to the Air Force Officer-in-Charge of Air Force participation for the efficient functioning of his team.

b. Will supervise and/or provide shelter and sanitary facilities for the population of the emergency zone by converting existing buildings into quarters or by providing a "tent city".

c. Will provide potable water and re-establish sewage facilities and utility services.

d. Will, in the case of floods assist in building dykes, levees or other construction to minimize damage.

e. Will, in the case of fire, explosion, tornado, hurricane, earthquake, riots, or similar disaster and disturbance, clear streets, and in case of fire, remove structures from the path of the fire.

f. Will, in case of explosion, earthquake, riots, etc., use all available resources to prevent the outbreak and/or spread of fire, to confine and extinquish fires.

g. Will be responsible for requisitioning, receipt and storage of appropriate engineer equipment necessary in the emergency area.

3. Capabilities - The Construction Team is designed and constitutes personnel for supervising and assisting civilian agencies in disaster work in a city of approximately 1000 population.

TAB I TO ANNEX VII

COMPOSITION OF A SUPPLY TEAM

JOB DESCRIPTION	MOS	TYPE "A"	
		OFFICERS	AIRMEN
Supply Officer, General	4000	1	
Supply NCO	821		1
Foreman, Warehouse	252		2
Engineer Supply Technician	583		1
Chief Clerk (Ordnance)	815		1
Chief Clerk (Medical)	825		1
Communication Supply Technician	581		1
Supply Technician (Air Force)	826		1
TOTAL		1	8

1. Purpose - The supply team is responsible for the requisitioning, receipt, storage, maintenance and issue of supplies required in the emergency area, within the limits of its capabilities.

2. Responsibilities and Duties of the Team Commander:

a. Will direct the operations of his team and determine its policy and procedure for efficient functioning. He will be responsible to the Air Force Officer-In-Charge of Air Force participation, for the efficient functioning of his team.

b. Will be responsible for requisitioning, receipt, storage, maintenance, and issue of supplies required in connection with the emergency.

3. Capabilities - This team is capable of providing for the requisitioning, receipt, storage, maintenance and issue of Quartermaster, Ordnance, Chemical, Communications, Medical, Air Force, and Engineer Supplies in sufficient quantities to maintain other USAF emergency teams, as well as providing for the populace of the emergency area. The situation, density of population and gravity of disaster will dictate the number of supply teams required.

TAB J TO ANNEX VII

COMPOSITION OF TRANSPORTATION TEAMS

JOB DESCRIPTION	MOS	TYPE "A"		TYPE "B"	
		OFFICER	AIRMEN	OFFICER	AIRMEN
Motor Officer	0600	1			
Motor Sergeant	014		1		1
Dispatcher	502		1		1
Mechanics	014		2		1
Drivers	345		21		11
TOTAL		1	25		14

1. Purpose - The transportation team is responsible for furnishing vehicular transportation in the emergency area, within the limits of its capabilities.

2. Responsibilities and Duties of the Team Commander:

a. Will direct the operations of his team and determine its policy and procedure for efficient functioning. He will be responsible to the Air Force Officer-in-Charge of Air Force participation for the efficient operation of his team.

b. Will be responsible for selecting and establishing a motor pool and vehicle fuel storage area.

c. Will be responsible for the orderly dispatching of all vehicles in connection with the emergency.

d. Will be responsible for securing road and street maps of the emergency area and adjacent roadways.

e. Will aid other emergency teams to the limit of his capabilities.

3. Capabilities - The two teams are capable of furnishing transportation as shown below:

a. Type "A" is capable of providing twenty trucks, 2½ ton or smaller, with a maximum load of 100 tons of cargo or 360 personnel.

b. Type "B" is capable of providing ten trucks, 2½ ton or smaller, with a maximum load of 50 tons of cargo or 180 personnel.

TAB K TO ANNEX VII

COMPOSITION OF AN ORDNANCE TEAM

JOB DESCRIPTION	MOS	TYPE "A"	
		OFFICERS	AIRMEN
Aviation Ordnance Officer	4532	1	
Chief Parts Clerk (Auto)	348		1
Ammunition Supply Technician	505		1
Master Mechanic	342		1
Automotive Repairman	965		2
Chemical Technician	870		1
TOTAL		1	6

1. Purpose - The Ordnance Team is responsible for providing emergency maintenance and procurement of vehicles and weapons, to include ammunition, within the limits of its capabilities.

2. Responsibilities and Duties of the Team Commander:

a. Will direct the operations of his team and determine its policy and procedure for efficient functioning. He will be responsible to the Air Force Officer-In-Charge of Air Force participation, for the efficient functioning of his team.

b. Will provide required emergency maintenance of vehicles in connection with the emergency.

c. Will assist in the procurement of vehicles, weapons, ordnance and chemical ammunition.

3. Capabilities - This team is capable of rendering field maintenance for approximately twenty vehicles, and identification of and instructions in capabilities of chemicals.

TAB L TO ANNEX VII

COMPOSITION OF AN OPERATIONS TEAM

JOB DESCRIPTION	MOS		TYPE "A"	
			OFFICERS	AIRMEN
*Operations Officer	2161		1	
*Assistant Operations Officer	2161		1	
Weather Officer	8219		1	
Administrative Specialist	502			1
Clerk-Typist	405			1
Air Operations Specialist	791			3
Control Tower Operator	552			3
Personal Equipment Technician	594			1
Weather Forecaster	787			1
Weather Observer	784			2
Basic Airmen	521			4
TOTAL			3	16

*NOTE: One officer should have an additional MOS or experience as 0911.

1. Purpose - The Operations Team is responsible for establishing and maintaining an emergency air operation facility in the emergency area, within the limits of its capabilities.

2. Responsibilities and Duties of the Team Commander:

a. Will direct the operations of his team and determine its policy and procedure for efficient functioning. He will be responsible to the Air Force Officer-In-Charge of Air Force participation for the efficient functioning of his team.

b. Will, in conjunction with other team commanders, establish and maintain those facilities required for an operations section.

c. Will control all flight operations at the emergency location.

d. Will be responsible for the scheduling of aircraft and flying crews, the controlling of aircraft traffic and the clearance of aircraft flights with military flight service.

e. Will be responsible for compliance with flying safety standards and the maintenance of flying operations records and reports.

f. Will be responsible for the loading and unloading of aircraft dispatched in connection with the emergency.

TAB L TO ANNEX VII (Cont'd)

3. Capabilities:

a. Establishing, in conjunction with the communications team, an emergency air operations facility.

b. Maintenance of operations control of all aircraft and crews arriving at and departing from the scene of the emergency on a twenty four hour basis until the emergency conditions are alleviated.

c. Loading and unloading equipment and supplies transported by aircraft to the scene of the emergency.

d. Providing adequate weather briefing for all emergency flights.

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ANNEX NO ______ TO ______ A F DOMESTIC EMERGENCY PLAN

REPORT AS OF ______
DATE

EQUIPMENT ASSIGNED FOR DOMESTIC EMERGENCIES AT ALL AF INSTALLATIONS IN THE ______ A F

	TRANSPORTATION			EQUIPMENT							REMARKS
AF INSTALLATION	AIRCRAFT ASSIGNED (1)	VEHICLES ASSIGNED	BOATS	(2) COMM	STORAGE FACILITIES	PORTABLE MAJOR MOBILE POWER UNIT	ARMS & AMMUNITION (INCLUDING CHEMICALS)	ROAD REPAIR	TENTAGE	MISCELLANEOUS	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
TOTAL											

NOTE

(1) ALL AIRCRAFT WHEN COMMITTED MUST HAVE COMPLETE CREWS THAT ARE QUALIFIED, AND NECESSARY AUXILIARY EQUIPMENT TO BE USED WITH CONSIDERATION TO NATURE OF THE EMERGENCY

(2) COMMUNICATIONS EQUIPMENT SHOULD BE LISTED BY TYPE

ANNEX VIII

NOTE

(A) AMMUNITION, SMALL ARMS (ALL SIZES UP TO AND INCL 20 [illegible] REPORT IN CASE LOTS)
(B) BKS NO PERSONS THAT CAN BE ACCOM IN AVAILABLE BKS
(C) HOSPITALIZATION AVAIL FOR HOW MANY PATIENTS
(D) NO PATIENTS THAT CAN BE GIVEN MEDICAL SERVICE
(E) NO PERSONS THAT CAN BE FED IN AVAILABLE MESS HALLS
(F) NO PERSONS THAT CAN BE FED IN AVAILABLE FIELD KITCHENS
(G) NO PERSONS THAT CAN BE OUTER CLOTHED WITH UNISSUED STOCK

ANNEX IX

REPORTS

1. There are three basic type reports which are required by this headquarters to be submitted by each ConAC Air Force Commander in conjunction with Domestic Emergency activities. The requirements of these reports are outlined below:

a. Domestic Emergency Preliminary Report: As soon as it becomes apparent that a domestic emergency condition will exist within an air force area, the ConAC Air Force Commander having jurisdiction over the area to be effected, will report, by priority, the full particulars to this headquarters by the most expeditious means available. The message form attached hereto (Tab A) will be used and each section thereof will be answered in sequence listed. Reports Control Symbol CNC-DO-U1A (Part 1) is assigned this report.

b. Domestic Emergency Action and Situation Report: To be submitted to this headquarters (with an information copy of the report forwarded to Headquarters USAF) upon placing the Domestic Emergency Plan in operation and each twenty-four hours thereafter at 1200 hours. This priority report (see Tab B attached hereto for form to be used) will include the action taken, action contemplated for the next twenty-four hours, and a general description of the situation. The report to be forwarded by most expeditious means available. Reports Control Symbol CNC-DO-U1A (Part 2) is assigned this report.

c. Final Report (Letter Form): Written in narrative form to cover entire period of preparation for the emergency, the emergency period and action after the emergency. The report will include: Date emergency ended, synopsis of emergency including action taken, casualties and fatalities of both civilian and military personnel, supplies furnished (i.e., medical, mess equipment, blankets, cots, mattresses, lanterns, shovels, picks, etc.), number of personnel and units employed, number of persons evacuated and other pertinent information. This report is to be submitted not later than one week following the termination of all emergency activities involving the air forces. Reports Control Symbol CHC-DO-U1A (Part 3) is assigned this report.

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TAB A TO ANNEX IX

DOMESTIC EMERGENCY PRELIMINARY REPORT

TO: Commanding General, Continental Air Command, Mitchel Air Force Base,
New York

In accordance with Continental Air Command Domestic Emergency Plan, Basic 1949, the following Domestic Emergency Preliminary Report, Reports Control Symbol CNC-DO-U1A (Part 1), is submitted:

a. (Will indicate the type emergency expected (i.e., hurricane, flood, rail transportation strike, labor violance due to_______strike, subversive activities, etc.)

b. (Will indicate the locality to be effected (i.e.,________ factory in San Francisco, Ohio River Valley from Huntington, W. Virginia to Louisville, Kentucky, South Florida from Daytona Beach to Key West - center of expected damage around West Palm Beach - etc.)

c. (Will indicate the estimated time and date emergency will begin.)

d. (Will indicate the expected duration.)

e. (Summary of the preparations being made (i.e., type, units alerted, etc.)

f. (Will indicate the organizations notified (i.e., Red Cross, Army and Navy Units, Coast Guard, Public Officials.)

g. (Will indicate the Air Force Officer selected to be in charge, tentative address of emergency command post, and telephone number.)

h. (Will indicate any additional information relative to the emergency not covered in above paragraphs.)

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TAB B TO ANNEX IX

DOMESTIC EMERGENCY ACTION AND SITUATION REPORT

TO: Commanding General, Continental Air Command, Mitchel Air Force Base,
New York

In accordance with Continental Air Command Domestic Emergency Plan, Basic 1949, the following domestic emergency action and situation report, Reports Control Symbol CNC-DO-U1A (Part 2), is submitted:

a. (Will indicate location and type of emergency.)

b. (Will indicate expected duration and service which has command responsibility, (i.e., Army, Air Force or Navy) if any change from previous report, otherwise, no change will be indicated.)

c. (Summary of action taken, such as number personnel employed, units committed, aircraft assigned, hours flown, equipment delivered, etc.)

d. (Summary of action contemplated during next twenty four hours.)

e. (Will indicate number of casualties and fatalities.)

f. (Will indicate Air Force Officer-In-Charge, command post address and telephone number if any change from previous report, otherwise no change will be indicated.)

g. (Will indicate general description of situation.)

h. (Will indicate any additional information relative to the emergency not covered in above paragraphs.)

Info Cy To
Hqs USAF

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UNITED STATES
AIR FORCE

OFFICIAL BUSINESS

419.663

TO BE RETURNED TO
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A.[illegible]

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DOD DIR 5200.10

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PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(PMGC)

Con AC

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no date

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~~CONTINENTAL AIR COMMAND~~
CONTINENTAL AIR COMMAND

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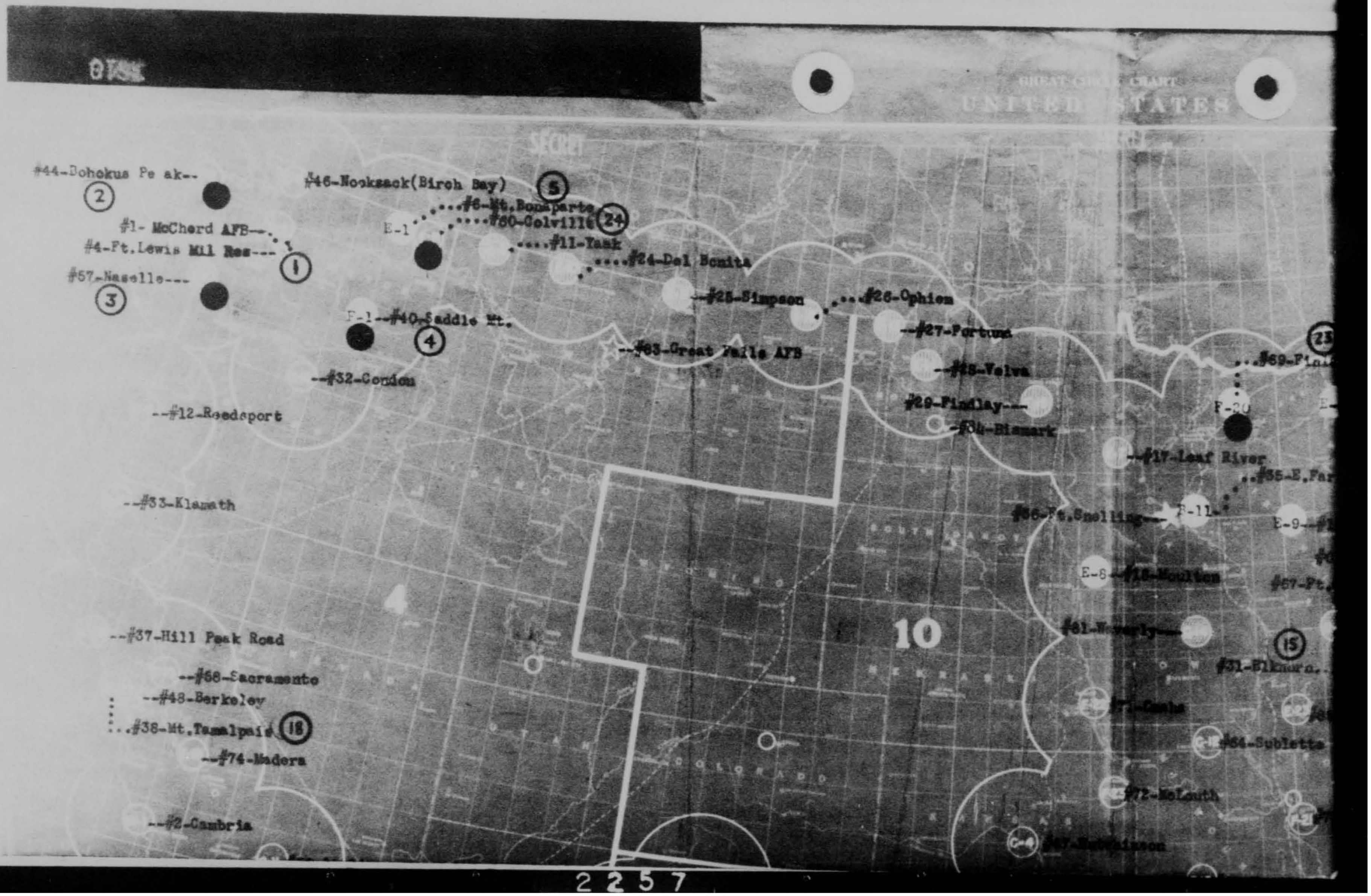
GREAT CIRCLE CHART
UNITED STATES
SECRET
#44-Bohokus Peak--
②
#1- McChord AFB--
#4-Ft.Lewis Mil Res---
①
#57-Naselle---
③
#46-Nooksack(Birch Bay)
⑤
E-1
#6-Mt.Bonaparte
#60-Colville
㉔
#11-Yaak
#24-Del Bonita
#25-Simpson
#26-Ophiem
#27-Fortuna
#28-Velva
#29-Findlay---
#34-Bismark
#63-Great Falls AFB
F-1--#40-Saddle Mt.
④
--#32-Condon
--#12-Reedsport
--#33-Klamath
㉓
#69-Fi
F-20
#17-Leaf River
#55-E.Fa
#56-Ft.Snelling
F-11
E-9
E-8--#18-Moulton
#57-Ft.
#61-Waverly
⑮
#31-Elkhorn
10
4
SOUTH DAKOTA
WYOMING
NEBRASKA
UTAH
COLORADO
KANSAS
--#37-Hill Peak Road
--#68-Sacramento
--#48-Berkeley
..#38-Mt.Tamalpais
⑱
--#74-Madera
--#2-Cambria
#71-Omaha
#64-Sublette
#72-McLouth
C-4
#67-Hutchinson

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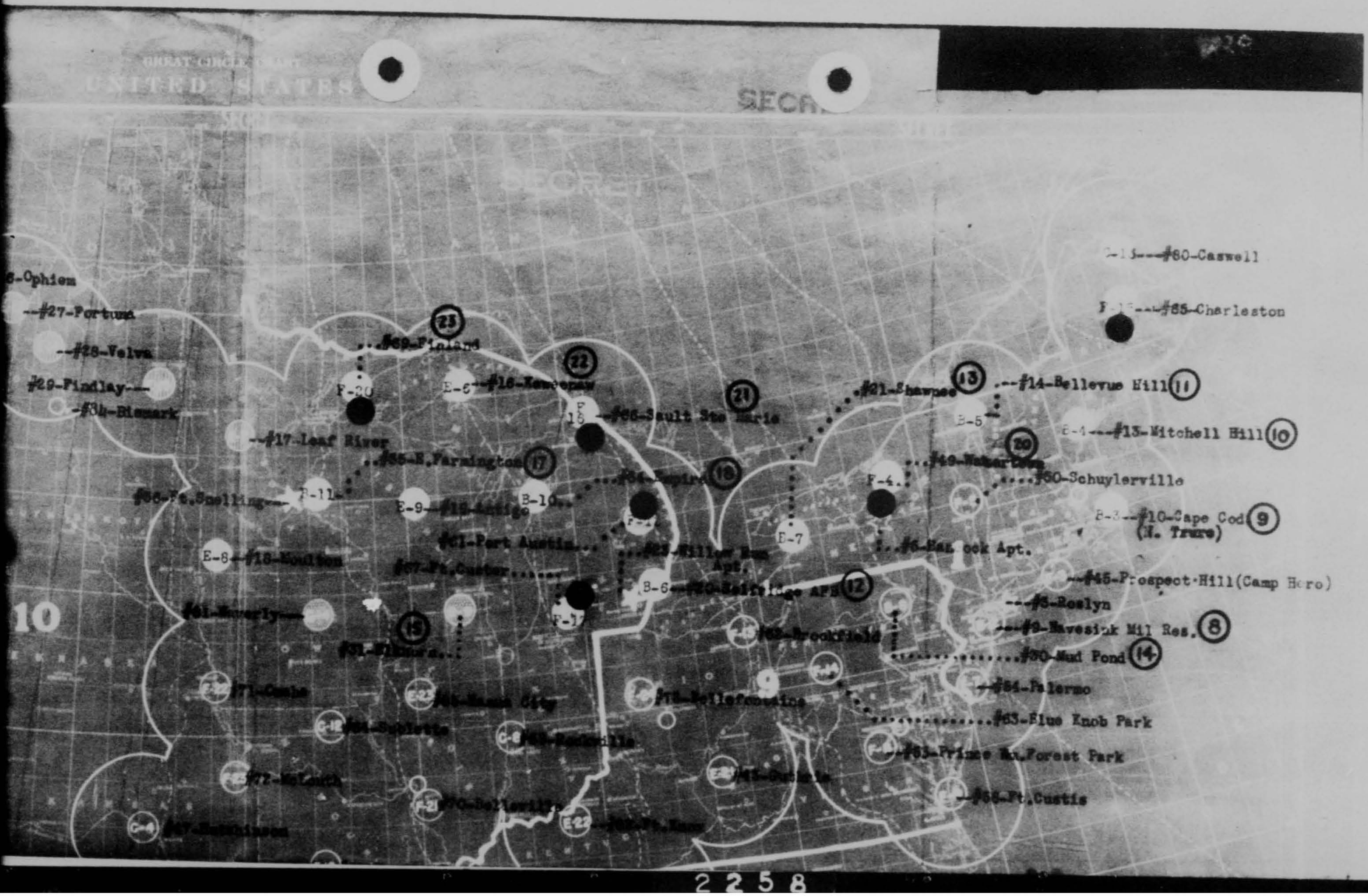
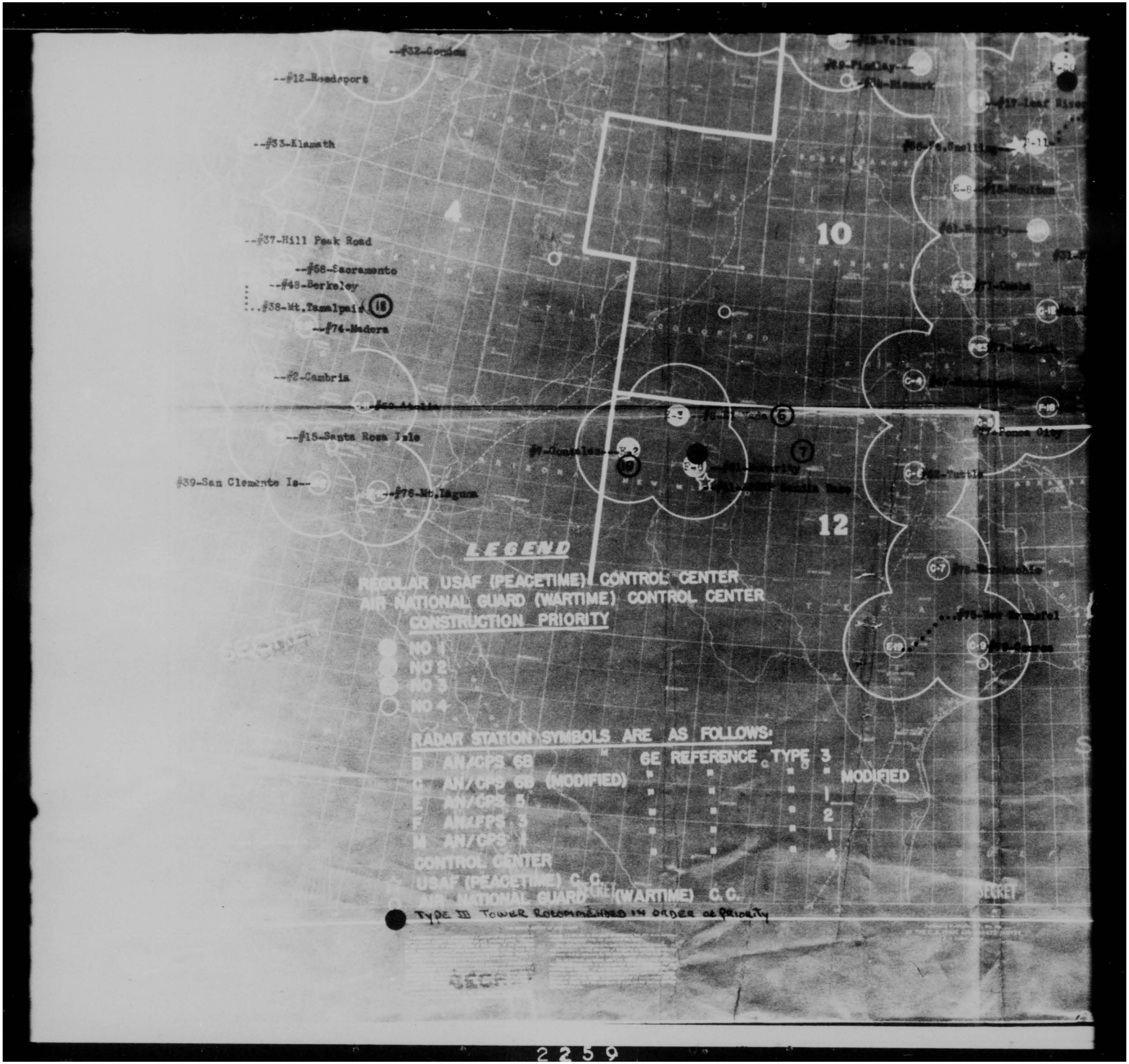
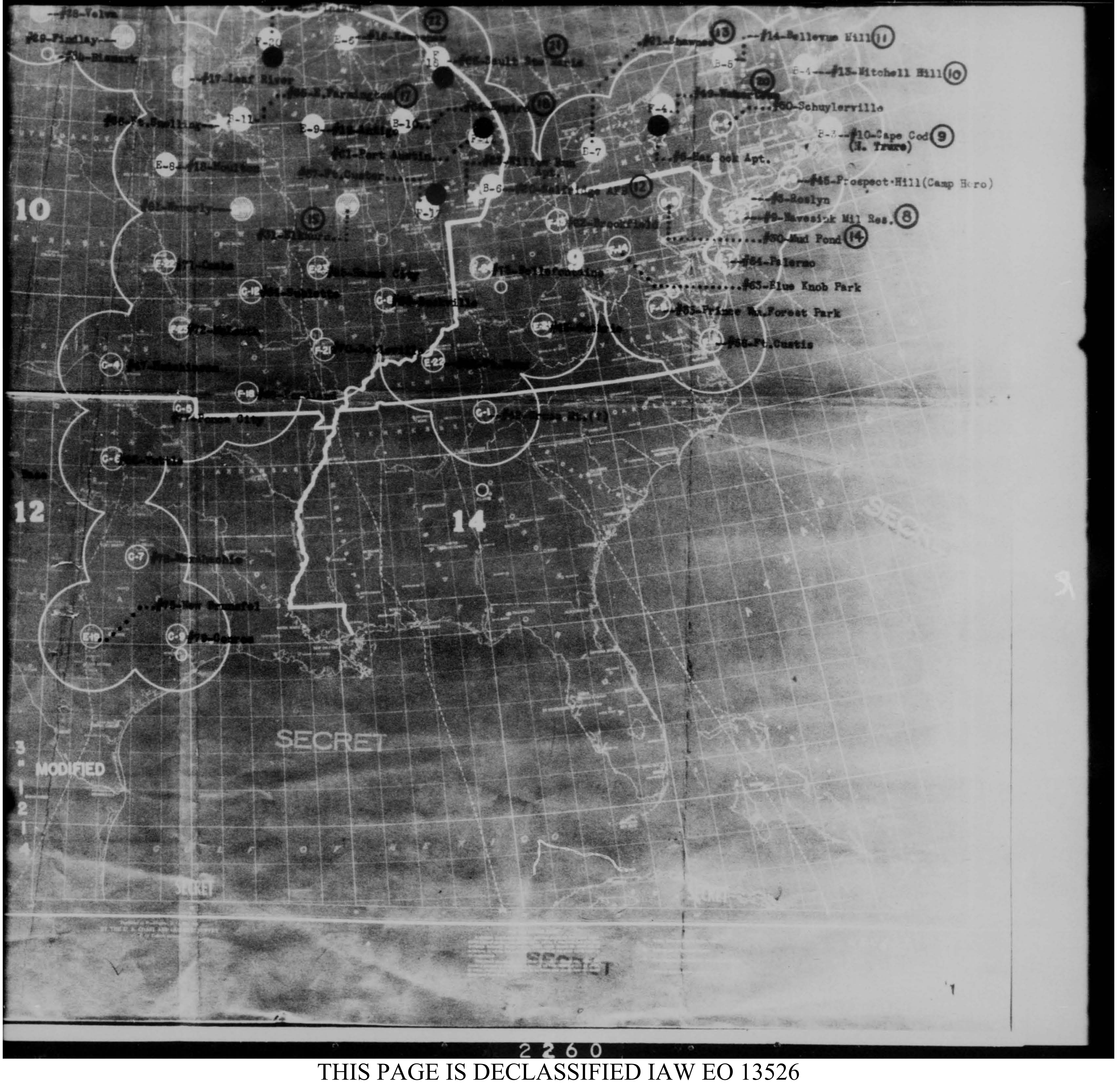

GREAT CIRCLE CHART
UNITED STATES
SECRET
SECRET
-Ophiem
--#27-Fortuna
--#28-Velva
#29-Findlay---
-#34-Bismark
--#17-Leaf River
23
..#69-Finland
F-20
E-6--#16-Keweenaw
22
F 16--#66-Sault Ste Marie
21
..#55-E.Farmington
17
#66-Ft.Snelling---B-11-
E-9--#19-Antigo
B-10..
...#54-Empire
18
F-4
#61-Port Austin...
#67-Ft.Custer......
...#23-Willow Run Apt.
E-8--#18-Moulton
B-6--#20-Selfridge AFB
12
10
#61-Waverly---
F-17
15
#31-Elkhorn...
E-7
..#21-Shawnee
13
.--#14-Bellevue Hill
11
B-5
20
...#49-Watertown
....#50-Schuylerville
F-4.
..#6-Hancock Apt.
C-13---#60-Caswell
F-15---#65-Charleston
B-4---#13-Mitchell Hill
10
B-3--#10-Cape Cod (N. Truro)
9
--#45-Prospect·Hill(Camp Hero)
---#5-Roslyn
--#9-Navesink Mil Res.
8
...#30-Mud Pond
14
#62-Brookfield
--#64-Palermo
...#63-Blue Knob Park
--#53-Prince Wm.Forest Park
--#56-Ft.Custis
#71-Omaha
#46-Kansas City
#74-Sublette
#68-Rockville
#73-Bellefontaine
#72-McLouth
#70-Belleville
#75-Guthrie
E-22--#62-Ft.Knox
C-4
#67-Hutchinson
9


--#32-Cordon
--#12-Reedsport
--#33-Klamath
--#37-Hill Peak Road
--#58-Sacramento
--#48-Berkeley
..#38-Mt.Tamalpais
18
--#74-Madera
--#2-Cambria
--#15-Santa Rosa Isle
#39-San Clemente Is--
--#76-Mt.Laguna
4
10
12
#7-Gonzales
E-2
E-3
E-8
6
7
19
--#16-Velva
#29-Finley--
--#34-Bismark
--#17-Leaf River
#66-Ft.Snelling
E-11
E-6
#18-Moulton
#61-Waverly
#71-Omaha
C-12
C-4
F-16
C-5
Ponca City
C-6
Tuttle
C-7
#75-New Braunfel
E-19
C-9
LEGEND
REGULAR USAF (PEACETIME) CONTROL CENTER
AIR NATIONAL GUARD (WARTIME) CONTROL CENTER
CONSTRUCTION PRIORITY
NO 1
NO 2
NO 3
NO 4
RADAR STATION SYMBOLS ARE AS FOLLOWS:
B AN/CPS 6B GE REFERENCE TYPE 3
C AN/CPS 6B (MODIFIED) " " " " MODIFIED
E AN/CPS 5 " " " 1
F AN/FPS 3 " " " 2
M AN/CPS 1 " " " 1
" " " 4
CONTROL CENTER
USAF (PEACETIME) C.C.
AIR NATIONAL GUARD (WARTIME) C.C.
TYPE III TOWER RECOMMENDED IN ORDER OF PRIORITY
SECRET
2259


#28-Velva
#29-Findlay
#34-Bismark
#17-Leaf River
F-20
E-6
#16-Kewaunee
22
F-16
#26-Sault Ste Marie
21
#31-Shawnee
13
#14-Bellevue Hill
11
B-5
B-4
#13-Mitchell Hill
10
20
#66-E.Farmington
17
#36-Ft.Snelling
F-11
E-9
#19-Antigo
B-10
#24-Napier
16
F-4
#49-Watertown
#50-Schuylerville
B-3
#10-Cape Cod
(N. Truro)
9
F-1
B-7
#61-Port Austin
#27-Willow Run Apt.
#6-Hancock Apt.
E-8
#18-Moulton
#67-Ft.Custer
B-6
#20-Selfridge AFB
12
#45-Prospect Hill (Camp Hero)
#5-Roslyn
#9-Navesink Mil Res.
8
10
#62-Waverly
15
F-17
F-15
#32-Brookfield
#31-Elkhorn
#30-Mud Pond
14
9
E-32
#71-Custis
E-23
#46-Sumner City
#73-Bellefontaine
#64-Palermo
#63-Blue Knob Park
C-12
#64-Sublette
C-8
#68-Rockville
#65-Prince Wm.Forest Park
F-25
#72-McLeach
E-31
#56-Ft.Custis
F-21
#70-Dellwood
E-22
C-4
#67-Hutchinson
F-18
C-5
#7-Ponca City
C-1
#42-Cross Mt.
C-6
#69-Tatum
12
14
C-7
#74-Waxahachie
#75-New Braunfel
E-19
C-9
#76-Conroe
SECRET
MODIFIED
SECRET
SECRET
SECRET
3
1
2
1
4
2260

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GM-1163-S

Map of.
C.A.C. Deployment of Radar Installations.

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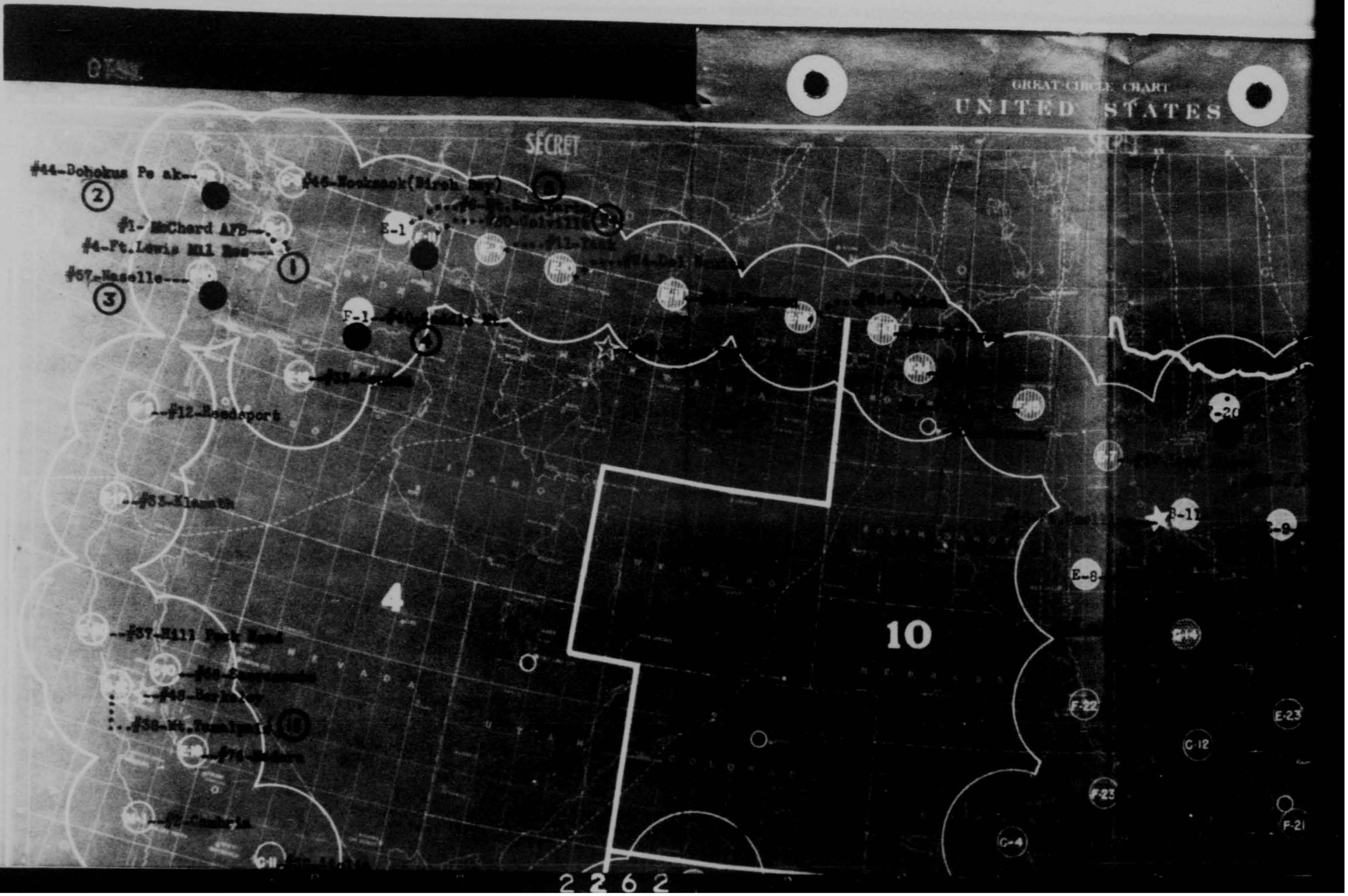
GREAT-CIRCLE CHART
UNITED STATES
SECRET
#44-Bohokus Pe ak--
2
#46-Nooksack(Birch Bay)
#1- McChord AFB--
#4-Ft.Lewis Mil Res---
1
#67-Naselle---
3
E-1
F-1
4
--#12-Reedsport
--#33-Klamath
--#48-Berkeley
--#2-Cambria
IDAHO
NEVADA
4
10
B-11
20
E-8
F-22
E-23
C-12
F-23
C-4
F-21
C-11

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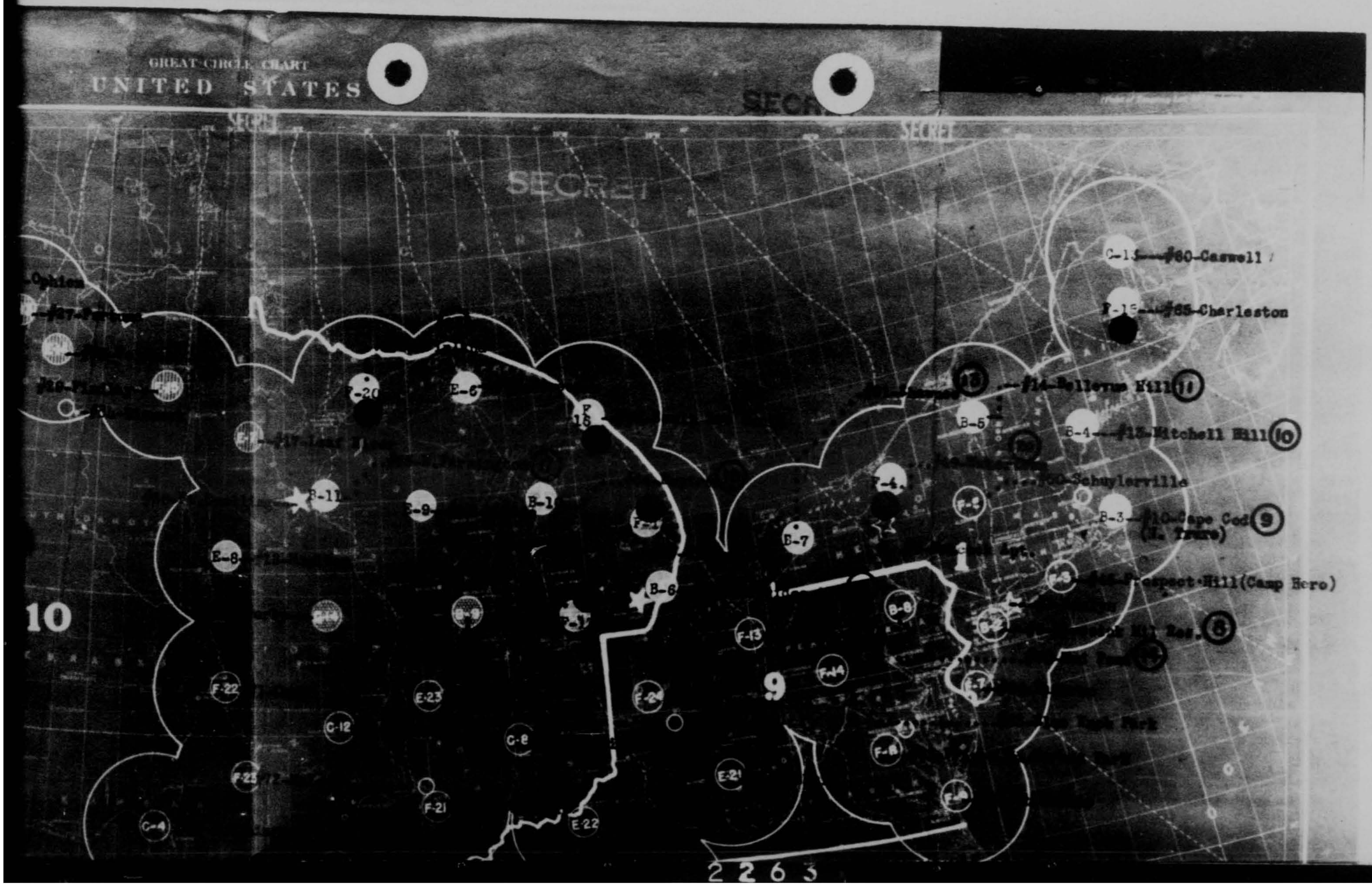
GREAT CIRCLE CHART
UNITED STATES
SECRET
SECRET
SECRET
SECRET
C-13 #60-Caswell
F-15 #65-Charleston
#14-Bellevue Hill ⑪
B-5
B-4 #13-Mitchell Hill ⑩
#50-Schuylerville
B-3 #10-Cape Cod ⑨
(N. Truro)
F-3 #45-Prospect Hill (Camp Hero)
Mil. Res. ⑧
B-2
F-7
F-6
F-14
B-8
F-4
F-5
E-7
F-13
F-24
E-21
E-22
B-6
F-21
C-8
E-23
C-12
F-22
F-23
C-4
B-10
B-9
B-11
E-6
F-20
F-18
E-8
10
9
Ophion
#26

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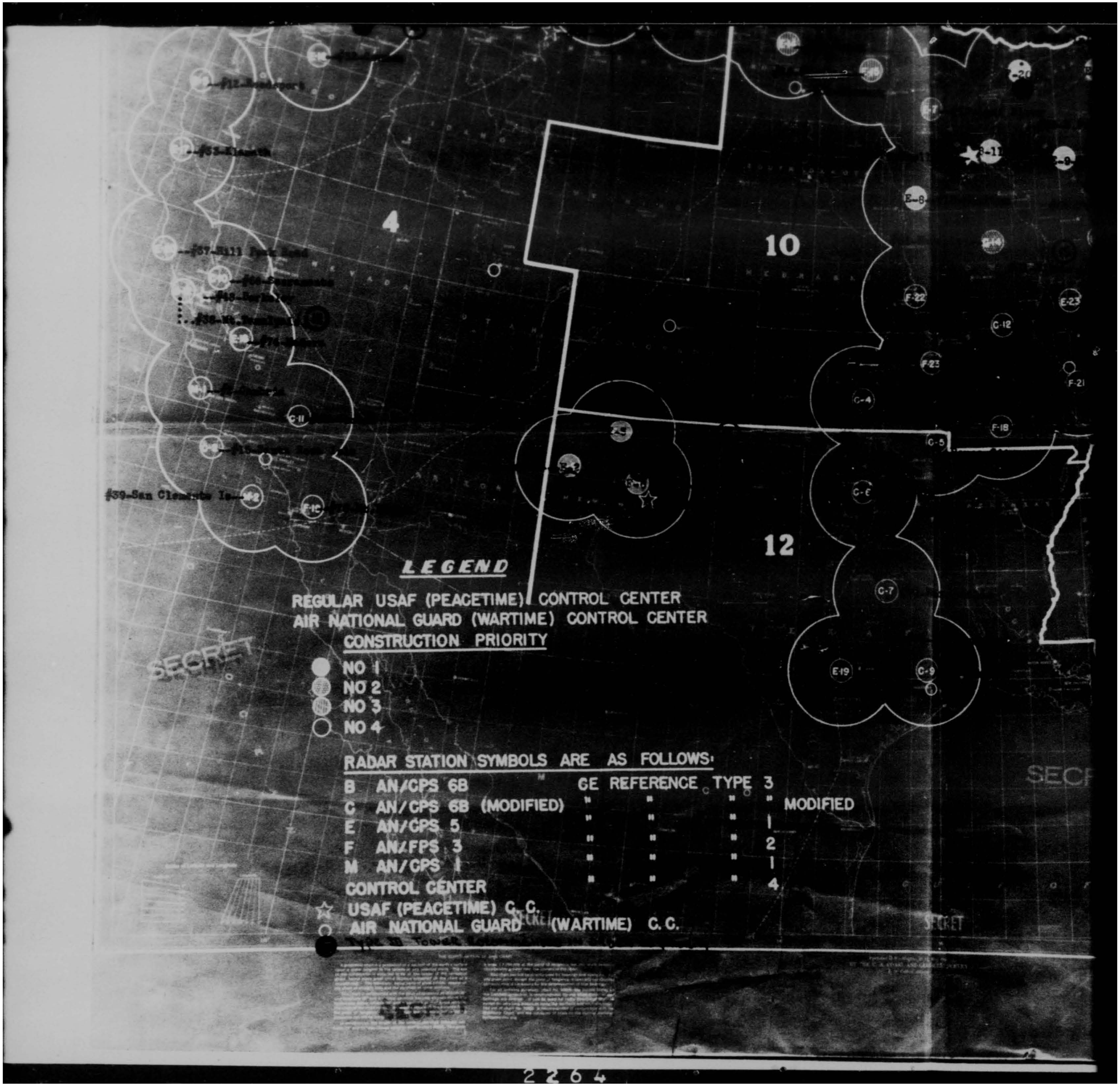
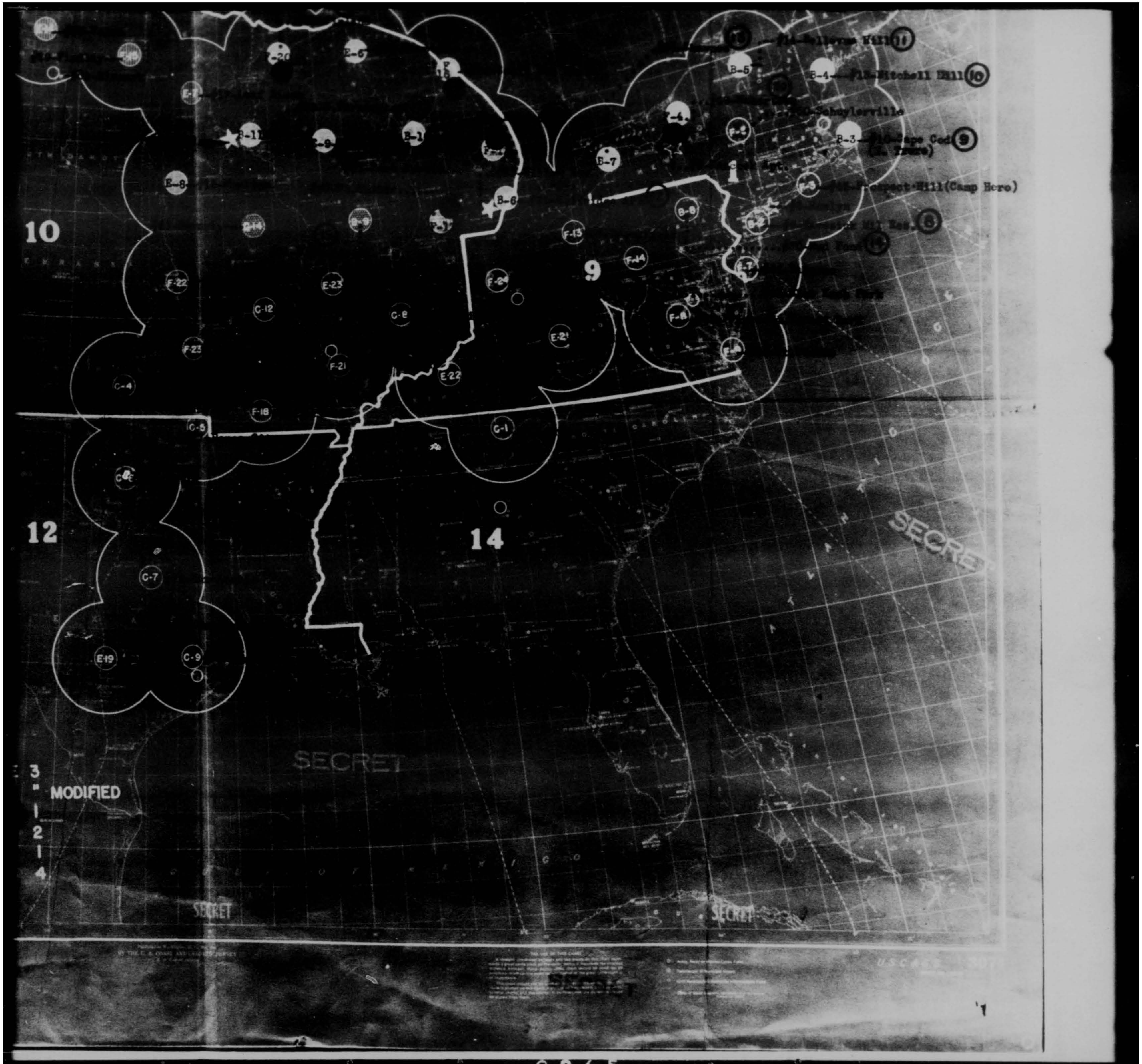

#12-Reedsport
#53-Klamath
#57-Hill Peak Road
#40-Sacramento
#48-Berkeley
#38-Mt. Tamalpais
#39-San Clemente Is.
4
10
12
C-11
F-1C
M-2
E-8
F-22
E-23
C-12
F-23
F-21
C-4
F-18
C-5
C-6
C-7
E-19
C-9
LEGEND
REGULAR USAF (PEACETIME) CONTROL CENTER
AIR NATIONAL GUARD (WARTIME) CONTROL CENTER
CONSTRUCTION PRIORITY
NO 1
NO 2
NO 3
NO 4
RADAR STATION SYMBOLS ARE AS FOLLOWS:
B AN/CPS 6B GE REFERENCE TYPE 3
C AN/CPS 6B (MODIFIED) " " " " MODIFIED
E AN/CPS 5 " " " 1
F AN/FPS 3 " " " 2
M AN/CPS 1 " " " 1
CONTROL CENTER " " " 4
USAF (PEACETIME) C. C.
AIR NATIONAL GUARD (WARTIME) C. C.
SECRET
SECRET
SECRET
SECRET


#14-Bellevue Hill ⑪
B-5
B-4
#15-Mitchell Hill ⑩
#10-Schuylerville
B-3
#10-Cape Cod ⑨
(S. Truro)
B-7
F-4
F-5
1
F-3
Prospect Hill (Camp Hero)
B-8
B-2
Mil. Res. ⑧
⑭
E-7
F-13
F-14
9
F-8
F-24
E-21
E-22
C-1
E-6
E-5
F-15
C-20
E-2
B-11
B-9
B-1
E-8
C-14
B-6
10
F-22
E-23
C-12
C-8
F-23
F-21
C-4
F-18
C-5
C-6
12
C-7
E-19
C-9
14
SECRET
MODIFIED
3
1
2
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SECRET
SECRET
SECRET
SECRET
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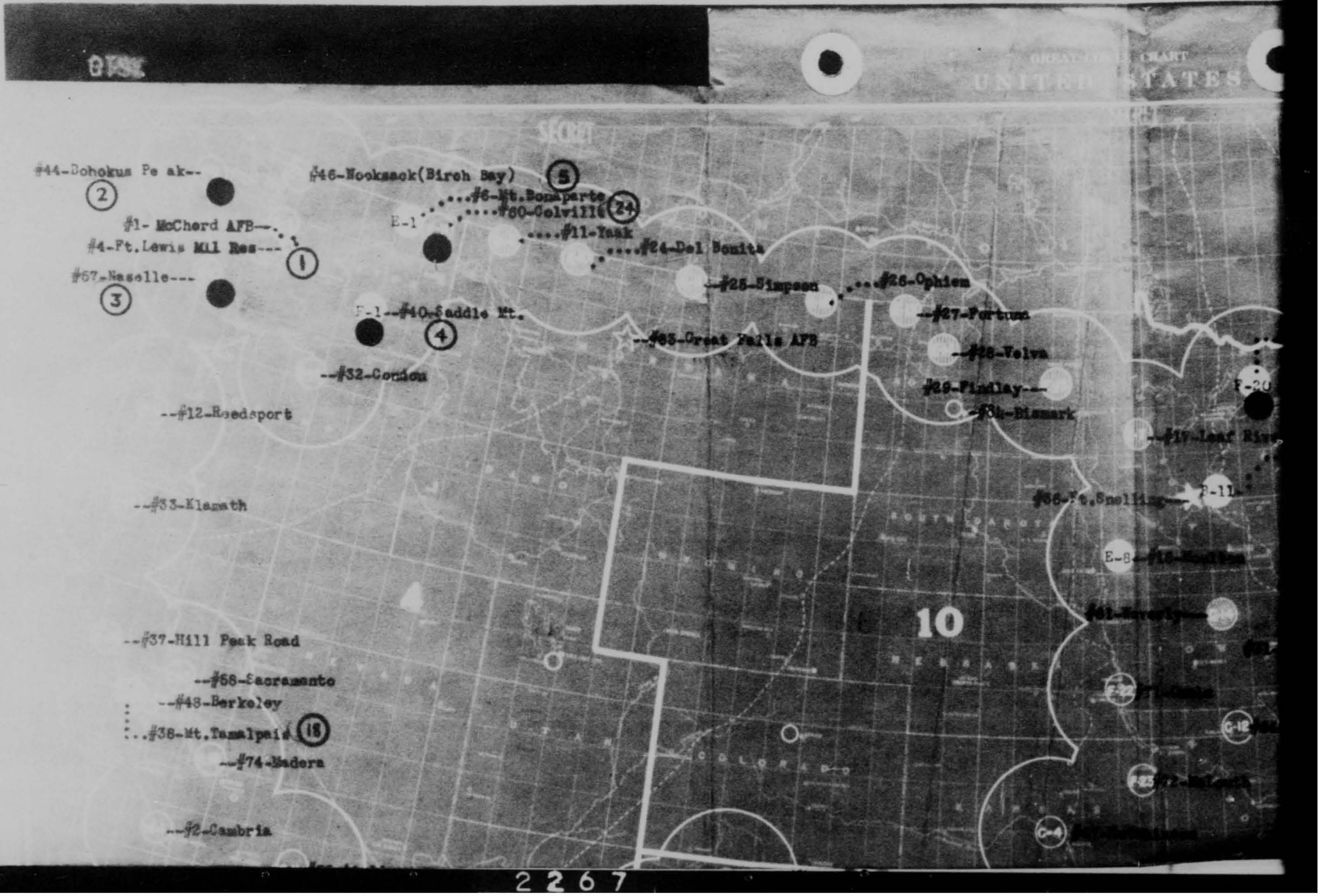
SECRET
UNITED STATES
#44-Dohokus Pe ak--
②
#1- McChord AFB--
#4-Ft.Lewis Mil Res---
①
#57-Naselle---
③
#46-Nooksack(Birch Bay)
⑤
E-1
#6-Mt.Bonaparte
#60-Colville
㉔
#11-Yaak
#24-Del Bonita
#25-Simpson
#26-Ophiem
#27-Fortuna
#28-Velva
#29-Findlay---
#34-Bismark
#83-Great Falls AFB
F-1--#40-Saddle Mt.
④
--#32-Condon
--#12-Reedsport
--#33-Klamath
--#37-Hill Peak Road
--#68-Sacramento
--#48-Berkeley
..#38-Mt.Tamalpais
⑱
--#74-Madera
--#2-Cambria
F-20
#17-Leaf Riv
F-11
#56-Ft.Snelling
E-8
#61-Beverly
10
C-12
C-4
SOUTH DAKOTA
NEBRASKA
COLORADO

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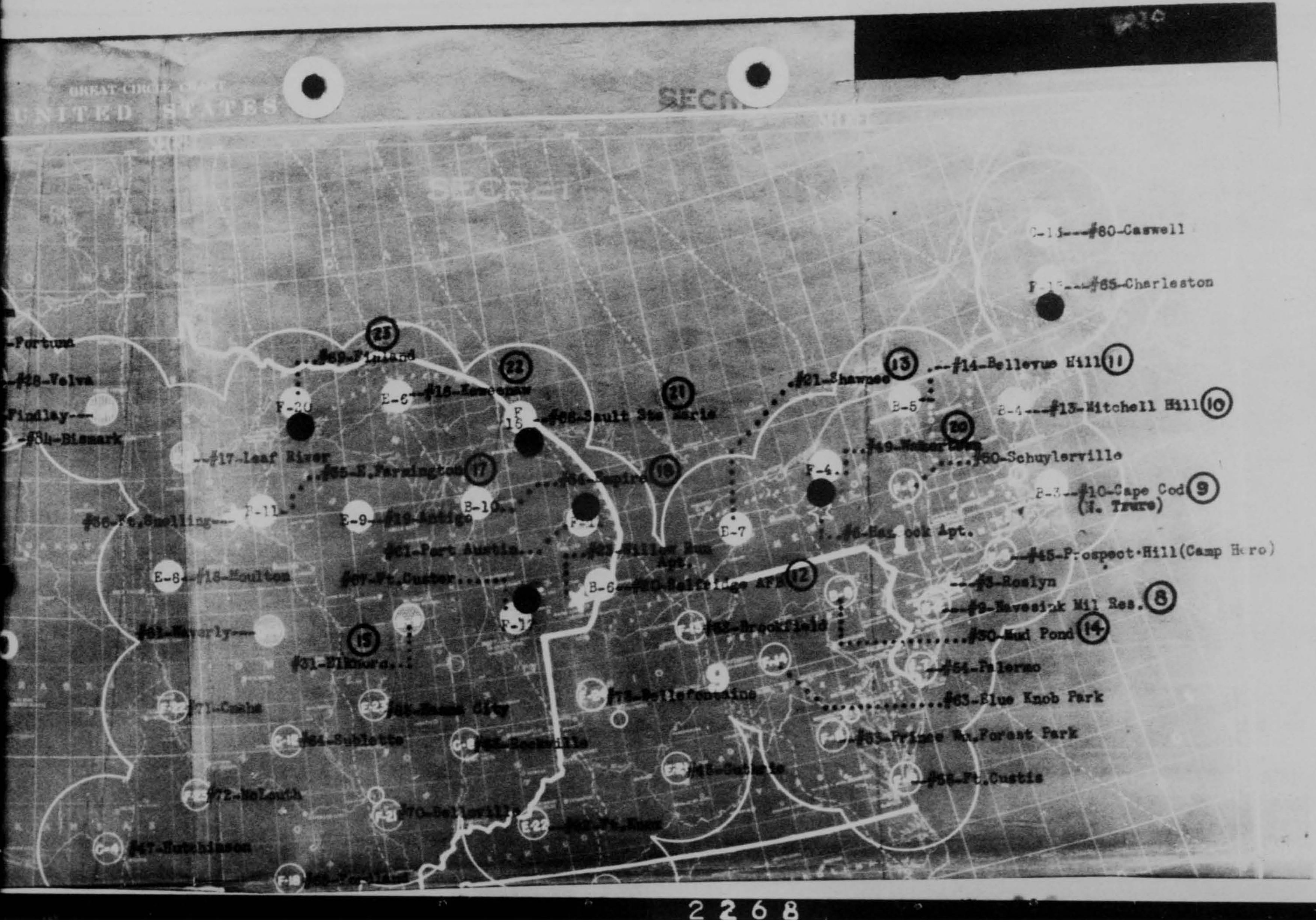
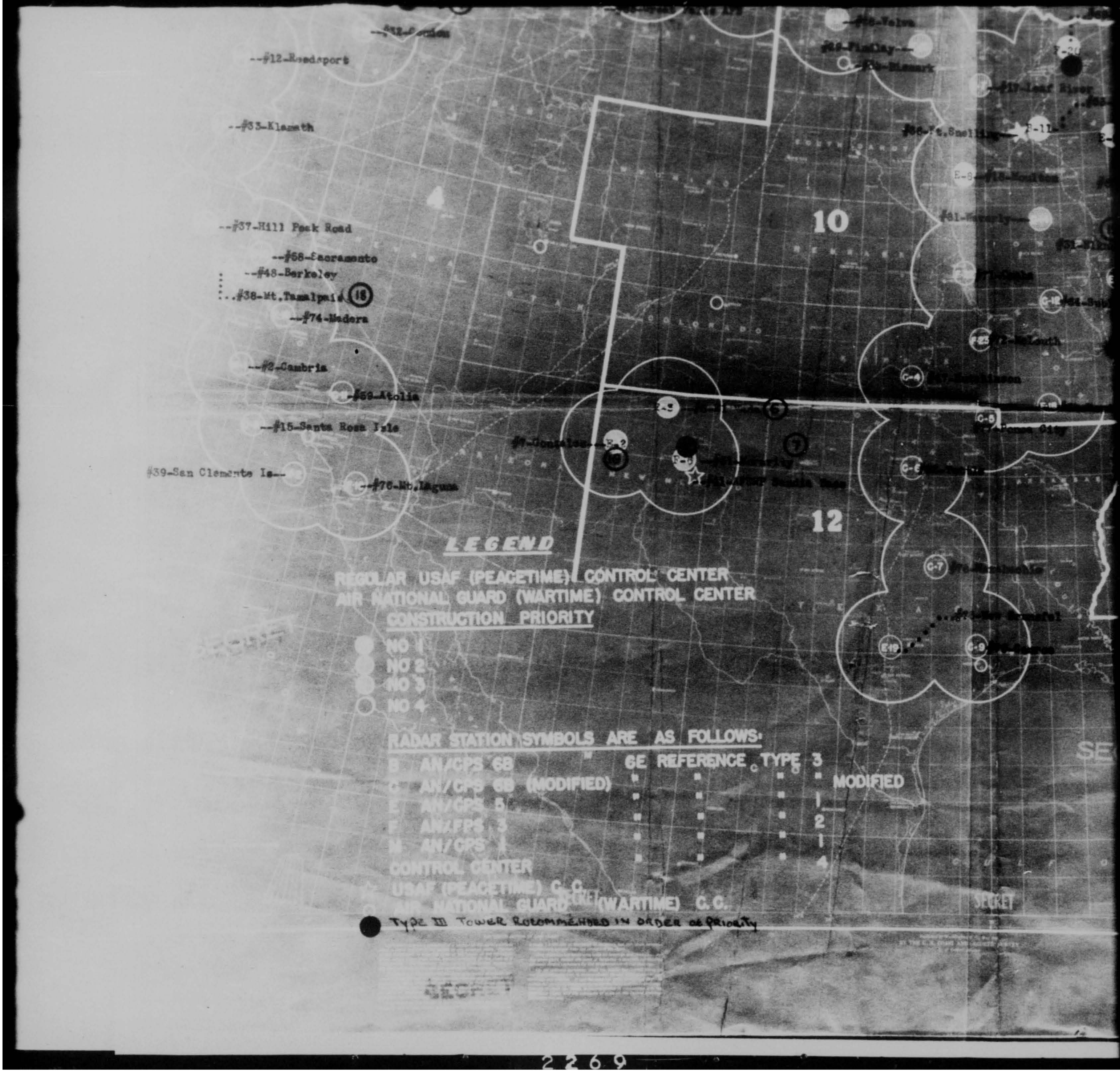
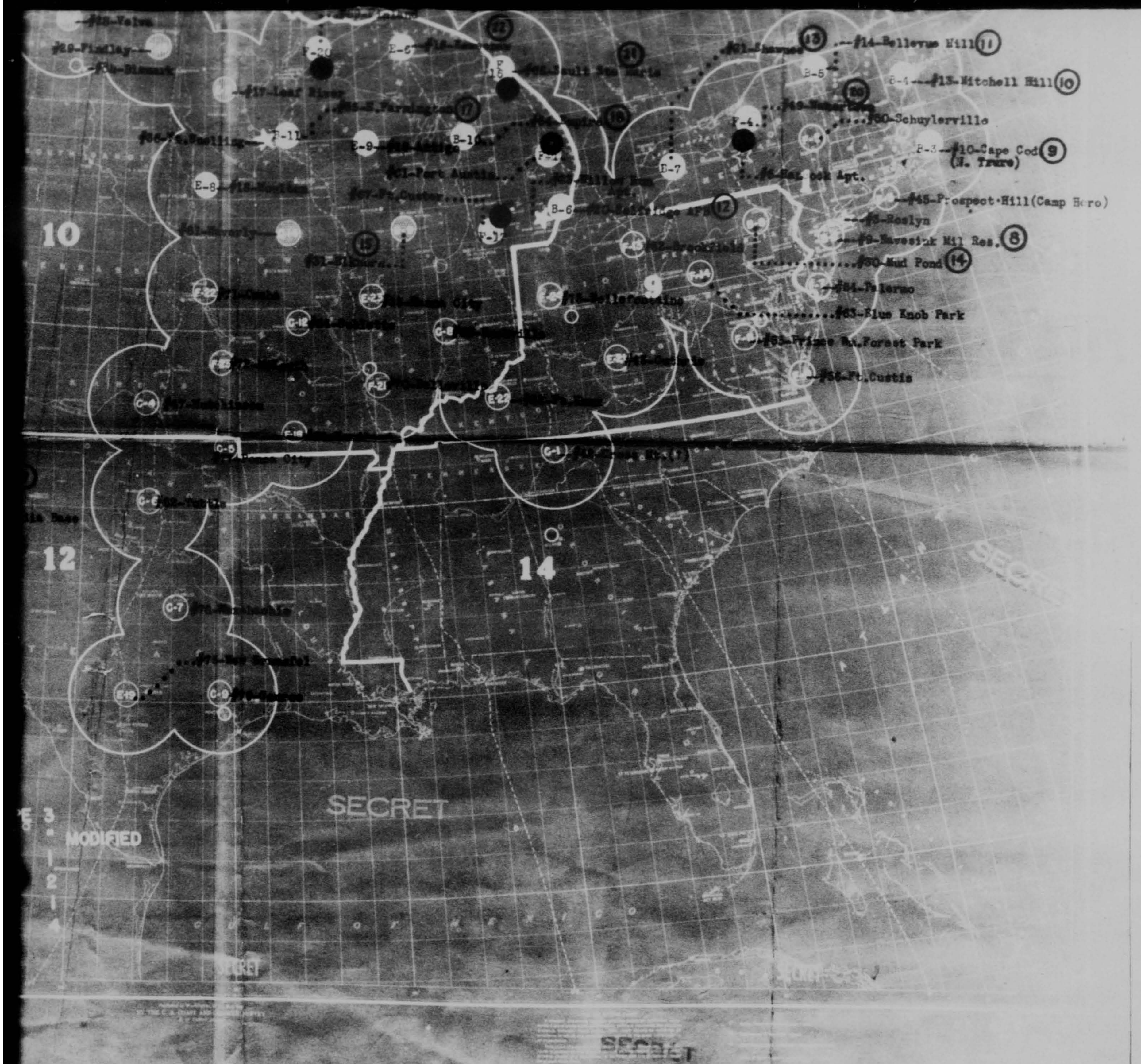

GREAT CIRCLE CHART
UNITED STATES
SECR
SECRET
-Fortuna
#28-Velva
Findlay
-#34-Bismark
--#17-Leaf River
#56-Ft.Snelling
F-11
E-8--#18-Moulton
#61-Waverly
#31-Elkhorn
#71-Cushe
#84-Sublette
#72-McLouth
#47-Hutchinson
F-20
#69-Finland
23
E-6--#15-Keweenaw
22
F-15--#68-Sault Ste Marie
21
#55-E.Farmington
17
E-9--#19-Antigo
B-10
#64-Empire
18
#61-Port Austin
#67-Ft.Custer
#23-Willow Run Apt.
B-6--#20-Selfridge AFB
12
F-17
15
E-21
#55-Kansas City
C-8
#62-Rockville
F-21
#70-Belleville
E-22
#62-Ft.Knox
F-18
#52-Bellefontaine
#62-Brookfield
9
#45-Guthrie
#21-Shawnee
13
E-7
F-4
#49-Watertown
20
#6-Hancock Apt.
B-5
#14-Bellevue Hill
11
B-4--#13-Mitchell Hill
10
C-15--#80-Caswell
F-15--#65-Charleston
#50-Schuylerville
B-3--#10-Cape Cod
(N. Truro)
9
#45-Prospect Hill(Camp Hero)
#3-Roslyn
#9-Navesink Mil Res.
8
#30-Mud Pond
14
#54-Palermo
#63-Blue Knob Park
#53-Prince Wm.Forest Park
#55-Ft.Custis


#52-Condon
#12-Reedsport
#33-Klamath
#37-Hill Peak Road
#58-Sacramento
#48-Berkeley
#38-Mt. Tamalpais
18
#74-Madera
#2-Cambria
#59-Atolia
#15-Santa Rosa Isle
#39-San Clemente Is.
#76-Mt. Laguna
#7-Gonzales
#88-Ft. Snelling
#17-Leaf River
E-8
#31-Waverly
#71-Omaha
#72-McLouth
C-4
C-5
Ponca City
C-6
C-7
E-19
C-9
#73-New Braunfels
10
12
6
7
SOUTH DAKOTA
NEBRASKA
COLORADO
ARIZONA
ARKANSAS
TEXAS
LEGEND
REGULAR USAF (PEACETIME) CONTROL CENTER
AIR NATIONAL GUARD (WARTIME) CONTROL CENTER
CONSTRUCTION PRIORITY
NO 1
NO 2
NO 3
NO 4
RADAR STATION SYMBOLS ARE AS FOLLOWS:
B AN/CPS 6B 6E REFERENCE TYPE 3
C AN/CPS 6B (MODIFIED) " " " " MODIFIED
E AN/CPS 5 " " " 1
F AN/FPS 3 " " " 2
M AN/CPS 1 " " " 1
CONTROL CENTER " " " 4
USAF (PEACETIME) C.C.
AIR NATIONAL GUARD (WARTIME) C.C.
TYPE III TOWER RECOMMENDED IN ORDER OF PRIORITY
SECRET
SECRET
SECRET
SECRET


#28-Velva
#29-Findlay
#3b-Bismark
#17-Leaf River
#35-N.Farmington
#36-Ft.Snelling
#1-Port Austin
#67-Ft.Custer
#61-Beverly
#51-Elburn
#18-Sault Ste Marie
#14-Bellevue Hill
#13-Mitchell Hill
#50-Schuylerville
#10-Cape Cod
(N. Truro)
#45-Prospect Hill(Camp Hero)
#3-Roslyn
#9-Navesink Mil Res.
#30-Mud Pond
#54-Palermo
#63-Blue Knob Park
#53-Prince Wm.Forest Park
#56-Ft.Custis
#62-Brookfield
#71-Omaha
#76-New Braunfel
F-20
E-6
F-16
F-11
E-9
B-10
E-8
F-17
B-6
B-5
B-4
F-4
B-7
B-3
E-22
E-23
G-12
G-8
F-25
F-21
C-4
F-18
C-5
C-6
C-1
E-21
C-7
E-19
C-9
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SECRET
MODIFIED
SECRET
SECRET

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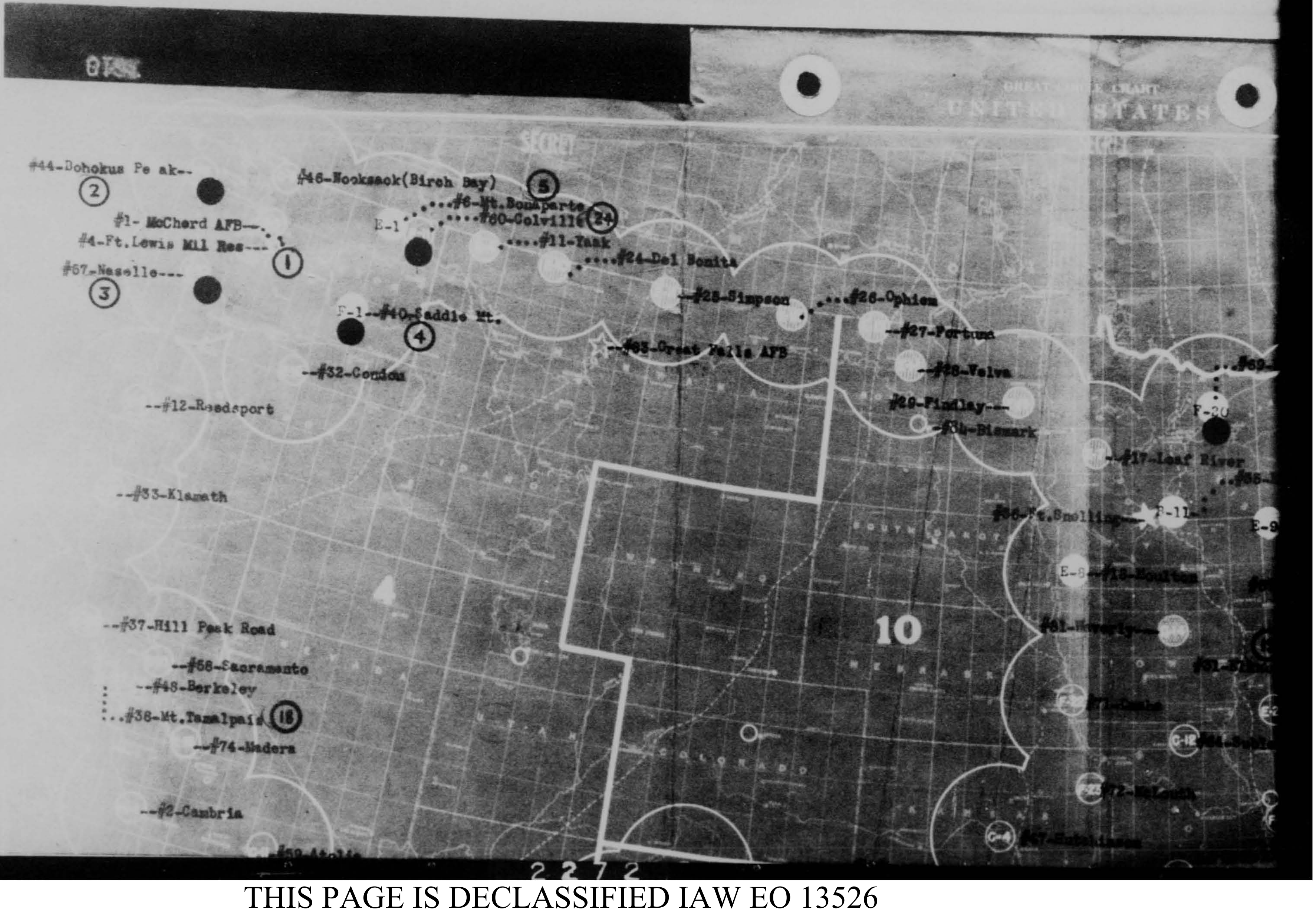
GREAT CIRCLE CHART
UNITED STATES
SECRET
#44-Dohokus Pe ak--
②
#1- McChord AFB--
#4-Ft.Lewis Mil Res---
①
#67-Naselle---
③
#46-Nooksack(Birch Bay)
⑤
#6-Mt.Bonaparte
#60-Colville
(24)
E-1
#11-Yaak
#24-Del Bonita
F-1--#40-Saddle Mt.
④
#32-Condon
#12-Reedsport
#33-Klamath
#25-Simpson
#26-Ophiem
#63-Great Falls AFB
#27-Fortuna
#28-Velva
#29-Findley---
#34-Bismark
#69-
F-20
#17-Leaf River
#55-
#36-Ft.Snelling--
F-11
E-9
E-8--#18-Houlton
#81-Waverly--
#31-
#71-Omaha
#84-
#72-McLouth
#67-Hutchinson
C-4
C-12
E-2
4
10
#37-Hill Peak Road
#56-Sacramento
#48-Berkeley
#38-Mt.Tamalpais
(18)
#74-Madera
#2-Cambria
#59-Atolia
2272

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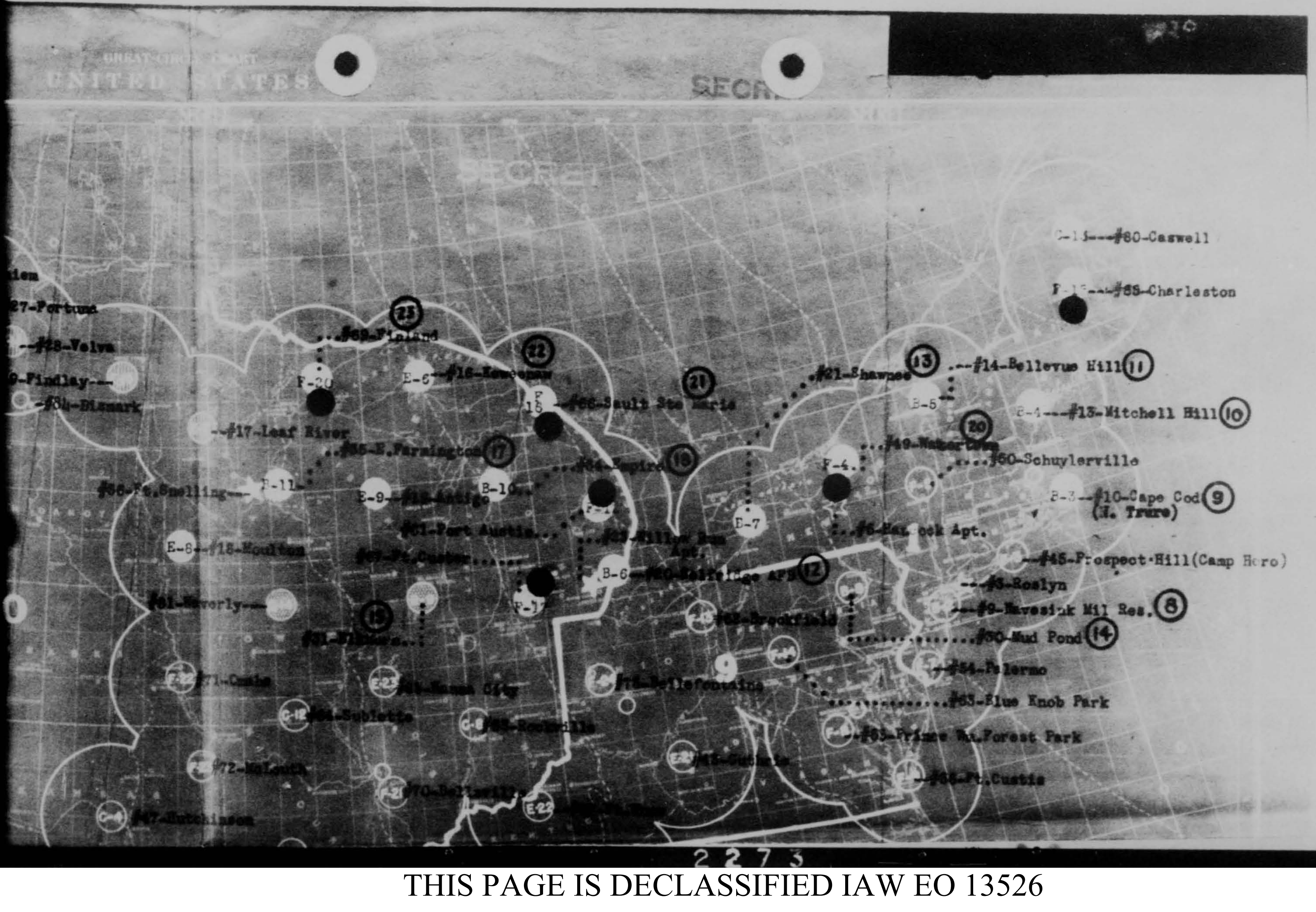
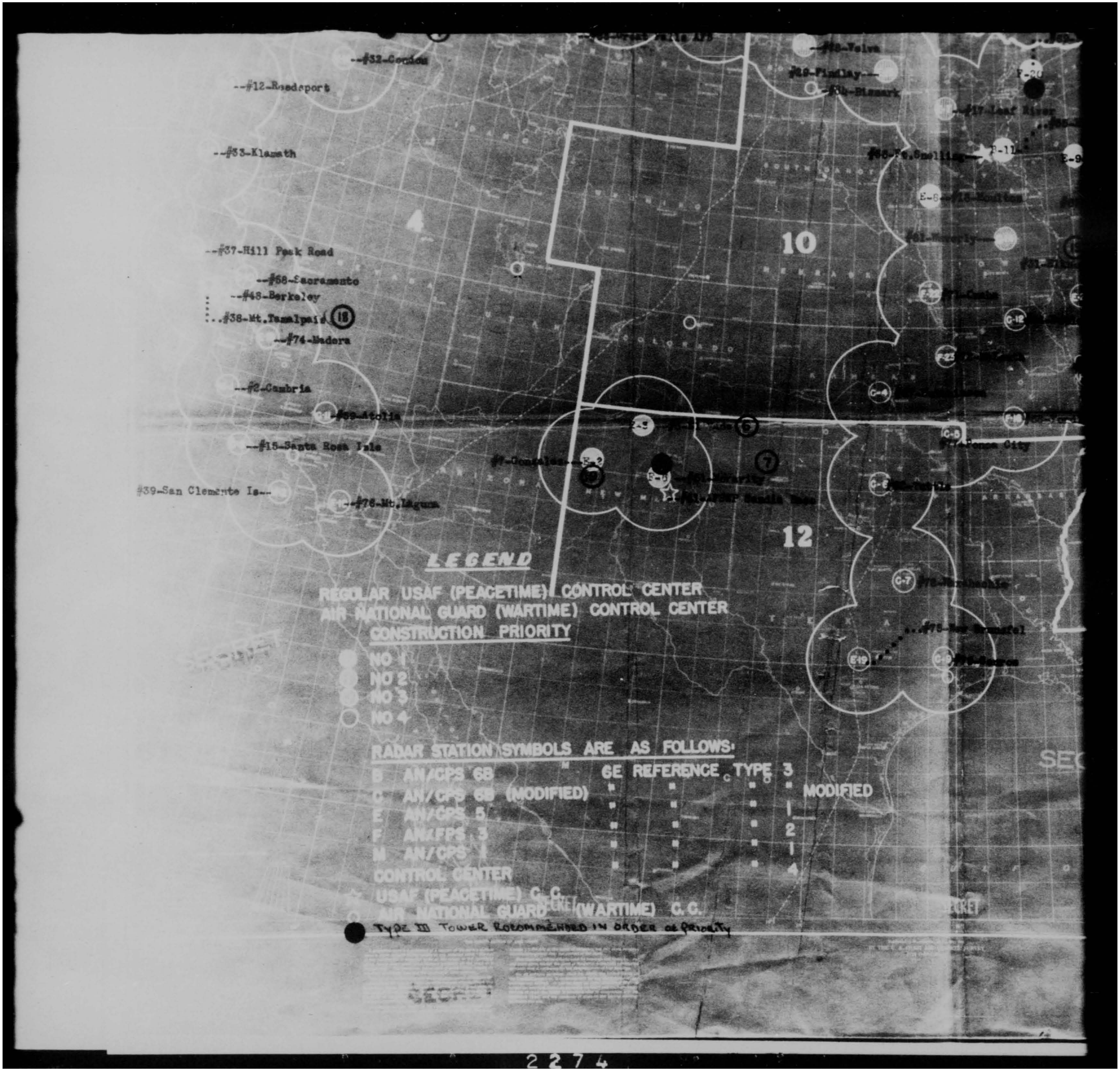
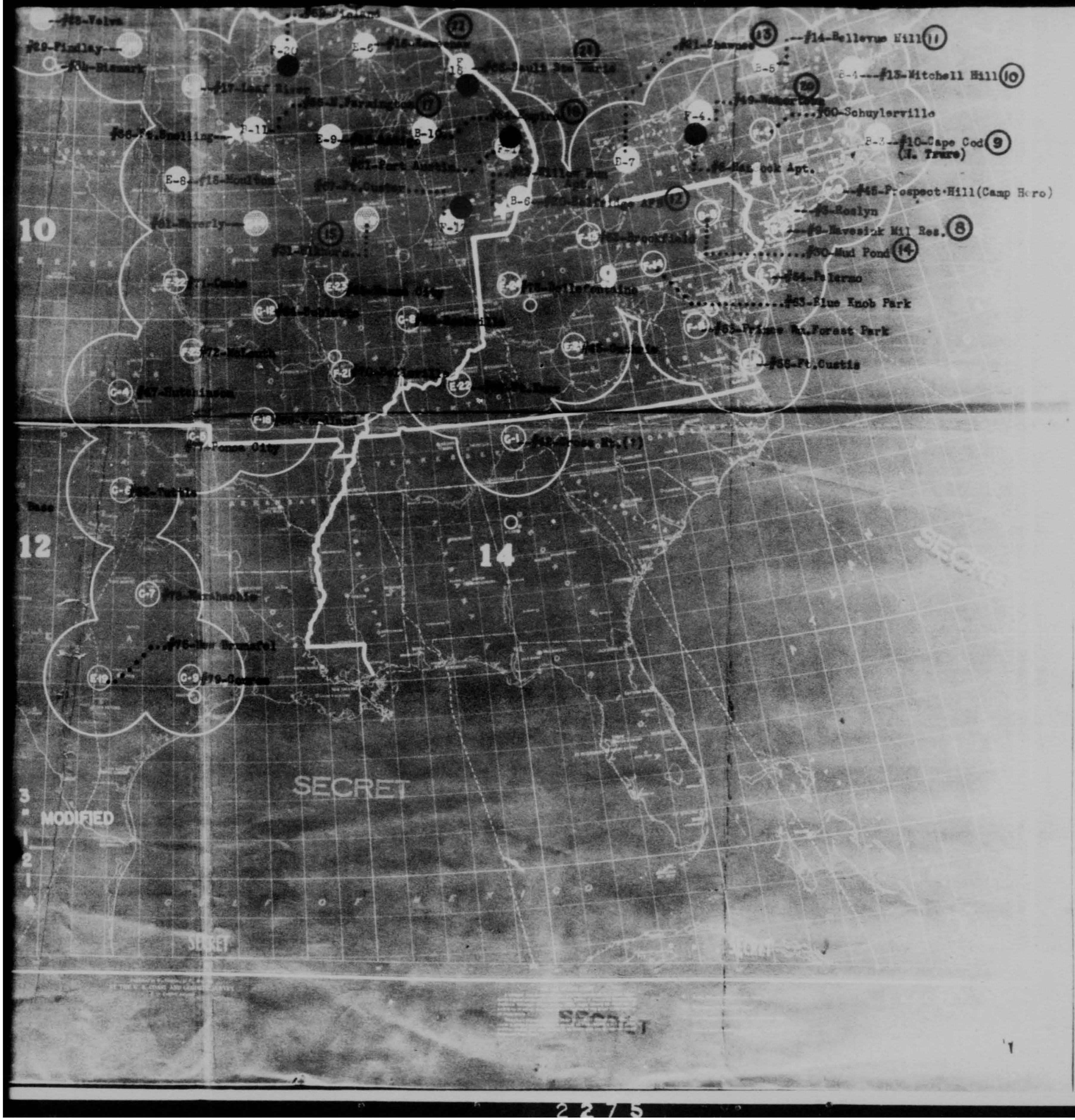

GREAT CIRCLE CHART
UNITED STATES
SECRET
SECRET
C-15---#80-Caswell
#88-Charleston
#27-Fortuna
#28-Velva
Findlay
#34-Bismarck
F-20
#69-Finland
E-6--#16-Keweenaw
F 15--#66-Sault Ste Marie
#21-Shawnee
#14-Bellevue Hill
B-5
B-4---#13-Mitchell Hill
#17-Leaf River
#55-E.Farmington
#64-Empire
#49-Watertown
#60-Schuylerville
F-4.
#56-Ft.Snelling
B-11
E-9--#18-Antigo
B-10
B-3--#10-Cape Cod (N. Truro)
#61-Port Austin
#23-Willow Run Apt.
E-7
#6-Hancock Apt.
E-8--#18-Moulton
#67-Ft.Custer
B-6--#20-Selfridge AFB
#45-Prospect Hill(Camp Hero)
#3-Roslyn
#81-Waverly
F-17
#62-Brookfield
#9-Navesink Mil Res.
#31-Elburn
#30-Mud Pond
#54-Palermo
#71-Omaha
#73-Bellefontaine
#63-Blue Knob Park
#64-Sublette
#65-Prince Wm.Forest Park
#72-McLouth
E-23
C-12
C-8
#58-Rockville
#48-Guthrie
#85-Ft.Custis
F-21
#70-Belleville
E-22
C-4
#47-Hutchinson
25
22
21
17
16
13
11
10
20
9
12
8
14
15


--#32-Coquina
--#12-Reedsport
--#33-Klamath
4
--#37-Hill Peak Road
--#68-Sacramento
--#48-Berkeley
..#38-Mt.Tamalpais
18
--#74-Madera
--#2-Cambria
#69-Atolia
--#15-Santa Rosa Isle
#39-San Clemente Is--
#76-Mt.Laguna
Great Falls AFB
--#28-Velva
#29-Findlay--
--#34-Bismark
F-20
--#17-Leaf River
#86-Ft.Snelling
F-11
E-9
E-8
#16-Moulton
#61-Waverly
10
#71-Omaha
C-12
F-23
C-4
F-18
C-5
#Ponca City
E-9
6
7
#7-Gonzales
E-2
F-8
#61-Moriarty
#81-AFSWP Sandia Base
C-6
12
C-7
#78-Waxahachie
#75-New Braunfel
E19
C-9
#79-Seguin
LEGEND
REGULAR USAF (PEACETIME) CONTROL CENTER
AIR NATIONAL GUARD (WARTIME) CONTROL CENTER
CONSTRUCTION PRIORITY
NO 1
NO 2
NO 3
NO 4
RADAR STATION SYMBOLS ARE AS FOLLOWS:
B AN/CPS 6B GE REFERENCE TYPE 3
C AN/CPS 6B (MODIFIED) " " " " MODIFIED
E AN/CPS 5 " " " 1
F AN/FPS 3 " " " 2
M AN/CPS 1 " " " 1
CONTROL CENTER " " " 4
USAF (PEACETIME) C. C.
AIR NATIONAL GUARD (WARTIME) C. C.
TYPE III TOWER RECOMMENDED IN ORDER OF PRIORITY
SECRET
SECRET
SECRET


#28-Velva
#29-Findlay
#34-Bismark
#17-Leaf River
#85-N.Farmington
#86-Ft.Snelling
F-11
F-20
E-6
#16-Newberry
F-15
#65-Sault Ste Marie
E-9
B-10
F-17
#61-Port Austin
#67-Ft.Custer
E-8
#18-Moulton
#81-Waverly
#21-Shawnee
#14-Bellevue Hill
B-5
B-4
#13-Mitchell Hill
#49-Watertown
#60-Schuylerville
F-4
B-3
#10-Cape Cod
(N. Truro)
B-7
#6-Hancock Apt.
B-6
#20-Selfridge AFB
#45-Prospect Hill (Camp Hero)
#3-Roslyn
#9-Navesink Mil Res.
#30-Mud Pond
#54-Palermo
#53-Blue Knob Park
#83-Brookfield
#73-Bellefontaine
#63-Prince Wm.Forest Park
#55-Ft.Custis
E-22
#71-Cambie
E-23
G-12
#72-McLouth
C-4
#47-Hutchinson
F-21
F-18
C-6
#77-Ponca City
C-1
#82-Tuttle
Base
C-7
#78-Waxahachie
#75-New Braunfel
E-19
C-9
#79-Conroe
10
12
14
9
1
11
10
9
8
14
12
13
20
21
22
17
16
15
SECRET
MODIFIED
SECRET
SECRET
SECRET

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CONTINENTAL AIR COMMAND

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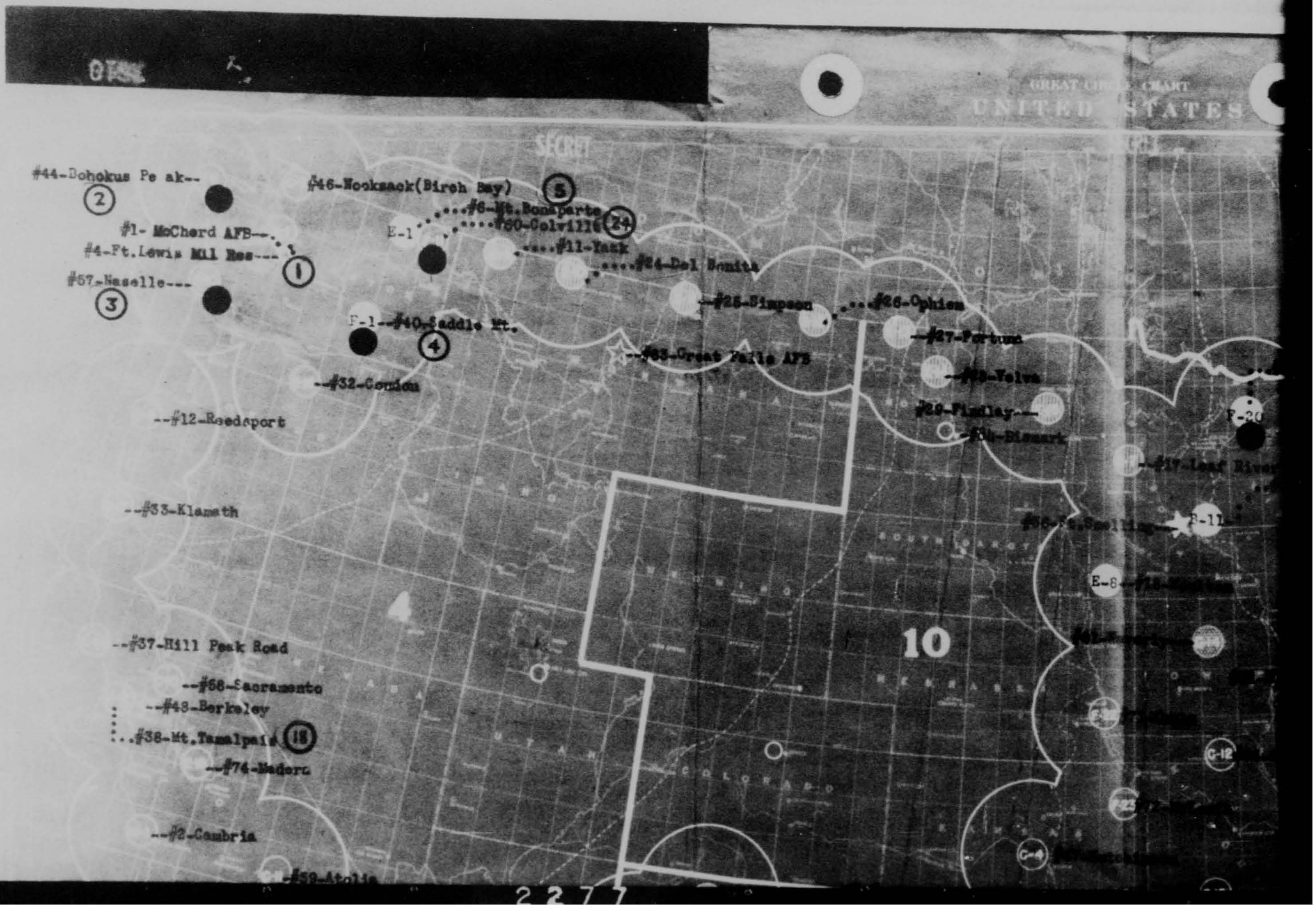
GREAT CIRCLE CHART
UNITED STATES
SECRET
#44-Dohokus Pe ak--
②
#46-Nooksack(Birch Bay)
⑤
#6-Mt.Bonaparte
#60-Colville
㉔
#1- McChord AFB--
#4-Ft.Lewis Mil Res---
①
E-1
#11-Yack
#24-Del Bonita
#57-Naselle---
③
#25-Simpson
#26-Ophiem
F-1--#40-Saddle Mt.
④
#63-Great Falls AFB
#27-Fortuna
#32-Condon
#28-Volva
#29-Findlay---
#34-Bismark
F-20
#12-Reedsport
#17-Leaf River
#33-Klamath
#66-Ft.Snelling
B-11
E-8
4
10
SOUTH DAKOTA
WYOMING
NEBRASKA
NEVADA
UTAH
COLORADO
KANSAS
#37-Hill Peak Road
#58-Sacramento
#48-Berkeley
#38-Mt.Tamalpais
⑱
#74-Madera
C-12
#2-Cambria
C-4
#59-Atolia
2277

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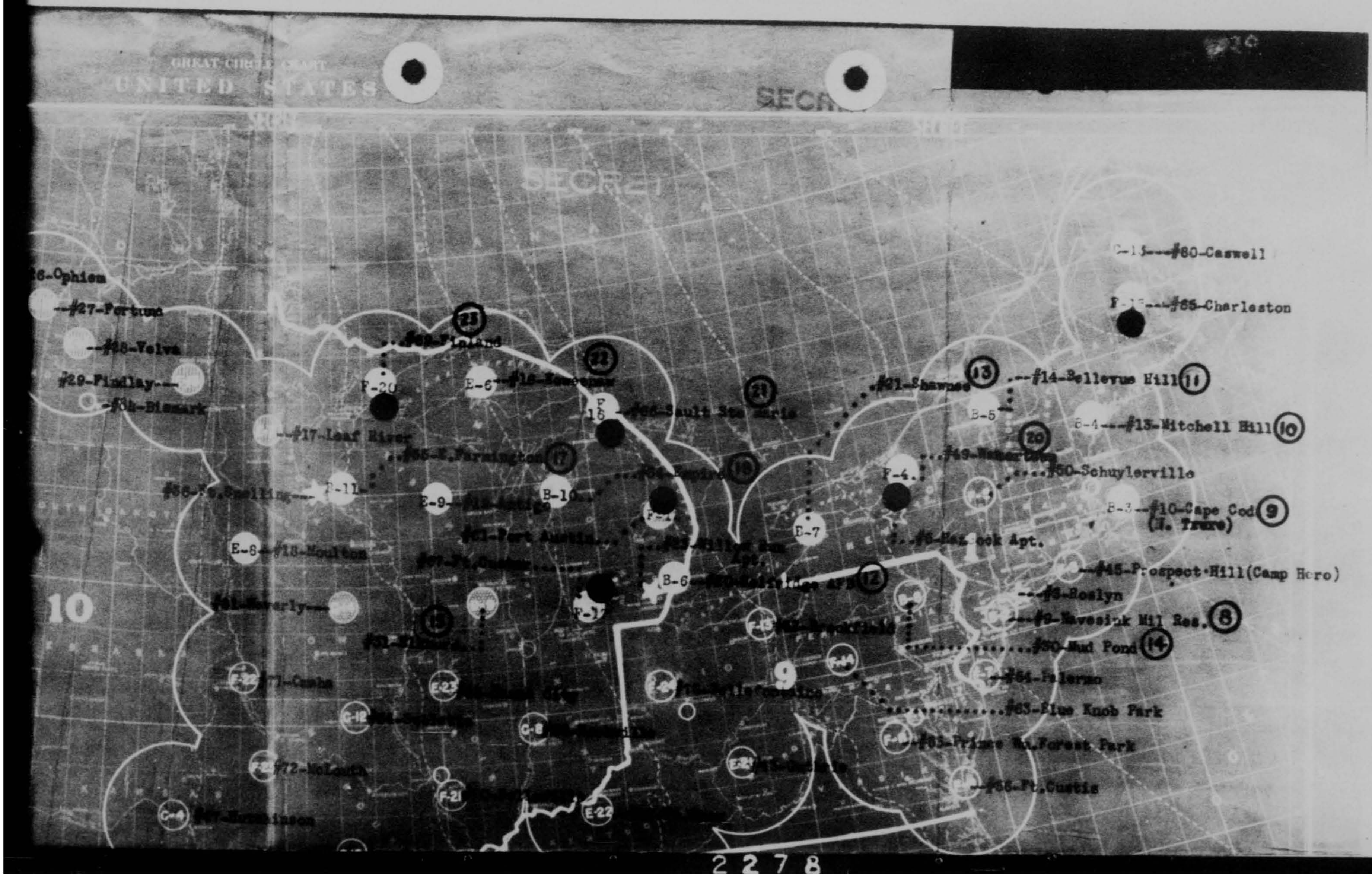
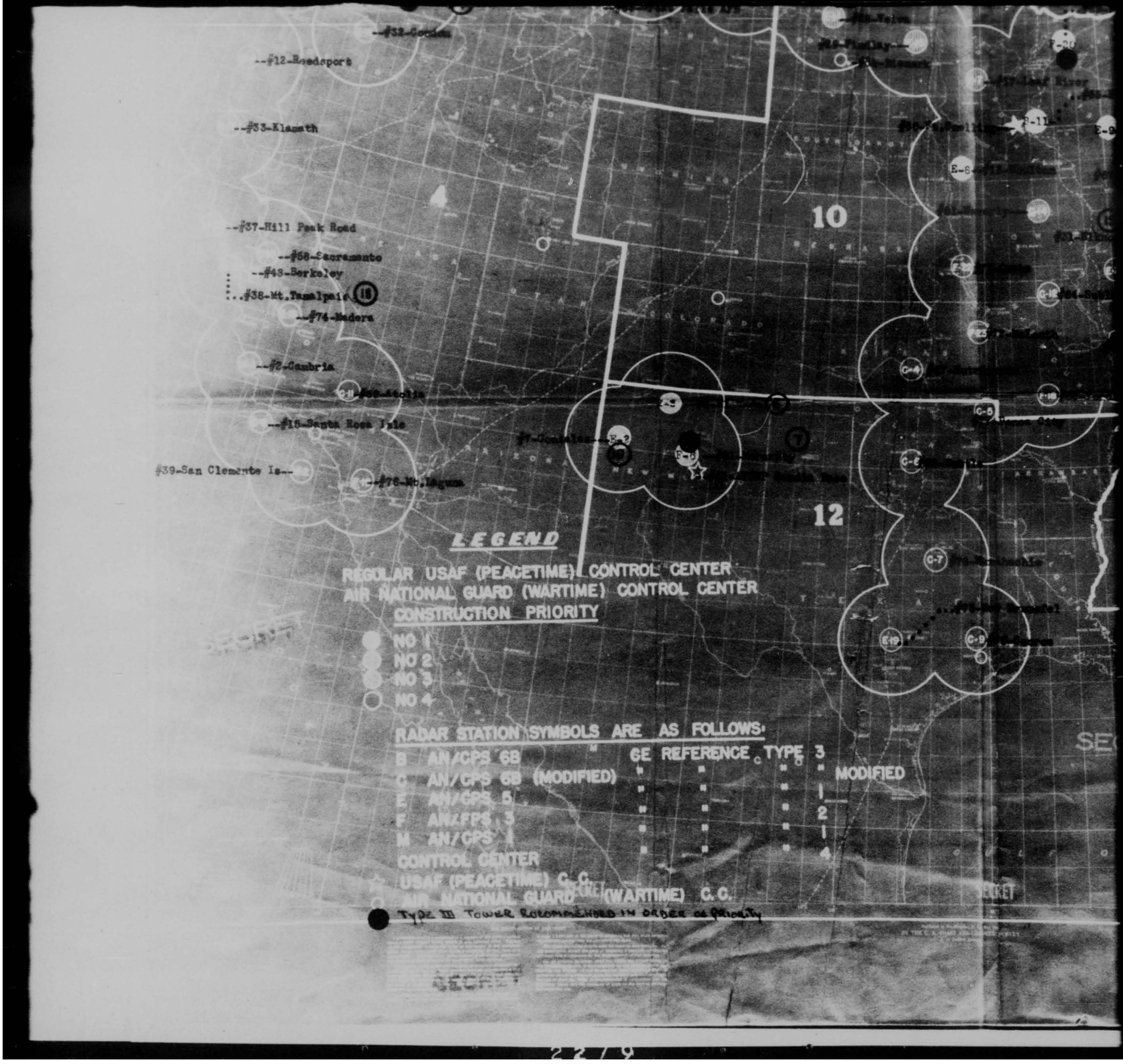
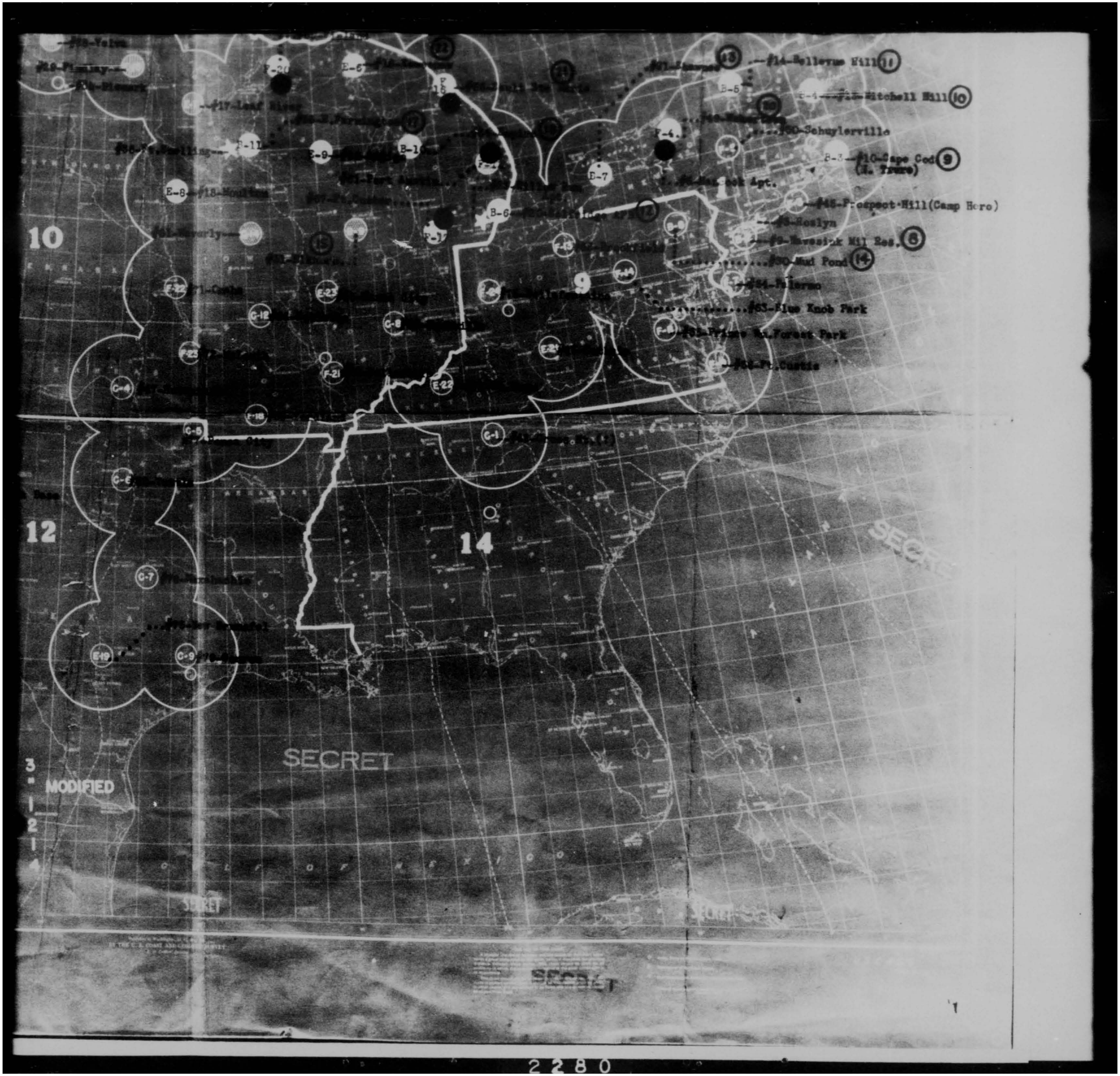

GREAT CIRCLE CHART
UNITED STATES
SECRET
SECRET
26-Ophiem
#27-Fortuna
#28-Velva
#29-Findlay
#34-Bismark
#17-Leaf River
#69-Finland
F-20
E-6
#66-Sault Ste Marie
#21-Shawnee
#14-Bellevue Hill
B-5
B-4
#13-Mitchell Hill
#49-Watertown
#50-Schuylerville
F-4
B-3
#10-Cape Cod
(N. Truro)
#6-Hancock Apt.
#45-Prospect Hill(Camp Hero)
#3-Roslyn
#9-Navesink Mil Res.
#30-Mud Pond
#64-Palermo
#63-Blue Knob Park
#55-Ft.Custis
C-15
#60-Caswell
#65-Charleston
E-9
B-10
B-11
#61-Port Austin
E-8
#18-Moulton
#61-Waverly
B-6
B-7
#72-McLouth
10
9
23
22
21
19
17
13
20
11
10
9
12
8
14
15


--#32-Condon
--#12-Reedsport
--#33-Klamath
--#37-Hill Peak Road
--#58-Sacramento
--#43-Berkeley
..#38-Mt.Tamalpais
18
--#74-Madera
--#2-Cambria
C-11
#59-Atolia
--#15-Santa Rosa Isle
#39-San Clemente Is--
--#76-Mt.Laguna
4
IDAHO
NEVADA
UTAH
ARIZONA
NEW MEXICO
WYOMING
COLORADO
SOUTH DAKOTA
NEBRASKA
KANSAS
ARKANSAS
TEXAS
#7-Gonzales
E-2
F-8
7
10
12
F-20
#17-Leaf River
#95-Ft.Snelling
F-11
E-9
E-8
F-25
C-12
C-4
F-18
C-5
C-6
C-7
E-19
C-9
SECRET
LEGEND
REGULAR USAF (PEACETIME) CONTROL CENTER
AIR NATIONAL GUARD (WARTIME) CONTROL CENTER
CONSTRUCTION PRIORITY
NO 1
NO 2
NO 3
NO 4
RADAR STATION SYMBOLS ARE AS FOLLOWS:
B AN/CPS 6B GE REFERENCE TYPE 3
C AN/CPS 6B (MODIFIED) " " " " MODIFIED
E AN/CPS 5 " " " 1
F AN/FPS 3 " " " 2
M AN/CPS 1 " " " 1
CONTROL CENTER " " " 4
USAF (PEACETIME) C.C.
AIR NATIONAL GUARD (WARTIME) C.C.
TYPE III TOWER RECOMMENDED IN ORDER OF PRIORITY
SECRET
SECRET

2279


#17-Leaf River
F-20
E-6
F-11
E-9
B-10
E-8--#18-Moulton
#21-Port Austin
B-6
F-17
10
F-22
E-23
C-12
C-8
F-23
C-4
F-21
E-22
F-18
C-5
C-1
C-6
12
C-7
E-19
C-9
14
#14-Bellevue Hill ⑪
B-5
B-4
Mitchell Hill ⑩
#80-Schuylerville
F-4
E-7
B-3--#10-Cape Cod ⑨
(N. Truro)
Hancock Apt.
1
#45-Prospect Hill(Camp Hero)
#3-Roslyn
#9-Navesink Mil Res. ⑧
#80-Mud Pond ⑭
9
F-15
F-14
E-24
#84-Palermo
#63-Blue Knob Park
Prince Wm.Forest Park
Ft.Custis
SECRET
SECRET
SECRET
SECRET
SECRET
MODIFIED
3
1
2
1
4
2280

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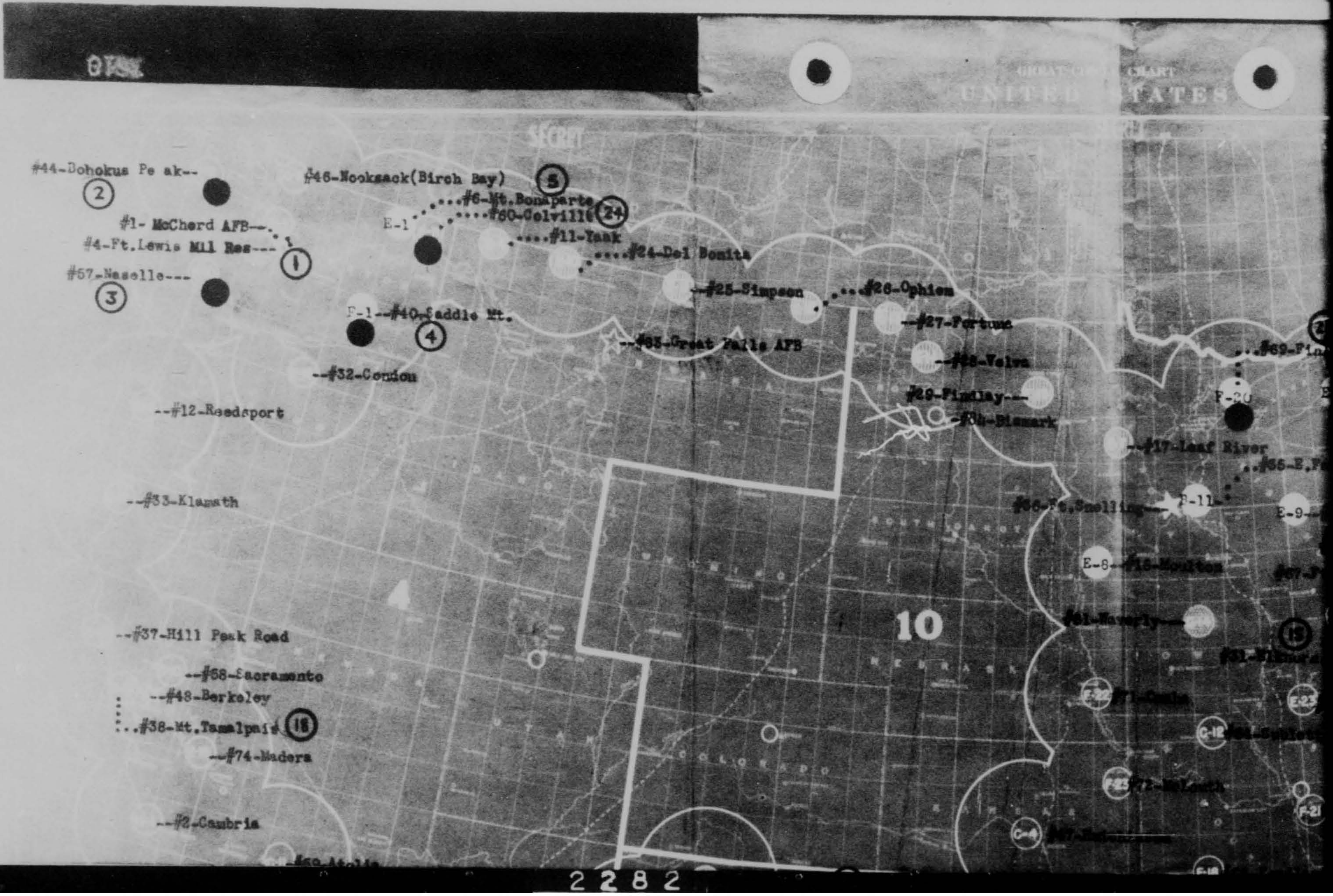

GREAT CIRCLE CHART
UNITED STATES
SECRET
#44-Dohokus Pe ak--
②
#1- McChord AFB--
#4-Ft.Lewis Mil Res---
①
#57-Naselle---
③
#46-Nooksack(Birch Bay)
⑤
#6-Mt.Bonaparte
#60-Colville
㉔
E-1
#11-Yaak
#24-Del Bonita
F-1--#40-Saddle Mt.
④
--#32-Condon
--#25-Simpson
#26-Ophiem
--#27-Fortune
--#83-Great Falls AFB
--#28-Velva
#29-Findlay---
-#34-Bismark
--#12-Reedsport
--#33-Klamath
--#17-Leaf River
#69-Fi
F-20
#55-E.F
#66-Ft.Snelling
F-11
E-9
E-8--#18-Moulton
#67-
4
10
#61-Waverly
⑮
#31-
--#37-Hill Peak Road
--#68-Sacramento
--#48-Berkeley
..#38-Mt.Tamalpais
⑯
--#74-Madera
--#2-Cambria
#59-Atolia
E-22
#71-Omaha
E-23
C-12
F-23
#72-McLouth
F-21
C-4
F-18
SOUTH DAKOTA
WYOMING
NEBRASKA
UTAH
COLORADO
KANSAS
IOWA

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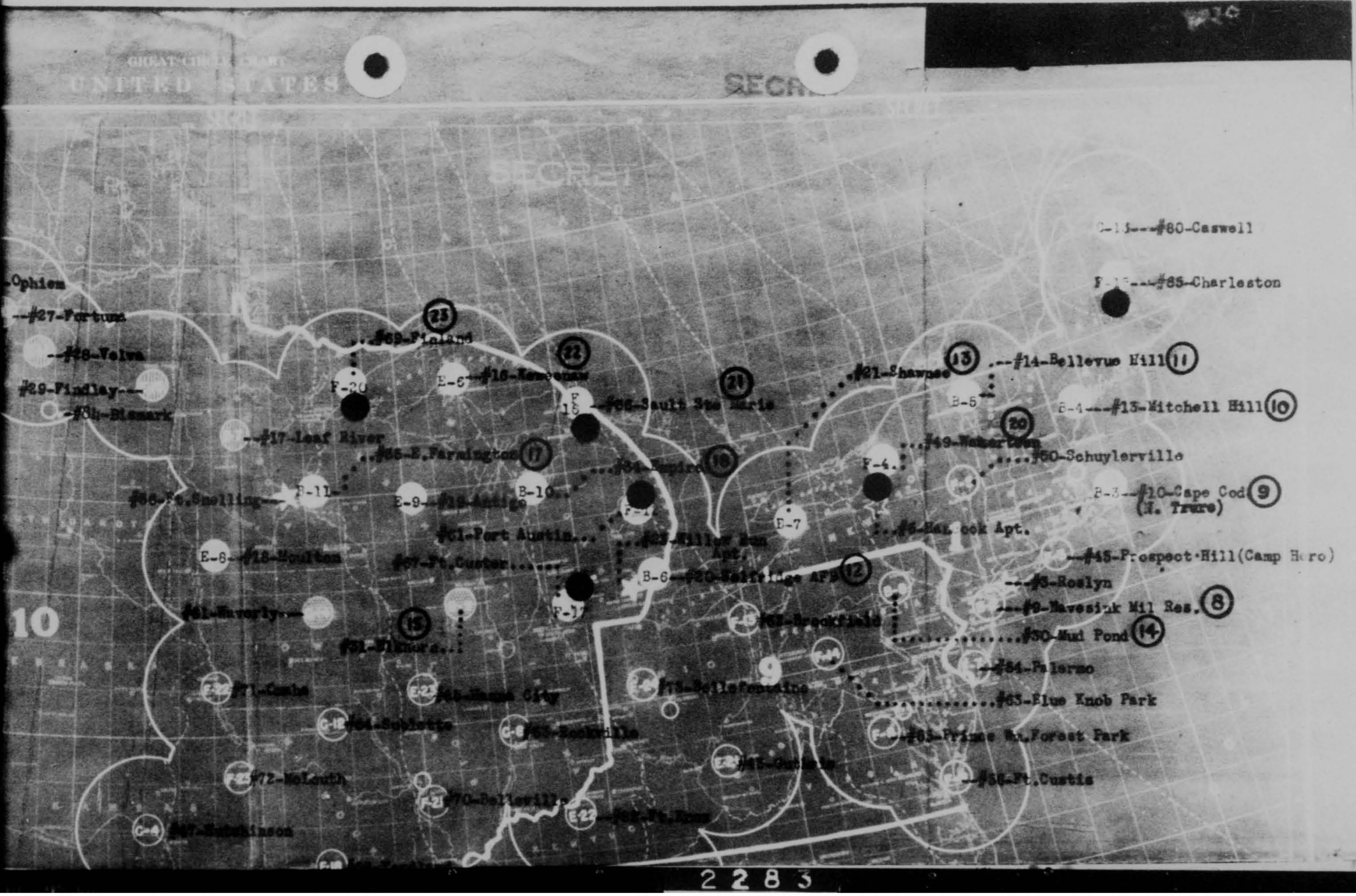
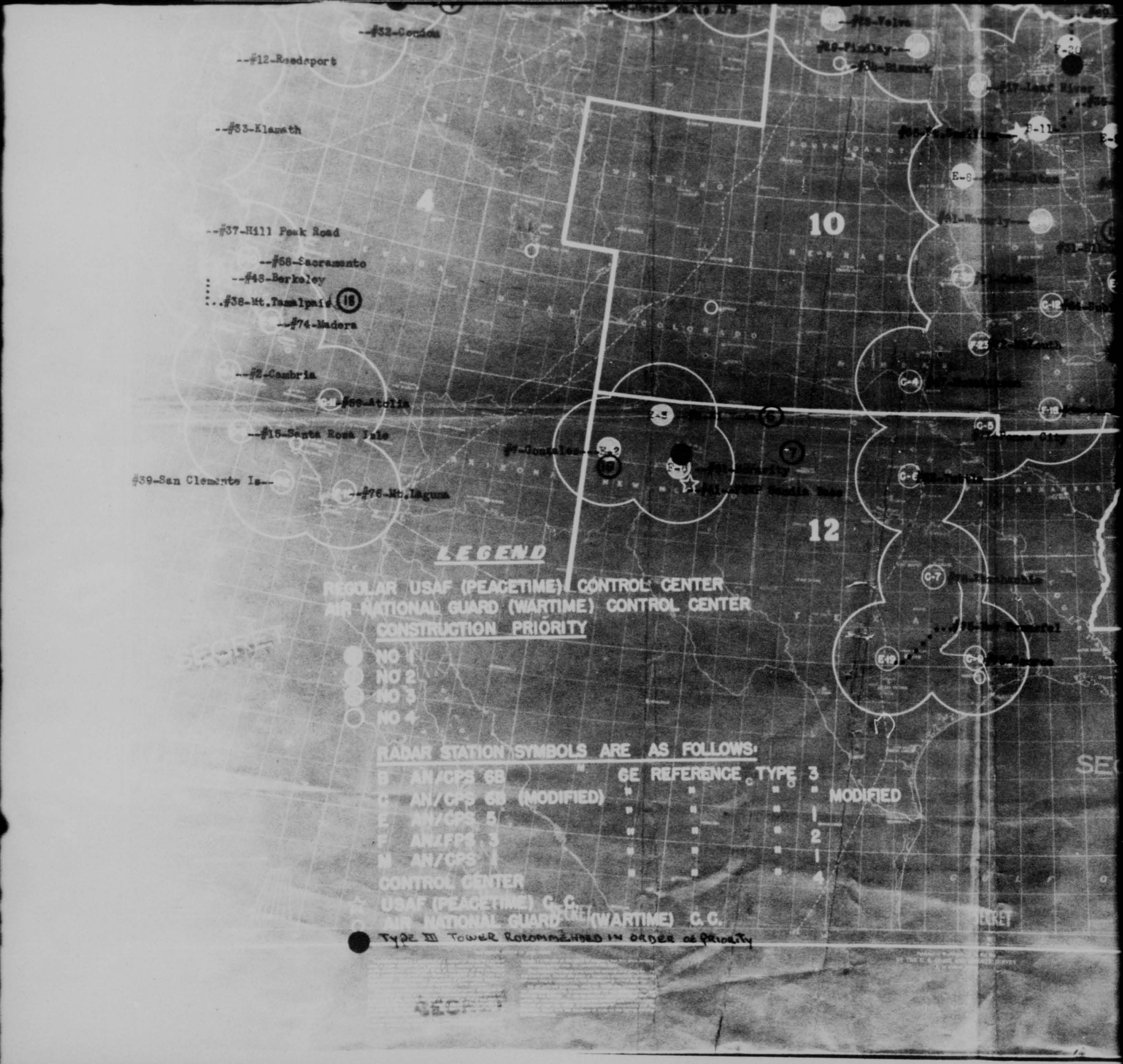
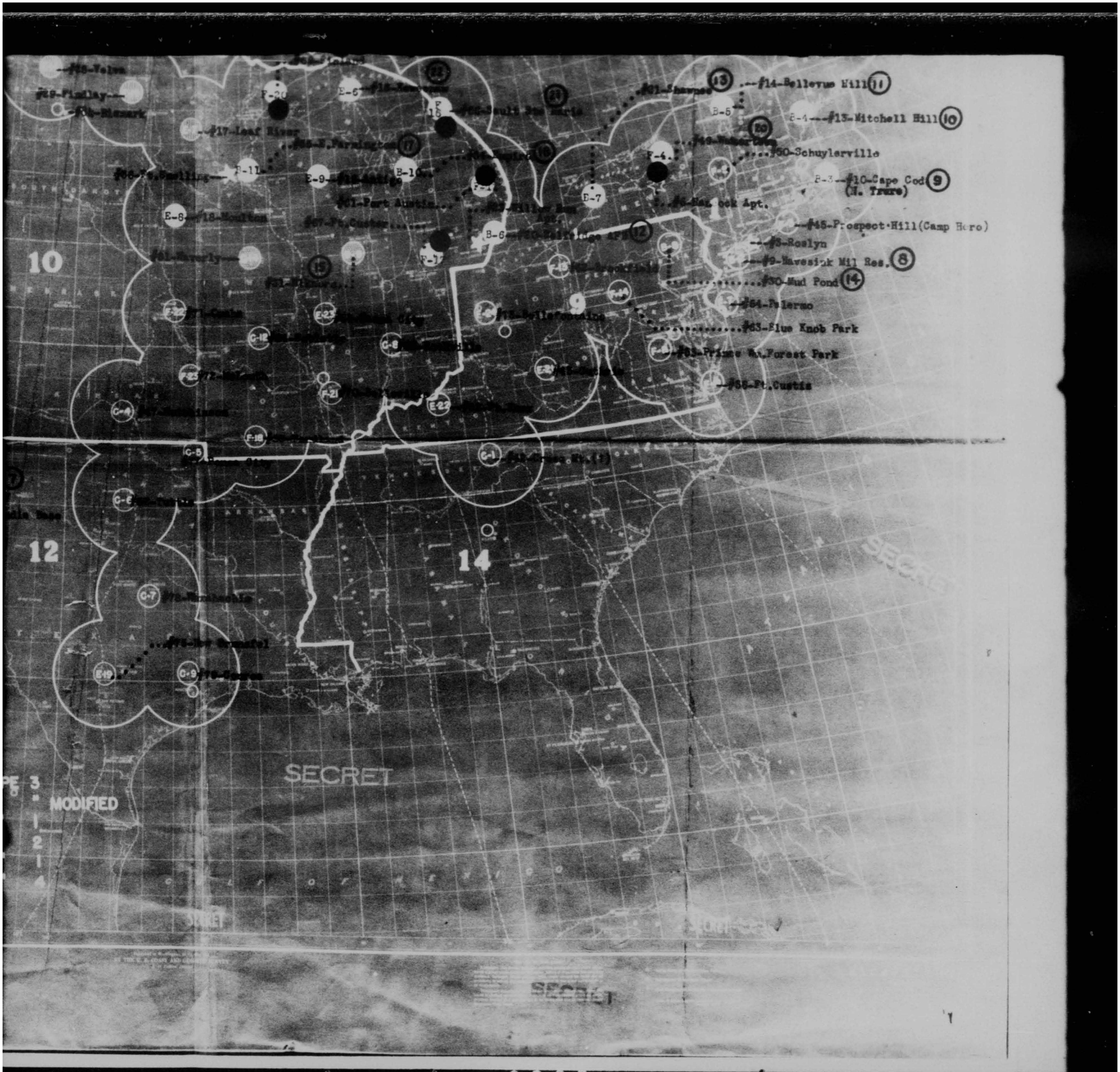

GREAT CIRCLE CHART
UNITED STATES
SECRET
SECRET
Ophiem
--#27-Fortuna
--#28-Velva
#29-Findley---
--#34-Bismark
--#17-Leaf River
..#69-Finland
E-6--#16-Keweenaw
F-20
F 15 --#66-Sault Ste Marie
..#65-E.Farmington
#86-Ft.Snelling--
B-11
E-9--#19-Antigo
B-10
...#24-Empire
F-1
#61-Port Austin...
...#23-Willow Run Apt.
#67-Ft.Custer......
B-6--#20-Selfridge AFB
F-17
E-8--#18-Moulton
#61-Waverly--
#51-Elmore...
F-22 #71-Omaha
E-21 #48-Kansas City
C-12 #64-Sublette
C-8 #63-Rockville
F-23 #72-McLouth
F-21 #70-Belleville
E-22--#62-Ft.Knox
C-4 #67-Hutchinson
F-18
#73-Bellefontaine
#62-Brookfield
#45-Guthrie
..#21-Shawnee
B-7
F-4.
...#49-Watertown
....#50-Schuylerville
..#6-Hancock Apt.
B-5
.--#14-Bellevue Hill
B-4---#13-Mitchell Hill
B-3--#10-Cape Cod (N. Truro)
C-15---#80-Caswell
F-15---#85-Charleston
--#45-Prospect Hill (Camp Hero)
---#3-Roslyn
---#9-Navesink Mil Res.
..............#30-Mud Pond
--#54-Palermo
..............#63-Blue Knob Park
F-6--#83-Prince Wm.Forest Park
--#56-Ft.Custis
23
22
21
17
16
13
11
20
10
9
12
8
14
15
10
9
1


--#32-Conica
--#12-Reedsport
--#33-Klamath
--#37-Hill Peak Road
--#58-Sacramento
--#48-Berkeley
..#38-Mt. Tamalpais
18
--#74-Madera
--#2-Cambria
--#59-Atolia
--#15-Santa Rosa Isle
#39-San Clemente Is--
--#76-Mt. Laguna
4
Great Falls AFS
--#25-Velva
#26-Finlay--
--#34-Bismark
F-20
--#17-Leaf River
F-11
E-8
#81-Waverly
10
SOUTH DAKOTA
WYOMING
NEBRASKA
COLORADO
KANSAS
ARIZONA
NEW MEXICO
TEXAS
ARKANSAS
F-25
C-12
C-4
F-16
C-5
#7-Gonzales--E-2
5
7
#41--Sandia Base
C-6
12
C-7
--#75-New Braunfels
E-19
C-8
SECRET
LEGEND
REGULAR USAF (PEACETIME) CONTROL CENTER
AIR NATIONAL GUARD (WARTIME) CONTROL CENTER
CONSTRUCTION PRIORITY
NO 1
NO 2
NO 3
NO 4
RADAR STATION SYMBOLS ARE AS FOLLOWS:
B AN/CPS 6B " GE REFERENCE TYPE 3
C AN/CPS 6B (MODIFIED) " " " " MODIFIED
E AN/CPS 5 " " " 1
F AN/FPS 3 " " " 2
M AN/CPS 1 " " " 1
CONTROL CENTER " " " 4
☆ USAF (PEACETIME) C. C.
○ AIR NATIONAL GUARD (WARTIME) C. C.
● TYPE III TOWER RECOMMENDED IN ORDER OF PRIORITY
SECRET


#28-Velva
#29-Findlay
#34-Bismark
F-20
E-6
#17-Leaf River
#55-N.Farmington
#66-Ft.Snelling
B-11
E-9
#19-Antigo
B-10
#61-Port Austin
#67-Ft.Custer
E-8
#18-Moulton
#61-Waverly
10
F
16
#56-Sault Ste Marie
F-17
B-6
E-7
#41-Shawnee
#14-Bellevue Hill
B-5
B-4
#13-Mitchell Hill
#50-Schuylerville
F-4
B-3
#10-Cape Cod
(N. Truro)
#6-Hancock Apt.
1
#45-Prospect·Hill(Camp Hero)
#3-Roslyn
#9-Navesink Mil Res.
#30-Mud Pond
#54-Palermo
#63-Blue Knob Park
#53-Prince Wm.Forest Park
#55-Ft.Custis
9
#75-Bellefontaine
E-22
E-23
C-12
C-8
F-23
F-21
C-4
E-21
F-18
C-5
C-1
C-6
12
14
C-7
#76-New Braunfel
E-19
C-9
SOUTH DAKOTA
NEBRASKA
ARKANSAS
KENTUCKY
TENNESSEE
SECRET
MODIFIED
SECRET
SECRET
SECRET
SECRET

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CONTINENTAL AIR COMMAND

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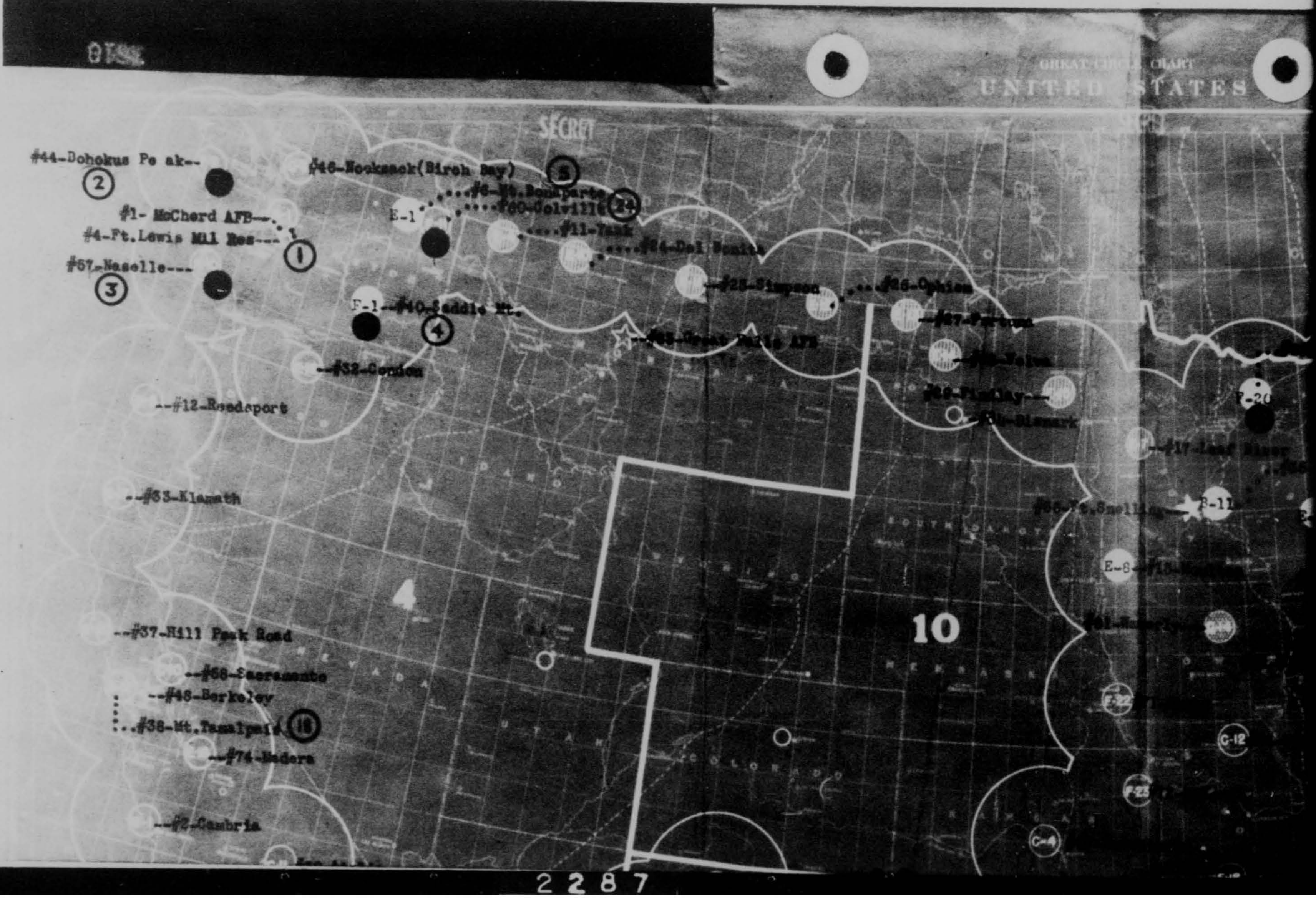
GREAT CIRCLE CHART
UNITED STATES
SECRET
#44-Dohokus Peak--
②
#46-Nooksack(Birch Bay)
⑤
#1- McChord AFB--
#4-Ft.Lewis Mil Res---
①
#6-Mt.Bonaparte
#60-Colville
㉔
E-1
#11-Yaak
#24-Del Bonita
#57-Naselle---
③
#25-Simpson
#26-Ophiem
F-1--#40-Saddle Mt.
④
#65-Great Falls AFB
#27-Parcum
#32-Condon
--#12-Reedsport
#69-Finlay---
#Bismark
F-20
--#17-Leaf River
--#33-Klamath
#55-Ft.Snelling
B-11
4
E-8--#15
10
--#37-Hill Peak Road
#61
--#68-Sacramento
--#48-Berkeley
..#38-Mt.Tamalpais
⑯
F-22
C-12
--#74-Madera
F-23
--#2-Cambria
C-4
NEVADA
UTAH
IDAHO
WYOMING
COLORADO
SOUTH DAKOTA
NEBRASKA
KANSAS
IOWA

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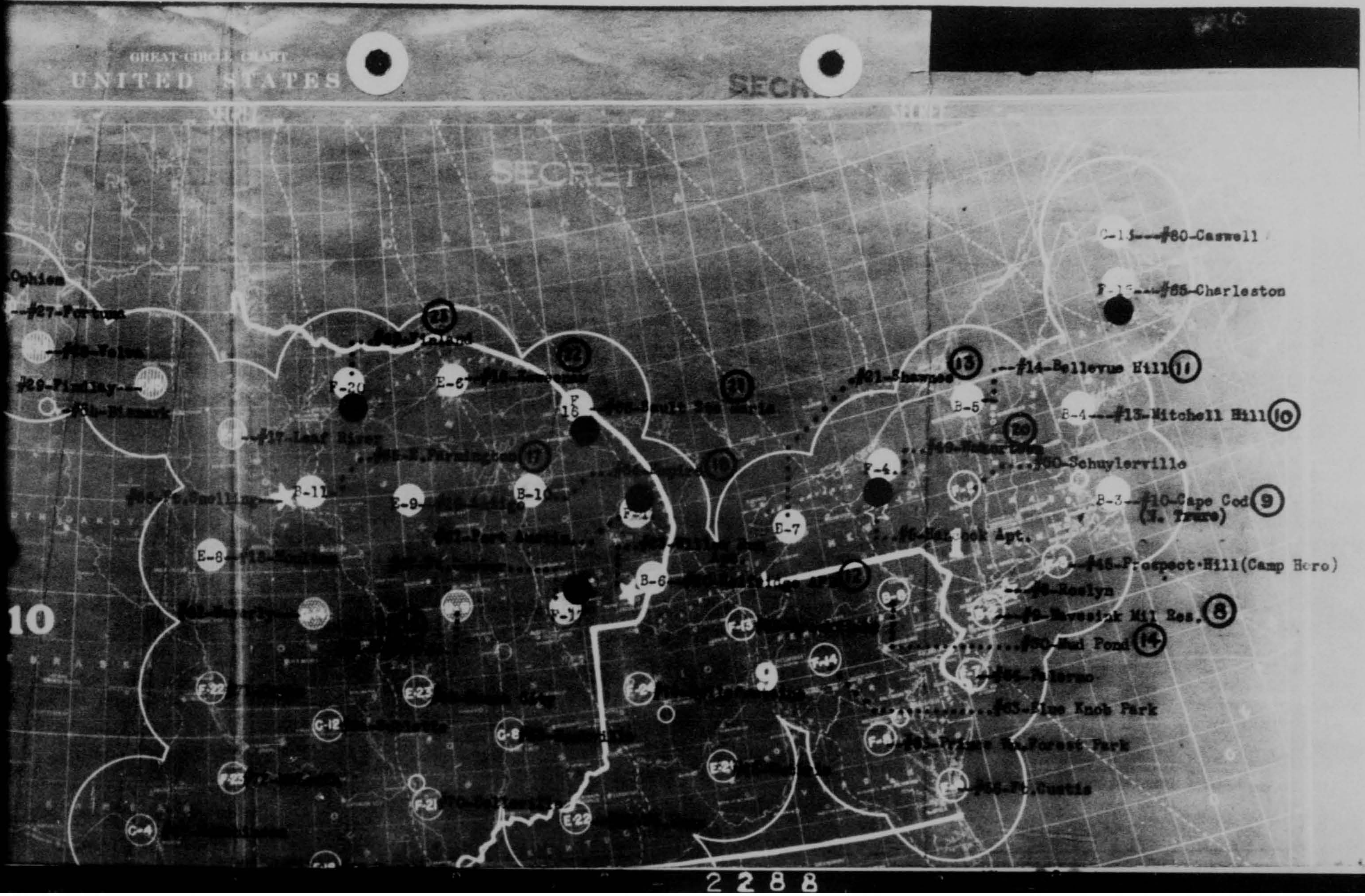
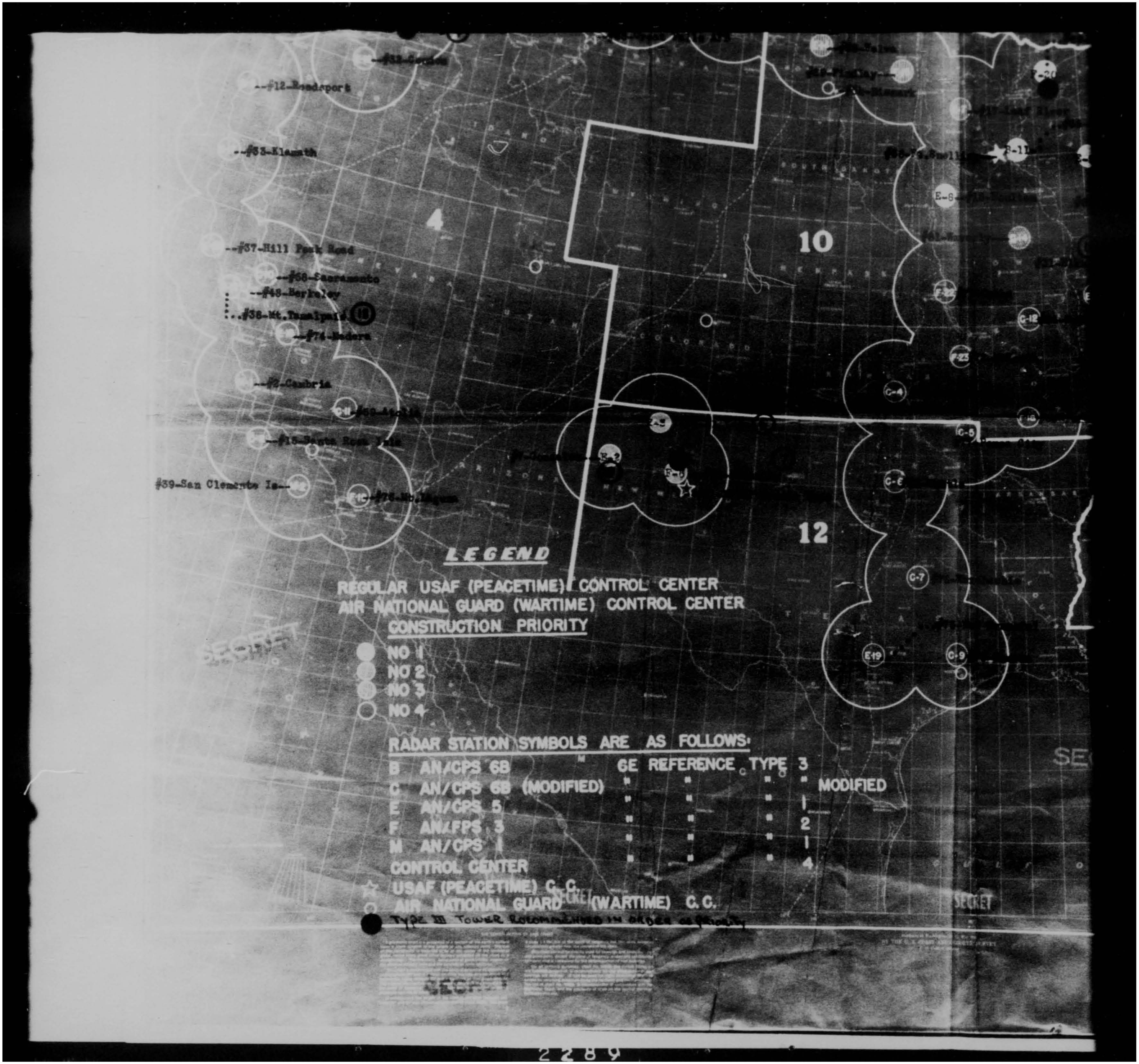
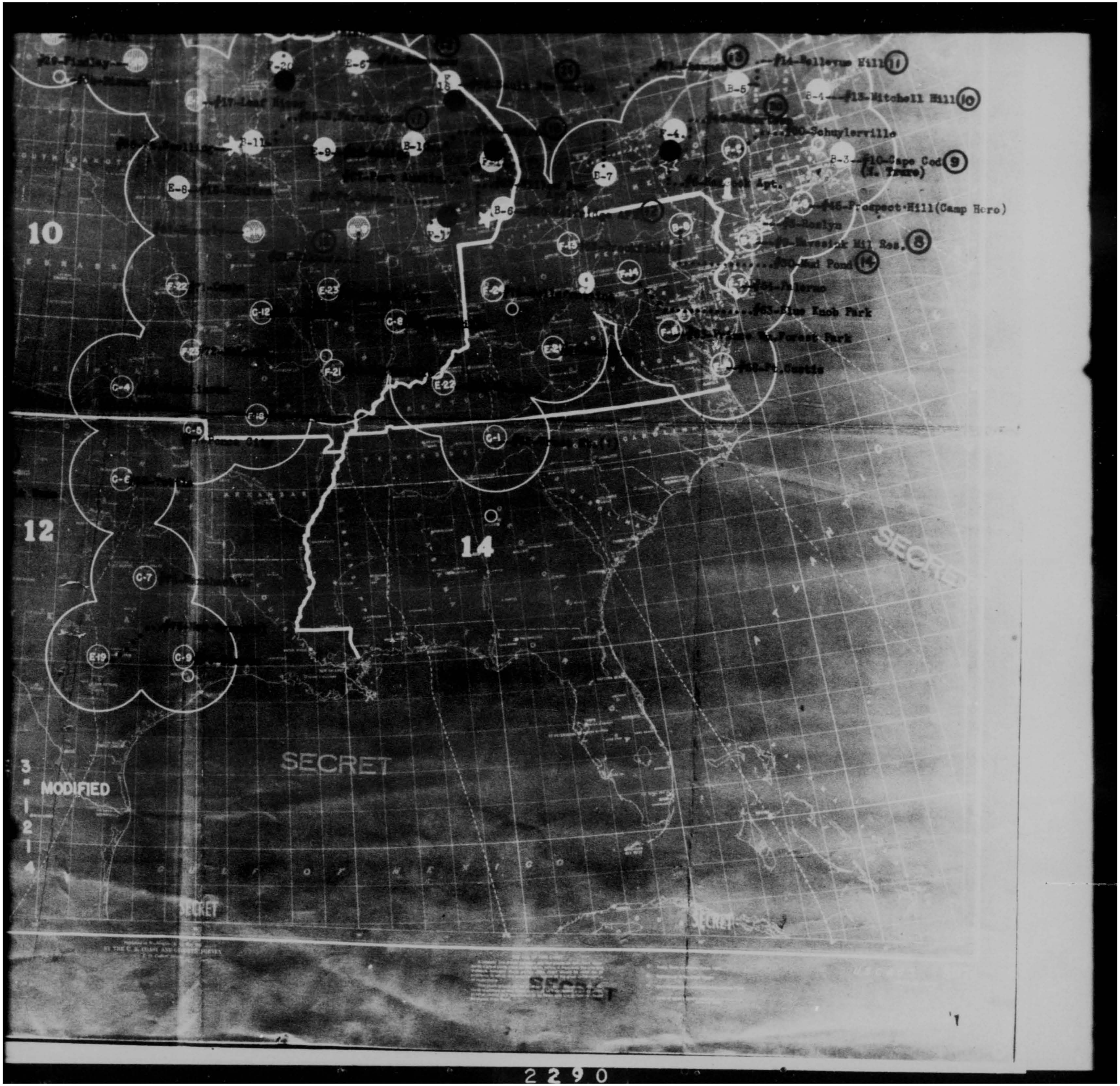

GREAT CIRCLE CHART
UNITED STATES
SECRET
SECRET
Ophiem
#27-Fortuna
#29-Finlay
#17-Leaf River
F-20
E-6
B-11
E-9
B-10
E-8
#14-Bellevue Hill
#13-Mitchell Hill
B-5
B-4
B-3
#10-Cape Cod
(N. Truro)
#60-Caswell
#65-Charleston
#21-Shawnee
F-4.
E-7
B-6
#50-Schuylerville
#6-Hancock Apt.
#48-Prospect Hill(Camp Hero)
#8-Roslyn
#9-Navesink Mil Res.
#50-Mud Pond
#63-Blue Knob Park
#65-Ft.Custis
10
9
F-22
E-23
C-12
C-8
F-25
F-21
E-22
E-21
C-4
F-15
F-14
F-8


#32-Cosmos
#12-Reedsport
#53-Klamath
#37-Hill Peak Road
#68-Sacramento
#48-Berkeley
#38-Mt. Tamalpais
#74-Madera
#2-Cambria
#59-Atolia
#15-Santa Rosa Isle
#39-San Clemente Is.
#76-Mt. Laguna
C-11
F-10
4
10
12
NEVADA
UTAH
COLORADO
ARIZONA
NEW MEXICO
SOUTH DAKOTA
NEBRASKA
KANSAS
TEXAS
ARKANSAS
IDAHO
WYOMING
#18-Finley
E-8
E-11
#58-Ft. Snelling
F-22
F-23
C-12
C-4
C-5
C-6
C-7
C-9
E19
F-20
LEGEND
REGULAR USAF (PEACETIME) CONTROL CENTER
AIR NATIONAL GUARD (WARTIME) CONTROL CENTER
CONSTRUCTION PRIORITY
NO 1
NO 2
NO 3
NO 4
RADAR STATION SYMBOLS ARE AS FOLLOWS:
B AN/CPS 6B GE REFERENCE TYPE 3
C AN/CPS 6B (MODIFIED) " " " " MODIFIED
E AN/CPS 5 " " " 1
F AN/FPS 3 " " " 2
M AN/CPS 1 " " " 1
CONTROL CENTER " " " 4
☆ USAF (PEACETIME) C.C.
○ AIR NATIONAL GUARD (WARTIME) C.C.
● TYPE III TOWER RECOMMENDED IN ORDER OF PRIORITY
SECRET
SECRET
SECRET
SECRET
2289


#14-Bellevue Hill ⑪
B-5
B-4---#13-Mitchell Hill ⑩
F-4
#50-Schuylerville
B-3---#10-Cape Cod ⑨
(N. Truro)
E-7
Apt.
#45-Prospect·Hill(Camp Hero)
#5-Roslyn
#9-Navesink Mil Res. ⑧
#50-Mud Pond ⑭
#54-Palermo
#63-Blue Knob Park
Forest Park
#62-Ft.Curtis
B-6
F-13
F-14
E-21
E-22
C-1
E-8
B-11
E-9
F-18
F-20
E-5
E-23
F-22
C-12
C-8
F-21
F-25
C-4
F-16
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CONTINENTAL AIR COMMAND

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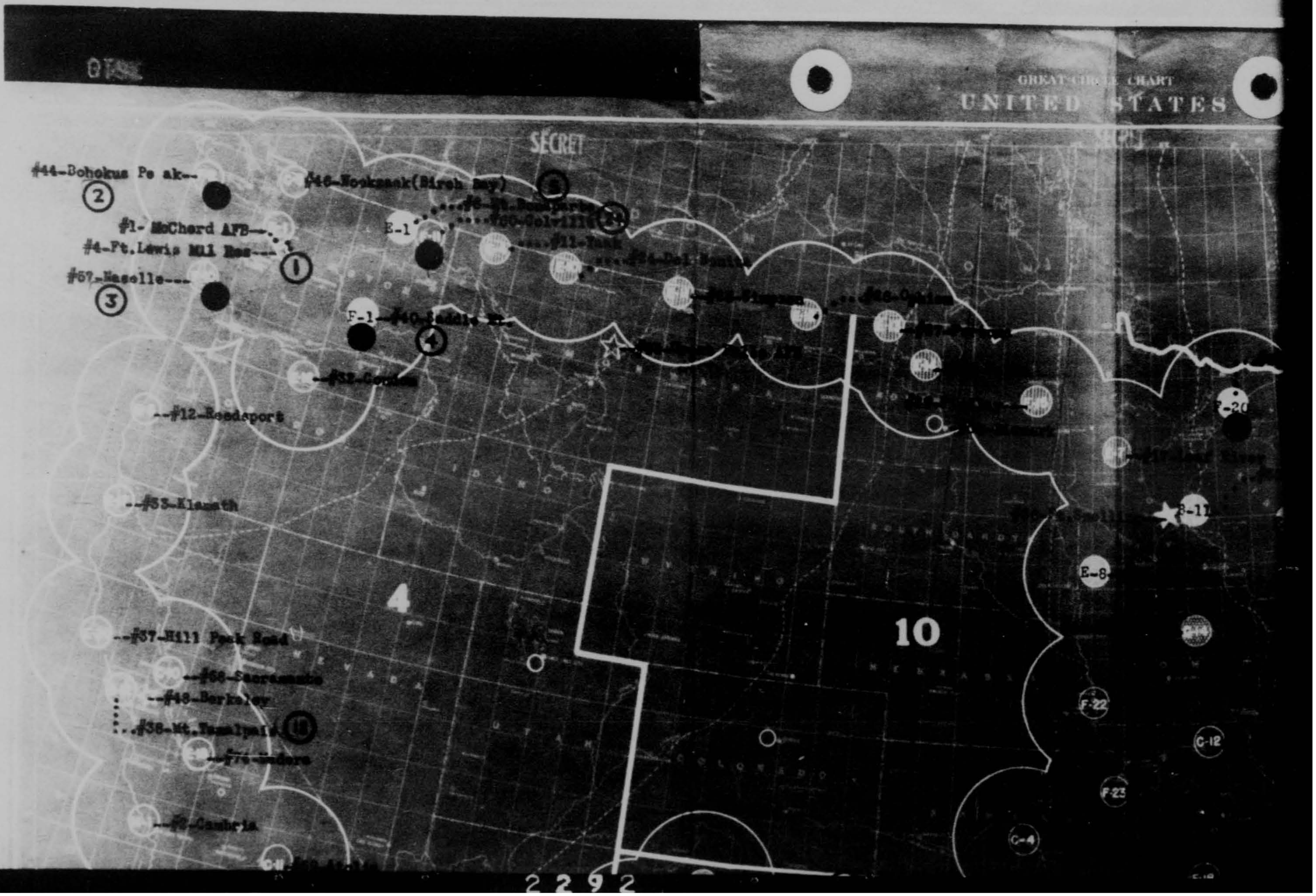
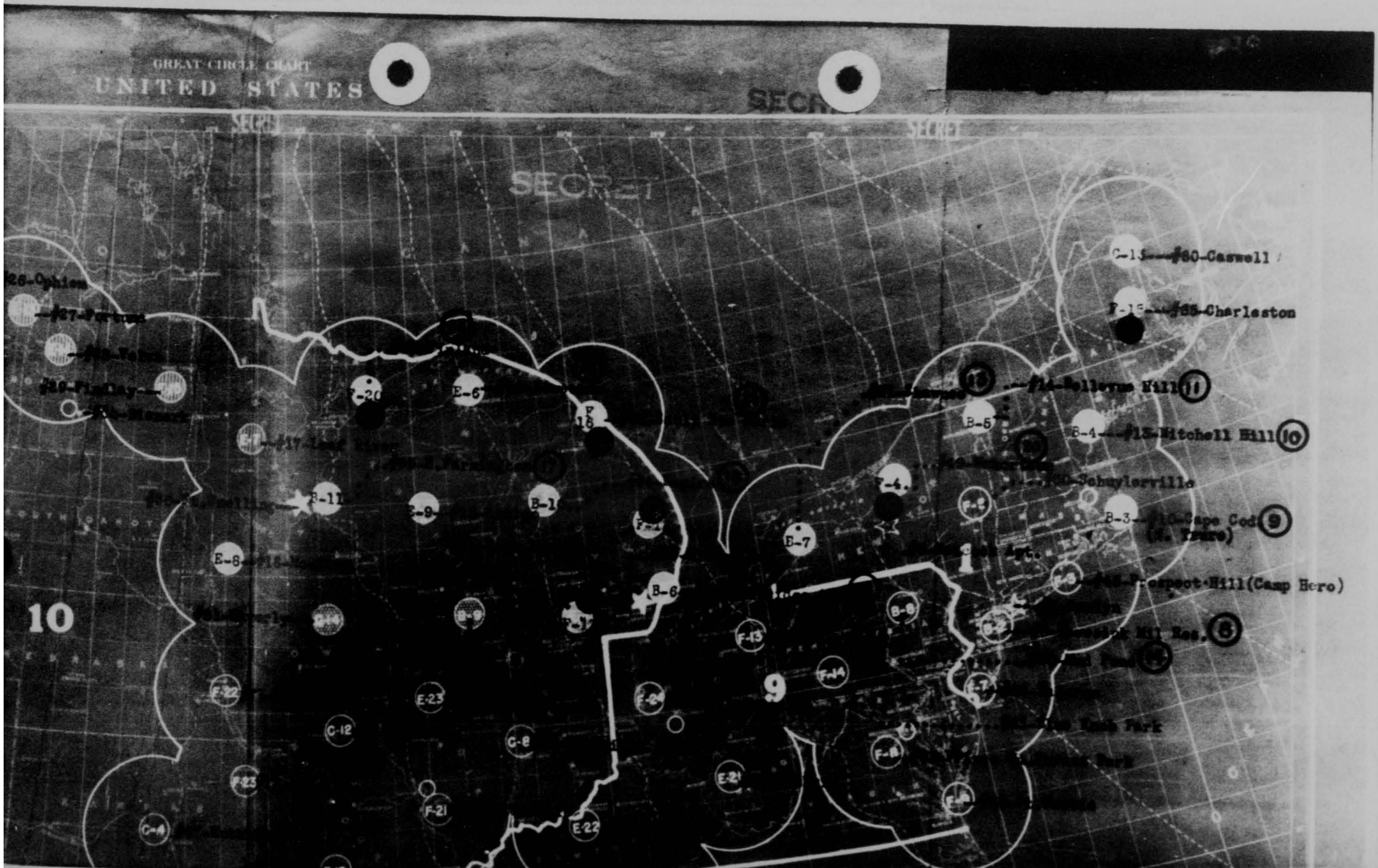
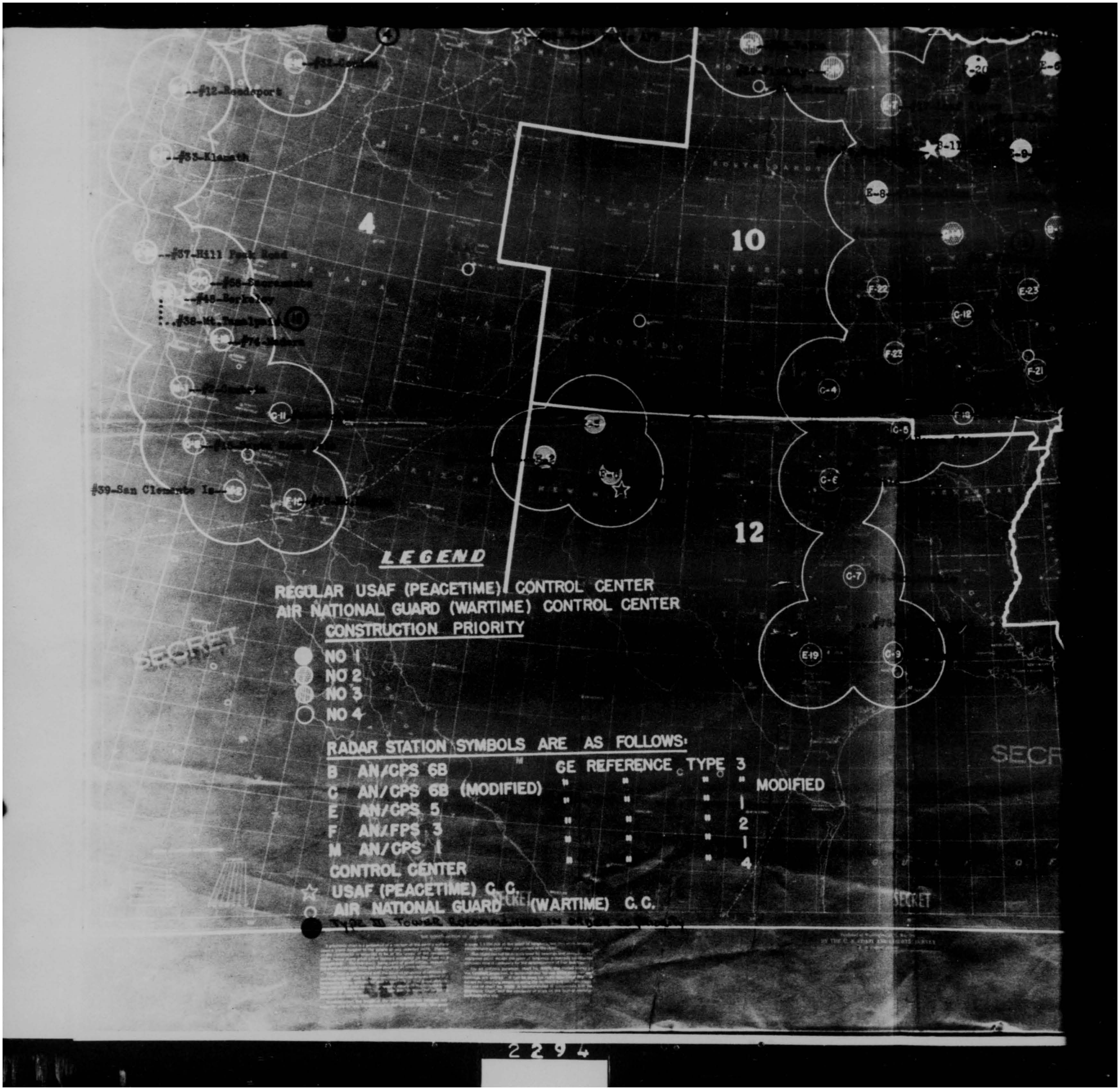

GREAT CIRCLE CHART
UNITED STATES
SECRET
#44-Bohokus Peak--
②
#46-Nooksack(Birch Bay)
⑤
#6-Mt.Bonaparte
#60-Colville
E-1
#1- McChord AFB--
#4-Ft.Lewis Mil Res---
①
#11-Yaak
#24-Del Bonita
#57-Naselle---
③
F-1
#40-Saddle Mt.
④
--#32-Gordon
--#12-Reedsport
--#53-Klamath
IDAHO
4
10
--#37-Hill Peak Road
--#58-Sacramento
--#48-Berkeley
..#38-Mt.Tamalpais
⑱
--#74-Madera
--#2-Cambria
NEVADA
UTAH
COLORADO
NEBRASKA
SOUTH DAKOTA
F-20
B-11
E-8
F-22
C-12
F-23
C-4
2292


GREAT CIRCLE CHART
UNITED STATES
SECRET
SECRET
SECRET
SECRET
#26-Ophiem
#27-Fortuna
#29-Finlay
E-6
F-20
#17-Lake
B-11
E-9
B-1
E-8
10
F
18
F-22
E-23
C-12
C-8
F-23
F-21
C-4
E-22
E-24
E-21
F-13
F-14
9
F-6
B-7
B-6
B-8
F-4
B-5
C-13—#60-Caswell
F-15—#55-Charleston
—#14-Bellevue Hill ⑪
B-4—#13-Mitchell Hill ⑩
#30-Schuylerville
B-3—#10-Cape Cod ⑨
(N. Truro)
Apt.
#45-Prospect-Hill(Camp Hero)
Mil Res. ⑧
E-7
B-2
Knob Park
Park
1


--#12-Reedsport
--#33-Klamath
--#37-Hill Peak Road
--#56-Sacramento
--#48-Berkeley
..#38-Mt. Tamalpais
--#74-Madera
#39-San Clemente Is.--
C-11
E-10
4
10
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E-8
B-11
E-9
F-22
E-23
C-12
F-23
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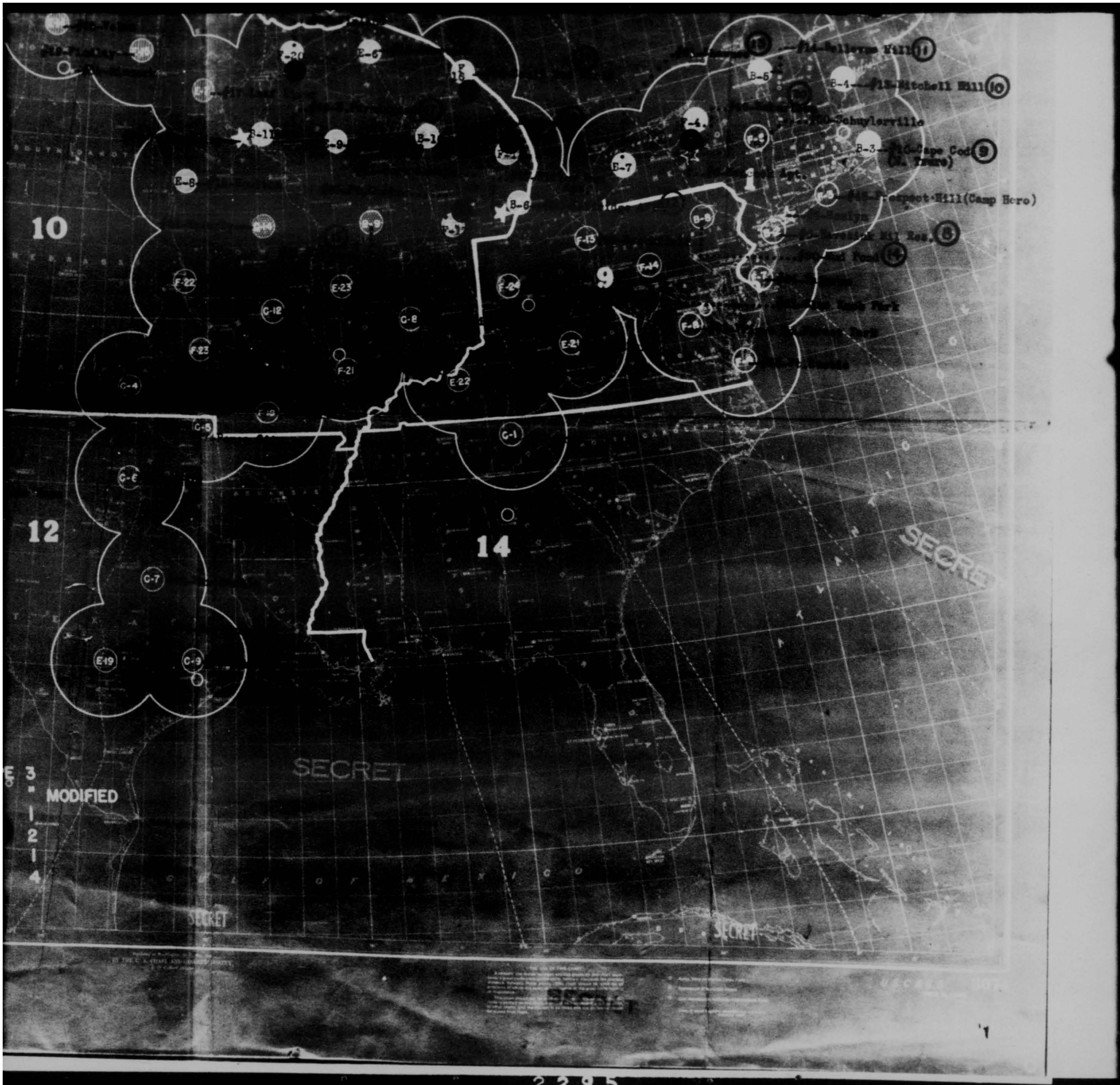
F-18
C-5
C-6
C-7
E-19
C-9
IDAHO
NEVADA
UTAH
COLORADO
ARIZONA
NEW MEXICO
WYOMING
NEBRASKA
SOUTH DAKOTA
TEXAS
SECRET
LEGEND
REGULAR USAF (PEACETIME) CONTROL CENTER
AIR NATIONAL GUARD (WARTIME) CONTROL CENTER
CONSTRUCTION PRIORITY
NO 1
NO 2
NO 3
NO 4
RADAR STATION SYMBOLS ARE AS FOLLOWS:
B AN/CPS 6B GE REFERENCE TYPE 3
C AN/CPS 6B (MODIFIED) " " " " MODIFIED
E AN/CPS 5 " " " 1
F AN/FPS 3 " " " 2
M AN/CPS 1 " " " 1
" " " 4
CONTROL CENTER
☆ USAF (PEACETIME) C. C.
○ AIR NATIONAL GUARD (WARTIME) C. C.
● Type III Tower Recommended in order of priority


#14-Bellevue Hill ⑪
B-5
B-4—#13-Mitchell Hill ⑩
#20-Schuylerville
F-4
B-3—#10-Cape Cod ⑨
(N. Truro)
E-7
1
F-3—#16-Prospect Hill (Camp Hero)
B-8
B-2
Res. ⑧
Pond ⑭
F-13
F-14
9
F-8
Park
E-20
E-6
F-18
B-11
E-9
B-1
E-8
10
E-14
B-6
F-22
E-23
C-12
C-8
F-24
E-21
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Conac Regulation 55-8
Aircraft Recognition in Air Defense
29 March 1950

2-3394-28

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ConAC REGULATION)
55-8)

HEADQUARTERS CONTINENTAL AIR COMMAND
Mitchel Air Force Base, N.Y., 29 March 1950

OPERATIONS

Aircraft Recognition in Air Defense

	Paragraph
Purpose	1
Scope	2
General	3
Recognition Zones	4
Recognition During Peace Alert	5
Recognition During Emergency and War Alert	6
Procedure	7

1. Purpose. The purpose of this Regulation is to establish the general policy for the recognition of aircraft by the air defense system.

2. Scope. This Regulation contains policy guidance for the two conditions of air defense system operation:

a. Peace Alert - operations conducted during peace time.

b. Emergency or War Alert - operations conducted during period of military national emergency declared by higher authority or operations conducted during time of war.

3. General. The prompt and accurate recognition of all aircraft in flight in specified, critical recognition zones surrounding and within areas being defended is essential to the accomplishment of the air defense mission.

a. Electronic recognition systems (IFF) do not always provide positive, completely reliable recognition; therefore, a system of control of air traffic and recognition of friendly aircraft by flight plan matching must be used in addition to IFF.

b. Air transportation of personnel and materiel during both peace and war is of great importance to the industrial, military and governmental effectiveness of this nation. Restrictions placed on flying necessary to achieve recognition of aircraft will be held to a minimum consistent with the requirement for air defense.

c. The Civil Aeronautics Administration is the agency having primary responsibility for the control of air traffic and the supply of flight plan data to the air defense system.

4. Recognition Zones. a. A recognition zone is the air space above a specified geographic area which is established for ready recognition of aircraft operating in or near an active air defense system. Normally, this will correspond to the defense area.

b. Headquarters United States Air Force and the Civil Aeronautics Administration will determine the size and location of recognition zones for all aircraft, based on requirements submitted by Headquarters Continental Air Command.

c. Headquarters Eastern Air Defense Force and Western Air Defense Force will submit their requirements for such recognition zones to this headquarters for coordination with higher headquarters.

5. Recognition During Peace Alert. a. During peace alert operations, the objective of the aircraft recognition system is to provide for recognition of aircraft in a minimum number of recognition zones.

b. The location, size, and number of these zones will be fixed by the following:

(1) The requirements for recognition during such alert periods.

2-3394-28

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*This Regulation supersedes ConAC Regulation 101-2, 30 August 1949.

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(2) The capabilities of the radar system.

(3) The traffic loads.

(4) The capability of the Civil Aeronautics Administration to undertake the additional workload.

c. The filing of prescribed flight plans during peace alert periods is on a request and cooperative basis for civil aircraft, since legal authority does not exist during peace to control civil flights during VFR weather.

d. Military aircraft will be required by regulations to file the necessary flight plans during peace alert. These regulations are to be issued in the near future.

e. The recognition of military aircraft engaged in tactical training during peace alert operations will not be based on Civil Aeronautics Administration flight plan data. Major USAF commands will make the necessary arrangements with the Air Defense Force commanders concerned to provide for the recognition of this type of air traffic before each flight.

6. Recognition During Emergency and War Alert. a. During emergency and war alerts, all aircraft not engaged in actual combat operations will be required to file IFR type flight plans when flying in recognition zones (legal authority for this action is being secured).

b. Close control of aircraft during emergency and war alert will be designed to meet the following requirements:

(1) Positive recognition in air defense areas.

(2) Safety of civil and noncombat military aircraft.

(3) Permit the Civil Aeronautics Administration to clear the air spaces in which actual or suspected air defense combat operations occur. This procedure will be vital to the effectiveness of combat operations as it will reduce the recognition, target assignment, and weapon mutual interference problems.

c. The recognition of military aircraft engaged in combat operations during emergency and war alert will be implemented by necessary arrangements made by major air commands conducting such operations with Air Defense Forces.

7. Procedure. a. The detailed operating procedures necessary for the recognition of aircraft are affected by the geography, air traffic density, radar deployment, Civil Aeronautics Administration organization and defense mission of each specific air defense area. Air Defense Force commanders, in coordination with Civil Aeronautics Administration regional headquarters, are responsible for the development of operating procedures for recognition in each area within the framework of the basic policies stated herein.

b. Air traffic will be uncontrolled except as it enters, operates in or passes through recognition zones. The size and number of zones during the peace alert period will be consistent with the air defense capability and during emergency and war periods will be as required for defense.

c. All flight plan data originating with the Civil Aeronautics Administration or Military Flight Service will be passed by the Civil Aeronautics Administration and Military Flight Service to the appropriate radar stations and/or air defense control centers. Air Defense Force commanders will determine the proper communication system and procedures for use of this data.

NOTE: The Civil Aeronautics Administration and/or Military Flight Service will provide necessary personnel (security controllers) at their traffic control centers.

d. Recognition of radar tracks normally will be made by specified radar stations. This recognition must be made in a minimum time (one minute) based on the coincidence of the observed track with flight plan data. The limits of deviation of the observed track from

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flight plan data allowed for recognition will be held to the lowest practical minimum. These limits should conform to Civil Aeronautics Administration requirements.

e. GCI radar stations receiving or plotting unrecognized radar tracks will intercept immediately or take other specific action as directed by the Air Division commander. The unrecognized track and the action taken will be reported to the air defense control center without delay.

f. Only hostile or friendly tracks will appear on air defense control center plotting boards during emergency or war operations after the actions outlined in paragraphs 7d and e, above, are taken. Erroneous hostile recognition may be corrected by air defense control centers as the interception proceeds, based on additional information received from either Civil Aeronautics Administration or the tracking radar station.

g. "Unknown" or "unidentified" tracks passed to air defense control centers during peace alert operation will be carried as "unknown" or will be intercepted for visual identification when and as authorized by this headquarters.
(PO&R)

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

CHARLES T. MYERS
Major General, USAF
Vice Commander

OFFICIAL:

Neal J O'Brien

NEAL J. O'BRIEN
Colonel, USAF
Air Adjutant General

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For Photographic Flight
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VOLUNTEER AIR RESERVE

TRAINING OUTLINE

PHOTOGRAPHIC FLIGHTS

— PREPARED BY —
DIRECTORATE OF OPERATIONS & TRAINING
HEADQUARTERS CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

2-34/6-5

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VOLUNTEER AIR RESERVE TRAINING OUTLINE FOR PHOTOGRAPHIC FLIGHTS

Headquarters, Continental Air Command
Mitchel Air Force Base, New York
1 January 1950

Subject course is published for the information and guidance of all concerned.

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

Neal J. O'Brien
NEAL J. O'BRIEN
Colonel, USAF
Air Adjutant General

Prepared by
Operations and Training Directorate
Headquarters, Continental Air Command
Mitchel Air Force Base, New York

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VOLUNTEER AIR RESERVE TRAINING OUTLINE
FOR PHOTOGRAPHIC FLIGHTS

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Notes to Instructors

1. Curricula contained in this outline has been prepared in accordance with the provisions of paragraph 7b, AF Regulation 45-23. Sufficient material is included to provide Photographic Volunteer Air Reserve Training Flights with four (4) hours' training per month for a period of three (3) years. It is realized that considerably more than one hundred forty-four (144) hours would be required to thoroughly cover the material offered, therefore, the hour figure listed at each subject is only a suggested time derived from an attempt to balance the outline and gives weight to each subject in accordance with its scope and/or significance.

2. The outline is arranged in a normal development sequence with basic material listed early in the program and more complex material in later periods. There is no objection, however, to any rearrangement or substitution of material to fit the needs of any particular photographic flight provided, of course, that the training schedules based on this outline, which are prepared quarterly by the flight, are approved by the appropriate air force, as required by paragraph 7c, AF Regulation 45-23. Reference to appropriate technical information are included, however, in many instances source material listed may be augmented. For example, the AF Extension Course Catalog offers courses obtainable from the Unit Guidance Branch, Benjamin Harrison AF Base, Indiana, which are valuable aids to both units and interested qualified individuals. The following courses are listed therein which pertain to current photographic techniques and allow for the accumulation of points creditable under the VARTU program.

Course No.	Title
30-18	Aerial Photography
309	Reconnaissance
105	Maps, Charts & Aerial Photographs
30-16	Intelligence Reconnaissance
345	Introduction to Air Intelligence
30-17	The Role of Photo Intelligence

3. A number of methods may be applied by the instructor for the purpose of achieving effective learning. A brief summary of these includes the lecture method, the discussion or seminar method, and the panel method. Everyone is familiar with the lecture method. It should be used sparingly since it achieves the poorest results. The discussion or seminar method encompasses the active participation of the entire group under the leadership of one or more members. It is an excellent method of instruction when all members of the group are well prepared. The panel method, whereby under proper guidance two or more members present the material to be covered, also offers a most productive method for learning. To apply the panel method to the outline inclosed, the instructor would assign individual hours to two or more members of the flight. The net result of this type of assignment would be an equitable distribution of the subjects to be covered among all the members of the flight without imposing an undue burden on any one or more individuals. Each panel would take for its guide the brief outline for the hour assigned and expand it for presentation in accordance with its experience and the reference materials available. This method has the

additional advantages of promoting an improving type of competitive spirit and a feeling of unity among the members as they work on the individual panels for their presentations.

4. Regardless of the method used, sufficient time must be allowed for the preparation of each period of instruction. In this connection, the instructor, or the seminar or panel leader, must have a lesson plan for each specific period of instruction. A good lesson plan would be one having the following main steps:

a. Objective of instruction.

b. Teaching devices to be used.

c. The procedure or points to be covered, in their proper sequence.

d. A check-up and review to emphasize important points covered and to stimulate thinking.

e. Questions: these questions should be prepared in advance for the purpose of offering them to the group should the group not have any questions to ask during this portion of the period.

f. Comments and remarks which by their constructive nature could be utilized for future periods to improve the technique used.

5. In general, effective planning is the basis of good teaching, therefore, it is suggested that for each specific subject definite objectives be established and all material be carefully planned.

PHOTOGRAPHIC FLIGHT MEMBERSHIP

1. The following personnel are normally included as the basic members of the V.A.R.T.U. (Photographic Flight):

a. Officers

(1) Photomapping Officer, 7916
(2) Aerial Photographic Officer, 8502
(3) Still Photography Officer, 8540

b. Airmen

(1) Photographer, 152
(2) Aerial Photographer-Gunner, 939
(3) Aerial Photographer, 940
(4) Camera Technician, 941
(5) Photographic Laboratory Technician, 945
(6) Master Photographic Technician, 1945

2. The following general listing of personnel and any others whose military specialty is closely allied to photography and whose membership in a Photographic Flight would benefit the individual and also the flight by their utilization in broadening the scope of instruction for individual parts of the curriculum:

a. Officers

(1) Tac Recon Pilot, Single Engine, 1061
(2) Photo Recon Pilot, Two Engine, 1062
(3) Public Relations Officer or Public Information Officer (new title), 5401
(4) Photographic Equipment Officer, 7052
(5) Map Reproduction Officer, 7917
(6) Photo-interpreter, 8503
(7) Motion Picture Technical Officer, 8537
(8) Medical Photographer, 8547
(9) Military Intelligence Officer, 9300
(10) Intelligence Staff Officer (combat), 9301
(11) Intelligence Staff Officer (base), 9307

b. Airmen

(1) Photogrammetrist, 004
(2) Cameraman, Motion Picture, 043
(3) Draftsman, Topographic, 076
(4) Photolithographer (designated type), 107

    (a) Lithographer, Photo Transfer
    (b) Photographer, Copy Transfer
    (c) Photographer, Copy Cameraman

(5) Film Editor, Motion Picture, 131
(6) Projectionist, Motion Picture, 137
(7) Intelligence Specialist, 631

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" " K-24		17	
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" " S-7		20	
" " K-20		21	
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" Copy		1,2,3	
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THREE YEAR VOLUNTEER AIR RESERVE TRAINING OUTLINE FOR PHOTOGRAPHIC FLIGHTS

FIRST YEAR	Hrs	References
1. Introduction	1	TM 1-219, par. 5-16: Encyclopedia Britannica TO-10-10BB-1
a. Military Value of Photography		
(1) Against the enemy		
(2) For evaluation of our establishment		
(3) For public information		
(4) For research and development		
b. Responsibility for Photography		
(1) Ground		
(2) Aerial		
(3) Explain position of photo laboratory in the wing structure		
c. Photographic Essentials		
(1) The camera		
(a) Breif history of cameras		
(b) The pin hole camera		
(2) Light		
(3) Emulsions		
(4) Theory of development		
2. C-1 Ground Camera Familiarization	1	T.O. 10-10BC-3
a. Uses of the C-1 camera		
b. Handling and care of C-1 ground camera		
c. Assembly and operation		
d. Exposing film in the C-1 ground camera		
3. Cut Film and Cut Film Holders	1	TM 1-219, pars 106-107 T.O. 10-5-18

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a. Cut Film

(1) Packaging

(2) Explain different notches (the manufacturer's code)

(3) Care in handling

(a) Finger prints, dust and foreign matter

(b) Marking of partially empty boxes of cut film

b. Cut film holders

(1) Construction and maintenance

(2) Method of loading

4. Photographic Chemistry 1 TM 1-219, par. 21-62

a. Fundamentals

(1) Explain what happens in a photographic developer to the photographic emulsion

(2) Basic ingredients of photographic developers

(a) Reducers

(b) Accelerators

(c) Restrainers

(d) Keepers

(e) Preservatives

5. Standard Formulas 1 TM 1-219, par. 21-61
T.C. 10-5-7

a. D-72 developer

(1) The constituents

(2) The purpose of each constituent

b. Type of developer

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(1) Demonstrate preparation		
c. Acid hardening fixing bath		
(1) The ingredients		
(2) Method of preparation		
(3) Uses		
6. Film Processing	1	TM 1-219, par 235-246; T.O. 10-5-9
a. Laboratory procedure		
b. Mechanics of film processing		
(1) Method		
(2) Time and temperature tables		
7. Contact papers and negative preparation	1	TM 1-219, par 275-292; T.O. 10-5-12, AFR 95-7
a. Discuss the AF contact papers		
b. Discuss contrast		
c. Discuss Type IX paper		
8. Negative Preparation	1	TM 1-219, par 275-292; AFR 95-7
a. Cleaning of negatives		
b. Lettering of negatives		
c. Masking		
d. Choosing the right paper for a given negative		
9. Contact Printers		
a. Explain component parts		
b. Discuss A-10 and A-14 printers		
c. Contact printing procedure		
(1) Explain the various steps		
(2) Discuss techniques		

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10. Introduction to light	1	TM 1-219, par 118-137
a. Properties, velocity and behavior of light		
b. The meaning as applied to light, of the terms: refraction, reflection, transmission, absorption, dispersion and diffration		
11. Introduction to Lenses	1	TM 1-219, par 118-137
a. Composition of lenses		
b. Characteristics of lenses		
c. Functions of lenses		
12. Focus and the C-1 lens	1	TM 1-219, par 121-137, T.O. 10-10BC-3, T.O. 10-10BA-1
a. Focus		
(1) Meaning and use of focal point, focal plane		
b. The C-1 lens		
(1) Results obtained by use of 12", 19" and 25" focal lengths		
13. Optical Definitions	1	TM 1-219, par 121-137, Photography, Its Principles, and practice by Neblette
a. Exposure		
(1) Method of determining the speed of a lens		
(2) Relationship between diaphram openings and shutter speeds for calculating exposure		
(3) Application of the inverse square law to exposure		
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(1) Explanation of and factors affecting:		
(a) Hyper focal distance		

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(c) Depth of focus		
(2) Meaning of:		
(a) Lens definition		
(b) Angle of field		
(c) Angle of view		
(d) Conjugate distances		
(e) Resolving power of lens		
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(1) Construction, are and operation of the G.E. and De Jur photoelectric exposure meters		
(2) Application and use of these meters for general and specific exposure problems		
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(1) Elementary factors of correct exposure		
(2) Meaning and use of film speed ratings		
(3) Method of using the camera as a visual extinction meter - the key-stop method		
15. Use of C-1 Camera.	1	TM 1-219; TO 10-10BA-1
a. Brief review of operation of C-1 camera		
b. Brief review of optical laws		
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(2) Other tropical effects		
(3) Methods of solving tropical problems		
b. Polar Effects		
(1) Polar effects on camera lenses and accessories		
(2) Methods of solving polar problems		
17. Chemistry of Developing Solutions.	1	TM 1-219, par. 29-37
a. Developing agent or agents		
b. Keeper		
c. Preservative		
d. Accelerator		
e. Restrainer		
18. Standard Developers and Their Uses.	1	TO 10-5-7; TO 10-5-9
a. Type A		
b. Type B		
c. Type C		
d. Type D		
19. Fixing Chemicals and Their Functions	1	TM 1-219, par 38-56
a. Chemicals used in fixing baths		
(1) Silver solvents		
(2) Emulsion hardeners		
(3) Acids		
(4) Preservatives		
b. Functions of fixing baths		
(1) Stop development		
(2) Make image permanent		

VARTU Photo Flts 1st Year (Con'd)	Hrs	References
(3) Harden the gelatin		
20. Types of Fixing Baths.	1	TM 1-219, par 38-56
a. Types of fixing baths		
(1) Plain fixing baths		
(2) Acid Fixing baths		
(3) Tropical fixing baths		
(4) Rapid fixing baths		
b. Capacity of fixing baths		
(1) Use of double fixing baths		
(2) Figuring the capacity of a given amount of fixing bath		
(3) Methods of testing fixing baths for exhaustion		
21. Chemical Mixing.	1	TM 1-219, par 71-91 and pages 303-320; TO 10-5-7
a. Procedure		
(1) Methods and precautions in handling dry and liquid chemicals		
(2) Procedure for mixing chemical solutions		
(3) Stock and working solutions		
(4) Storage and preparation for shipment		
b, Photographic formulae		
(1) Preparation of developer formulae		
(2) Preparation of fixing formulae		
(3) Preparation of reducing and toning formulae		
(4) Miscellaneous formulae, tray cleaner, ferrotype polish, print bleacher, etc.		

VARTU Photo Flts 1st Year (Con'd)	Hrs	References
22. Emulsion Characteristics.	1	TM 1-219; par. 25-28 par. 92-117; TO 10-5-1
a. Negative materials		
(1) Physical and emulsion characteristics of negative film stock, inclusing uses		
(2) Negative emulsions		
(a) How classified		
(b) How typed		
23. Engineering Photography.	1	TM 1-219, par 193-198
a. Purpose and requirements		
(1) U.R. photography		
(2) Historical records		
(3) Accidents and evidence photography		
b. Characteristics		
(1) Need for sharp, clear, well defined detail		
(2) Preservation of natural appearance		
(3) Detail in high lights		
(4) Inclusion of identification		
24. Techniques of Engineering Photography.	1	TM 1-219, par 193-198
a. Lighting		
b. Glass objects		
c. Causes for failure		
d. Corrective measures		
25. Photographic Composition.	1	TM 1-219, par 188-192
a. Fundamentals		
(1) Simplicity		

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VARTU Photo Flts 1st Year (Cont'd)	Hrs	References
(2) Point of interest		
(3) Balance		
b. Factors		
(1) Image size		
(2) Camera angle		
(3) Perspective		
(4) Viewpoint		
(5) Foreground		
(6) Background		
c. AF Composition requirements		
(1) Mechanized equipment		
(2) Buildings		
(3) Aircraft		
(4) Crashes		
(5) Groups		
26. Finishing.	1	TO 10-1-16, 10-1-17, 10-25-27, 10-25-29
a. Finishing room procedure		
(1) Operations, use and care of equipment		
(a) Print washers, tray & mechanical		
(b) Type B-8 & B-10 dryers		
(c) Type B-4a rack dryer		
(d) Type A-1A print straightener		
27. Print softeners.	1	TM 1-219, par 296-315; TO 10-25-6, 10-1-17, 10-25-27, 10-25-62
a. Types and their uses		
b. Precautions in softening prints		

VARTU Photo Flts 1st Year (Cont'd)	Hrs	References
c. Print mounting		
(1) Print trimmer		
(2) Tacking iron and dry mounting press		
(3) Methods of mounting		
(4) Mounting materials		
28. Type B-8 and Type B-10 Print Dryers.	1	TO 10-25G-1, 10-25G-2
a. Detailed description		
(1) Frame		
(2) Electric heating assembly		
(3) Drum assembly		
(4) Motor drive assembly		
b. Operation		
(1) Preparation for use		
(2) Principles of operation		
(3) Operating instructions		
c. Maintenance		
(1) Service inspection and maintenance		
(2) Lubrication		
(3) Service troubles and remedies		
29. Miscellaneous Finishing Equipment.	1	TO 10-25-6, 10-25-27, 10-25-62
a. Type A-1A print washer		
(1) Description of parts		
(2) Preparation for use		
(3) Operation		
(4) Inspection and maintenance		

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VARTU Photo Flts 1st Year (Cont'd) Hrs References

b. Type A-1 Dry Mounting Press

(1) Description of parts

(2) Operation

(3) Inspection and maintenance

c. Type A-2 Print Straightener

(1) Description of parts

(2) Operation

(3) Inspection and maintenance

30. AF Technical Publications and Supply Procedure. 1 — TO 00-1-1, 00-5-1, AF 67-1

a. AF Technical Publications

(1) Purpose, scope and use

(2) System of indexing

(3) Practical use of Technical Orders

b. Supply Procedure

(1) Purpose, scope and use

(2) AF Form 446

(3) AF Form 447

(4) Maintenance of adequate records

31. Polar and Tropical Effects on Photographic Emulsions and Solutions. 1 — TO 10-1-96, 10-5-7, 10-5-1; Notes on Tropical Photography - Eastman Kodak Co.

a. Polar effects

(1) Film brittleness

(2) Developing cold film

(3) Condensation due to temperature change

(4) Static electricity streaks

VARTU Photo Flts 1st Year (Cont'd)	Hrs	References
(5) Drying at cold temperatures		
(6) Solution freezing		
(7) Reduced rates of chemical processing and actions		
(8) Finishing at cold temperatures		
b. Tropical effects		
(1) Types of packaging		
(2) Tempering periods		
(3) Increased deterioration		
(4) Effect of combined high humidity and high temperature		
(5) Effect of high temperature on processing solutions		
(6) Increase in contrast		
(7) Drying difficulties in high humidity		
(8) Chemical fog		
32. Type C-1 Photographic Lamp.	1	TO 10-1-27
a. General description		
(1) Lamp assembly		
(a) Stand		
(b) Reflector		
(c) Bracket		
(d) Adapter		
b. Operation		
(1) How to set up		
(2) "Painting with Light"		
c. Inspection and maintenance		

VARTU Photo Flts 1st Year (Cont'd)	Hrs	References
(1) Printer body		
(2) Mirror base plate		
(3) Printer support legs		
(4) Light-tight bag		
(5) Carrying case		
b. Operation		
(1) Preparation for use		
(2) Operating procedure		
c. Inspection and maintenance		
(1) Inspection		
(2) Maintenance		
(3) Lubrication		
34. Type A-10 Contact Printer	1	TO 10-15-23
a. General description		
(1) Box		
(2) Lighting frame		
(3) Plattens		
(4) Spoolbrackets		
(5) Acetate-roll core		
(6) Printing mask		
b. Operation		
(1) Preparation for use		
(a) Installation		
(b) Precautions		
(c) Testing		
(2) Operating procedure		

VARTU Photo Flts 1st Year (Cont'd)	Hrs	References
(a) with roll film		
(b) With cut film		
(c) Dodging		
c. Maintenance and Inspection		
(1) Electrical circuits		
(2) Service inspection		
(3) Maintenance		
(4) Lubrication		
35. Type B-2 Opaque and Lantern Slide Projector.	1	TO 10-20-7
a. Detailed description		
(1) Lens		
(2) Illuminating system		
(3) Carriers		
(4) Cooling		
b. Operation		
(1) Preparation for use		
(2) Operation technique		
c. Service inspection and maintenance		
(1) Service inspection		
(2) Maintenance		
(3) Lubrication		
36. Type C-2 Projector.	1	TO 10-20-13
a. General description		
b. Operation		
c. Inspection, maintenance & lubrication		

VARTU Photo Flts 1st Year (Cont'd)   Hrs   References

d. Disassembly, inspection, repair and reassembly.

37. Type B, 16mm Silent and Sound Projector. 1   TO 10-20-16

a. Detailed description

(1) Housing

(2) Illumination

(3) Optical system

(4) Accessory parts

(5) Amplifier

b. Operation

(1) Adjusting the screen

(2) Threading the film

(3) Pre-check

(4) Projecting

(5) Framing

(6) Sound and tone control

38. Tripod Operation of the C-3 Camera. 1   TM 1-219; TO 10-10BD-4

a. Camera components

(1) The lens

(2) The shutter

(3) Body

(4) Focusing mechanism

(5) Film holders

b. Camera accessories

(1) The tripod

(2) Lens shade

VARTU Photo Flts 1st Year (Cont'd)	Hrs	References
(3) Filters		
39. Identification Photography and Official Portraiture.	1	TM 1-219, par 200-205, Encyclopedia of Photography
a. Identification photography		
(1) Requirements		
(2) Purpose		
(3) Image size		
(4) Lighting		
(5) Film used		
b. Portrait Photography		
(1) Requirement		
(2) Image size		
(3) Posing		
(4) Lighting		
(5) Film used		
40. Using C-3 with Double Extension Bellows	1	TM 1-219, par 125; TO 10-10BD-4
a. Method		
(1) Changing lens standard		
(2) Focusing on ground glass		
(3) Review inverse square law as it applies to exposure		
(4) Depth of field		
41. Hand-held operation of the C-3 Camera.	1	TM 1-219, par 174-187; TO 10-10BD-4
a. Operation		
(1) The hand-held C-3 (use film strip 1-355 for procedure, if available)		
b. Focusing		

VARTU Photo Flts 1st Year (Cont'd)	Hrs	References
(1) Ground glass		
(2) Coupled range finder		
(3) Vernier scale		
(4) Wire frame finder		
42. Filters with the C-3 Camera.	1	TM 1-219, par 138-151; TO 10-10-54
a. Nature of color		
(1) Primary colors		
(2) Secondary or complimentary colors		
b. Composition of filters		
(1) Gelatin and gelatin between glass		
(2) Glass		
(3) Action and purpose of filters		
c. Application of filters		
(1) Colored objects		
(2) Photographic reproduction of color		
(3) Orthocromatic rendition		
(4) Exposure modification		
(5) Special filters		
43. Projection Printing.	1	TM 1-219, par 293-295 TO 10-15-24, 10-15-28
a. Printers		
(1) The component parts of the B-11 printer		
(2) Condensing and diffusing systems		
(3) The easel		
b. Projection paper		

VARTU Photo Flts 1st Year (Cont'd)	hrs	References
(1) Discuss chloride and bromide papers		
(2) AF classification of projection papers		
(3) Type of negative required		
44. Technique.	1	TM 1-219; TO 10-15-24, 10-15-28
a. Exposure and Development		
(1) Manipulation to obtain varying contrasts		
(2) Developing time		
(3) Use of additional potassium bromide		
(4) Advantages of acid short stop bath		
b. Operational procedures		
(1) Masking		
(2) Cropping		
(3) Burning in		
(4) Dodging		
(5) Vignetting		
45. Review.	4	
a. Directed discussion of subjects covered during the year, and/or guest lecturers.		

THREE YEAR VOLUNTEER AIR RESERVE TRAINING OUTLINE FOR PHOTOGRAPHIC FLIGHTS

SECOND YEAR	Hrs	References
1. Copy Cameras.	1	TM 1-219, par 341-357, TO 10-10-14
a. A-2 copy camera		
(1) Component parts		
(2) Manual operation		
(3) Use of proportional scale		
(4) Focusing		
b. P-1 copy kit		
(1) Component parts		
(2) Operation with C-1 and C-3 cameras		
(3) Projection printing with P-1 kit		
2. Copy Work Accessories.	1	TM 1-219; TO 10-1-27, 10-10-14, 10-10-54, 10-15-35, 10-25-48
a. Easels		
(1) A-2 grouped camera easel		
(2) P-1 kit easel		
b. Lights		
(1) Operation of C-1 lamp assembly		
(2) Operation of B-3 lamp assembly		
(3) Effect of lighting angles on copy subject		
c. Filters		
(1) Why used		
(2) Filter set for P-1 copy kit		
(3) Filter set for A-2 copy camera		

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
3. Copy of Black and White and Colored Subjects.	1	TM 1-219; TO 10-1-34, 10-1-68, 10-10-54
a. Type of film required		
(1) For black and white subjects		
(2) For colored subjects		
(3) Uses of Kodalith		
b. Copying technique		
(1) Determining exposure		
(a) Test strip method		
(b) Exposure meters		
(2) Selection of corrective and contrast filters		
(3) Technique for continuous tone subjects		
4. Aerial Mathematics.	1	TM 1-220, par 6-8
a. Scale of aerial photographs		
(1) Computation		
(2) Scale as a representative fraction		
(3) Scale as words and figures		
(4) Graphic scale		
b. Ground coverage		
(1) Coverage per exposure		
(2) Number of exposure per strip		
(3) Problems		
5. Area Coverage.	1	TM 1-220, par 9-13
a. Area coverage		

VARTU Photo Flts 2nd Year (Cont'd) — Hrs — References

(1) Number of exposures required to cover an area

(2) Time interval between exposures

(3) Flight map preparation

(4) Problems for students to solve

6. Elements of Map Reading. — 1 — FM 21-25, 21-26

a. Standard maps

(1) Terrain map

(2) Tactical map

(3) Strategic map

(4) Air navigation map

(5) Geographical map

b. Scales

(1) Methods of representing scales

(2) Determination of scale

(3) Meaning and use of contour lines

c. Map Symbols

(1) Major terrain markings

(2) Man made markings

7. Aerial Photographic Missions. — 1 — TM 1-220

a. Types of aerial photographs

(1) Vertical pin-point

(2) Split verticles

(3) Reconnaissance strip

(4) High and low obliques

(5) Continuous strip

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
b. Aerial Operations by photographer		
(1) Air discipline and procedure		
(2) Tip and tilt		
(3) Crab		
8. K-17 Aerial Camera.	1	TO 10-10AC-41
a. Component parts		
(1) Magazines		
(2) Cones		
(3) Case Drive and control mechanism		
(4) Shutter speeds		
(5) Reduction gears		
(6) Diaphram Controls		
(7) Cycle of operation		
b. Camera Accessories		
(1) Filters		
(2) Lens heater		
(3) Camera heater		
(4) Trunions		
(5) Electrical cables		
9. Type A-9 Film Magazine.	1	TO 10-1-131
a. Component parts		
(1) Capacity		
(2) Temperature ranges of operation		
(3) Mechanical power input		
(4) Vacuum input		
(5) Heater plates and thermostat		

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
(6) Indicators		
(7) Covers		
b. Inspection and repair		
(1) Inspection of		
(a) Moving parts		
(b) Sub-assemblies		
(c) Film bearing surfaces		
(d) Cleanliness		
(2) Repair procedure		
10. Aerial Roll Film Processing Equipment	1	TO 10-25-19, 10-25-31
a. B-5 portable developer		
(1) Component parts		
(2) Operation		
(3) Developing time		
b. A-10 dryer		
(1) Component parts		
(2) Operation		
(3) Precautions		
11. Processing Aerial Roll Film.	1	TO 10-5-7, 10-5-9, 10-5-10
a. Types of packaged chemicals		
(1) Type A developer		
(2) Type B developer		
(3) Type C developer		
(4) Type D developer		
(5) Hardeners		

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
b. Processing		
(1) Different contrasts		
(2) Time and temperature tables		
(3) Preparing stock solutions		
(4) Use of Aerosol OT		
12. Polar and Seawater Processing.	1	TO 10-1-96, 10-5-14
a. Polar processing		
(1) Below 55° F		
(2) Fixing		
(3) Washing		
(4) Freezing		
b. Seawater Processing		
(1) For developing solutions (Type B)		
(2) For washing		
(3) For fixing baths		
(4) Permanence of developed image		
(5) Precautions		
13. Introduction to Sensitometry.	1	TM 1-219, par 152-162
a. Definition of sensitometry		
b. Photographic exposure		
c. Sensitometric exposure		
d. Development		
e. Density determination		
14. Contrast Determination and Measurement	1	TM 1-219, par 163-173
a. Gamma		
b. Development latitude		

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
c. Measurement of sensitivity		
d. Application		
15. Exposure Test Machine.	1	TO 10-1-50
a. General and detailed description		
b. Operation		
c. Inspection and maintenance		
16. K-17, and K-22 Cameras.	1	TO 10-10AC-9, 10-10AC-13
a. Detailed description		
(1) Lens and lens cone		
(2) Case and motor drives		
(3) Film magazines		
(4) Accessories		
b. Installation		
c. Operation		
d. Inspection, maintenance and lubrication		
17. K-18A and K-24 Cameras.	1	TO 10-10AC-33, 10-10AB-1
a. Detailed description		
(1) Lens and lens cone		
(2) Case and motor drives		
(3) Film magazines		
(4) Accessories		
b. Installation		
c. Operation		
d. Inspection, maintenance and lubrication		
18. K-19B Night Camera.	1	TO 10-10AC-24

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
(1) Lens cone and shutter		
(2) Camera case		
(3) Case drive and motor		
(4) Photocell unit		
(5) Photoflash bombs		
(6) Accessories		
b. Installation and operation		
(1) Procedure		
c. Inspection and maintenance		
19. T-5 Mapping Camera	1	TO 10-10AC-20
a. Detailed description		
(1) Lens cone and shutter		
(2) Camera case		
(3) Roll film magazine		
(4) Shutter speed control		
(5) Recording system		
(6) Altimeter chamber		
(7) Accessories		
b. Installation and operation		
c. Inspection and maintenance		
20. Sonne S-7 Camera	1	TO 10-10A-12
a. General description		
b. Installation		
c. Operation		
d. Inspection, maintenance and lubrication		
e. Service troubles and remedies		

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
21. K-20 Hand Held Camera.	1	TO 10-10AC-12
a. General description		
b. Installation		
c. Operation		
d. Inspection, maintenance and lubrication		
e. Service troubles and remedies		
22. Aerial Camera Accessories.	1	TO 10-1-119, 10-1-95, 10-1-36, 10-1-71, 10-10AG-3
a. Intervalometers		
(1) B-3B intervalometer		
(2) B-5 intervalometer		
(3) B-7 intervalometer		
b. Camera mounts		
(1) Type A-8		
(2) Types A-11 and A-11A		
(3) Types A-17 and A-17A		
(4) Types A-27 and A-28A		
23. Principles of Camera Repair.	1	TO 10-10AC-41
a. The case drive		
(1) Timing		
(2) Operation of the case drive		
(3) Lubrication		
b. Cycle of operation		
(1) Step by step description		
24. Mosaic Printing.	1	AF Reg 95-7, TO 10-5-12; TM 1-219
a. Negative lettering		

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VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
(1) AAF Reg 95-7		
b. Photographic paper		
(1) Type I paper		
(2) Type II paper		
(3) Developing of mosaic prints and use of a master print		
25. Mosaic Printing Processing Equipment.	1	TO 10-15-25, 10-15-21, 10-15-23, 10-25-62, 10-1-79
a. Printers		
(1) A-10 printer		
(2) A-11 Printer		
(3) A-14 printer		
b. Finishing		
(1) A-1, A-2 print washers		
(2) B-4 print dyer		
(3) Use of carbitol acetate		
26. Mosaic Assembly.	1	TM 1-219, 1-220, par 47-55; FM 21-25, 21-26
a. Procedures		
(1) Tape		
(2) Staple		
(3) Gum arabic		
(4) Formulas for gum arabic		
b. Mounting		
(1) Feather edging		
(2) Mounting materials		
c. Marginal data	1	
(1) Title box contents		
(2) Preparation		

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
(3) Position of north arrow		
27. Tri-metrogon Photography.	1	TM 5-240; Reconnaissance Mapping by Tri-metrogon Photography - AF Aeronautical Chart Service
a. Characteristics and use		
(1) Uses of tri-metrogon		
(2) Cameras required		
(3) Installation and check		
(4) Operation		
b. Tri-metrogon missions		
(1) Preparation of flight map		
(a) Computations required		
(2) Procedure in air		
28. B-1 Camera.	1	TO 10-10-16
a. Characteristics and use		
b. Description of parts		
c. Cycle of operations		
d. Inspection, care and storage		
29. A-3 Camera.	1	TO 10-10-19
a. Characteristics and use		
b. Description of parts		
c. Cycle of operations		
d. Inspection, care and storage		
30. A-4 Camera.	1	TO 10-10AA-4
a. Characteristics and use		
b. Description of parts		
c. Cycle of operations		
d. Inspection, care and storage		

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VARTU Photo [illegible] 2nd Year (Cont'd)	Hrs	References
31. N-6 and AN-N6 Gun Cameras.	1	TO 10-10CB-8
a. Detailed description		
(1) Camera body		
(2) Complete plain lens assembly		
(3) Erector assembly		
(4) Aligning indicator		
(5) Type A-6 film magazines		
b. Installation		
(1) Mounting the camera		
32. N-6 and AN-N6 Gun Cameras.	1	TO 10-10CB-8
a. Operation		
(1) Principles		
(2) Operating instructions		
b. Service inspection, maintenance and lubrication		
c. Service troubles and remedies		
33. Gun Camera Boresight, Type AN-1.	1	TO 10-10C-2
a. Detailed description		
(1) Case assembly		
(2) Stub assembly		
(3) Elbow assembly		
(4) Auxiliary assembly		
(5) Telescope tube assembly		
b. Installation and operation		
c. Inspection, maintenance and lubrication		

VAFTU Photo Flts 2nd Year (Cont'd)	Hrs	References
34. Gyro Sight Gun Camera Type N-7.	1	TO 10-10CB-13
a. Characteristics and uses		
b. Detailed description		
(1) Camera body		
(2) Overrun control mechanism		
(3) Heater cutout		
(4) Shutter		
(5) Motor		
(6) Aligning indicator		
(7) Magazine		
c. Operation		
d. Service troubles and remedies		
35. Night Photography.	1	TO AN 10-10AC-24, 10-1-139
a. K-19B camera		
(1) Component parts		
(2) Operation		
(3) Photo-electric cell		
b. Auxiliary light sources		
(1) M-46 flash bomb		
(2) D-2 lamp assembly		
(3) D-6 lamp assembly		
36. Introduction to Photo Interpretation.	1	TM 5-246; TF 1-870 (21 minutes), if available
a. Briefly discuss the primary features used in photo interpretation		
(1) Shape		
(2) Relative size		

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
(3) Tone		
(4) Shadow		
(5) Effect of poor photography		
(6) Effect of seasons		
(7) Topographical features		
(8) Relief		
b. Stereovision		
(1) Definition		
(2) Methods of attaining		
(3) Faulty stereo effects		
(4) Stereoscopic aids		
(a) Stereograms		
(b) Stereo-pair		
(c) Stereo-triplet		
37. Introduction to Radar Photography	1	AF Manual 95-101-1; FS 1-2450 (if available) FS 1-2451 (if available)
a. The 0-7 Radar Camera		
(1) Introduction to 0-7 Radar Camera		
(2) Inspection and Maintenance of 0-7 Radar Camera		
38. Introduction to Radar Scope Photo Interpretation.	1	AF Manual 45-101-1; FS 1-2571 (if available)
a Definition of terms		
(1) Scope returns		
(2) Echoes		
(3) Heading line		
(4) Reflections		
b. Characteristics of returns		

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
(1) How obtained		
(2) Water and mountain returns		
(3) Man made object returns		
39. Introduction to Color Photography	1	TM 1-219; History of Color Photography - Friedman
a. Methods		
(1) Type of color photography		
(a) Dufacolor		
(b) Kodachrome		
(c) Ektachrome		
(d) Carbon printing		
(e) Chromatone		
(f) Imbition dye process		
b. Additive and subtractive processes		
(1) Define white light		
(2) Complimentary colors		
(3) Primary colors		
(4) The additive method		
(5) The subtractive method		
(a) Screen plate process		
(b) Lenticular process		
40. Color Processing.	1	TM 1-219; Color Processing - Eastman Kodak Company; History of Color Photography - Friedman
a. Additive type color film		
(1) Exposure		
(2) First development		
(3) Re-exposure		
(4) Bleach bath		

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VARTU Photo Flts 2nd Year (Cont'd) Hrs References

(5) Redevelopment

(6) Fixation

b. Monopack subtractive type color film

(1) The sixteen steps of the Kodachrome process

(a) First development

(b) Shortstop, hardener and wash

(c) Re-exposure to deep red light

(d) Development in a cyan forming color developer

(e) Shortstop, hardener and wash

(f) Re-exposure to a deep green light

(g) Development in a magenta forming color developer

(h) Shortstop, hardener and wash

(i) Re-exposure to white light

(j) Development in a yellow forming color developer

(k) Shortstop, hardener and wash

(l) Bleach bath

(m) Wash

(n) Fix

(o) Final wash

(p) Drying

c. Precautions

(1) Color developer poisoning

(2) Use of asetic acid

VARTU Photo Flts 2nd Year (Cont'd)	Hrs	References
(3) Use of isopropyl alcohol		
(4) Rubber gloves		
41. Aerial Color Work.	1	TO 10-5-13, 10-5-23 and 23B, 10-5-15; History of Color Photography - Friedman
a. Problems of exposure		
b. Aero-color films		
c. Camouflage color film		
(1) The results		
(2) Uses		
d. Aerial color motion pictures		
42. Review.		
a. Student panel		
(1) Assign four photographic problems to class		
(2) Conduct a directed discussion of each problem		
(3) End each hour with a critique by the instructor		

THREE YEAR VOLUNTEER AIR RESERVE TRAINING OUTLINE FOR PHOTOGRAPHIC FLIGHTS

THIRD YEAR	Hrs	References
1. Handheld Operation of C-3 Camera.	1	TM 1-219; TO 10-10BD-4
a. Operation		
(1) Film Strip 1-355 for procedure (if available)		
b. Focusing		
(1) Ground glass, range finder, vernier scale		
(2) Wire frame finder		
c. Flash photography		
(1) Component parts of flashgun		
(2) Use of single flash		
(3) Use of multiple flash		
d. Tripod Operation of C-3		
(1) Component parts		
(2) Camera accessories		
2. Identification and Portraiture.	1	TM 1-219, par 200-205
a. Identification		
(1) Requirements		
(2) Purpose		
(3) Image size		
(4) Film used		
(5) Lighting		
b. Portraiture		
(1) Requirements		
(2) Image		

VARTU Photo Flts 3rd Year (Cont'd)	Hrs	References
(3) Posing		
(4) Painting with light		
(5) Film used		
3. Fundamentals of photographic Chemistry.	1	TM 1-219, par 21-61
a. Chemicals and their action		
(1) Reducers		
(2) Accelerators		
(3) Restrainers		
(4) Keepers		
(5) Preservatives		
4. Standard Formulae.	1	TM 1-219, pages 303-317
a. Developers		
b. Fixing solutions		
c. Rinse and stop baths		
5. Standard Formulae.	1	TM 1-219, pages 303-317
a. Reducing solutions		
b. Intensification		
c. Toning		
d. Chemicals used in photography		
6. Film Processing.	1	TM 1-219, par 235-247; TO 10-5-9
a. Laboratory procedure, cut film and 16mm		
b. Mechanics of film processing; cut film, 16mm film		
(1) Method		
(2) Use of time and temperature tables		

VARTU Photo Flts 3rd Year (Cont'd)	Hrs	References
7. G-3 Film Developer.	1	TO 10-25-25
a. Detailed description of parts		
b. Loading procedure		
c. Operation		
d. Inspection and maintenance		
8. K-3 Film Developing Machine	1	TO 10-25a-1
a. Detailed description of parts		
b. Loading procedure		
c. Operation		
d. Inspection and maintenance		
e. Service troubles and remedies		
9. Finishing Procedures.	1	TM 1-219, par 298-315
a. Describe methods used		
b. Print softeners		
c. Print mounting		
10. Finishing Equipment.	1	TO 10-25-6, 10-25-27, 10-25G-1, 10-25G-2
a. A-1A print washer		
b. B-8, B-10 print dryers		
c. A-2 print straightener		
d. A-1 dry mounting press		
11. Copy Work Equipment.	1	TM 1-219; TO 10-10-14, 10-1-27, 10-15-35, 10-25-48
a. A-2 copy camera		
b. P-1 copy kit		
c. Easels		
d. Lights		
e. Filters		

VARTU Photo Flts 3rd Year (Cont'd)	Hrs	References
12. Copy of black, and white, and colored subjects.	1	TM 1-219; TO 10-1-34, 10-1-68, 10-10-54

a. Film required
  - (1) Black and white line subjects
  - (2) Black and white continuous tone subjects
  - (3) Colored line subjects
  - (4) Colored continuous tone subjects

b. Technique
  - (1) Exposure
    - (a) Test strip method
    - (b) Exposure meter method
  - (2) Filters
    - (a) Explanation
    - (b) Corrective filters
    - (c) Contrast filters
  - (3) Technique for line subjects
    - (a) Black and white
    - (b) Colored
  - (4) Technique for colored subjects
    - (a) Colored line
    - (b) Continuous colored tone

13. Projection printing.	1	TM 1-219, TO 10-15-25, 10-15-28

a. Materials
  - (1) Printers
  - (2) Projection papers

b. Technique

VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
(1) Exposure and development		
(2) Operational procedures		
14. U-1 and U-2 Photographic Darkroom Kit.	1	TO 10-25-66
a. General and detailed description		
b. Preparation for use		
c. Operation		
(1) Principles		
(2) Operating instructions		
d. Inspection and maintenance		
e. Service troubles and remedies		
15. N-9 Photographic Temperature Control Kit.	1	TO 10-25-53, 10-35-3
a. General and detailed description		
b. Preparation for use		
c. Operation		
(1) Principles		
(2) Operating instructions		
d. Inspection and maintenance		
e. Service troubles and remedies		
16. N-2 Photographic Printing Kit.	1	TO 10-1-107
a. General and detailed description		
b. Preparation for use		
c. Operation		
d. Inspection and maintenance		
e. Service troubles and remedies		
17. N-4 Sink Kit and N-7 Print Drying Kit.	1	TO 10-25-61, 10-35-1, 10-35-2

VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
a. General and detailed description		
b. Preparation for use		
c. Operation		
(1) Principles		
(2) Operating instructions		
d. Inspection and maintenance		
e. Service troubles and remedies		
18. C-1, C-2 and G-1 Water Kits.	1	TO 10-1-133, 10-25-46, 10-25-47
a. General and detailed description		
b. Preparation for use		
c. Operation		
(1) Principles		
(2) Operating instructions		
d. Inspection and maintenance		
e. Service troubles and remedies		
19. Miscellaneous equipment; N-6 Print Washing Kit, N-3 Negative Working Kit.	1	TO 10-25-55
a. General and detailed description		
b. Preparation for use		
c. Operation		
(1) Principles		
(2) Operating instructions		
d. Inspection and maintenance		
e. Service troubles and remedies		
f. Review airborne equipment		
20. B-5 and B-6 Film Developing Assemblies.	1	TO 10-25-19, 10-25B-3

VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
a. General and detailed description		
b. Preparation for use and operation		
c. Inspection and maintenance		
21. Types A-5 and A-10 Roll Film Dryers.	1	TO 10-25-30, 10-25-31
a. General and detailed description		
b. Preparation for use and operation		
c. Inspection and maintenance		
22. Chemicals Used in Aerial Negative Processing.	1	TO 10-5-7
a. Type A developer		
b. Type B developer		
c. Type C developer		
d. Type D developer		
e. Hardeners		
23. Procedure for processing aerial Negatives	1	TO 10-5-9, 10-5-10
a. Loading		
b. Obtaining different contrasts		
c. Time and temperature		
d. Preparing stock solutions		
e. Use of aersol OT		
24. Public Information Photography.	1	FM 1-219; ConAC Regulations of 190 series
a. Technique		
(1) Principles of good composition		
(2) Telling the story		
(3) News releases		
(4) Historical data		

VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
b. Co-operation		
(1) With civilian agencies		
(2) With Public Information Officer		
25. Properties and Characteristics of Sensitized Materials.	1	TM 1-219, par 92-102
a. Physical properties		
b. Emulsion and backing		
c. Color sensitivity		
d. Speed and grain		
26. AF Sensitized Materials.	1	TM 1-219, par 103-117
a. Negative materials		
b. Positive materials		
c. Special emulsions		
27. Properties of Light and Lenses.	1	TM 1-219, par 118-124
a. Theory of light		
b. Characteristics of light		
c. Lens and the formation of images		
d. Focal length		
28. Application of Light.	1	TM 1-219, par 125-137
a. Speed of a lens		
b. Circle of Confusion		
c. Depth of field and depth of focus		
d. Angle of field and angle of view		
e. Conjugate distances		
f. Resolving power		
g. Lens abberations		

VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
h. Care of a lens		
29. Filters.	1	TM 1-219, par 138-145
a. Primary colors		
b. Secondary or complementary colors		
c. Composition of filters		
d. Purpose and action		
e. Filter factors		
30. Application of Filters.	1	TM 1-219, par 146-151
a. Colored subjects		
b. Photo reproduction of color		
c. Orthochromatic rendition		
d. Exposure modification		
e. Special filters		
31. Negative Printing.	1	TM 1-219 par 275-292; AFR 95-7, TO 10-15-23, 10-15-25
a. Negative and paper		
(1) Negatives		
(a) Cleaning		
(b) Lettering		
(c) Retouching		
(d) Masking		
(2) Paper		
(a) AF contact papers		
(b) Contrast		
(c) Type IX paper		
b. Procedure		
(1) Contact printers		

VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
(a) Review A-10 and A-14 printers		
(2) Procedure		
(a) Operation of printer		
(b) Development		
32. Type A-14 Printer.	1	TO 10-15-25
a. Detailed description of parts		
b. Operation		
c. Maintenance		
(1) Inspection		
(2) Maintenance		
(3) Service troubles and remedies		
33. Lantern Slides and Film Slides.	1	TM 1-219, par 358-375
a. Glass plates		
(1) Negative required		
(2) Printing		
(3) Processing		
(4) Finishing		
b. Film slides		
(1) Micro copies		
(2) Printing		
(3) Developing and finishing		
(4) Masking		
(5) Color transparancies		
34. Developer Formulas.	1	TM 1-219, pages 303-319
a. Specification developer		

VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
b. Pyro-developer		
c. Metol-hydroquinone-borax developer		
d. Metol-hydroquinone developer		
e. Process work - high contrast developers		
f. Fine grain developers		
g. Speed processing		
h. Paper developers		
35. Miscellaneous Formulas and Chemicals Used in Photography.	1	TM 1-219, par 303-319
a. Fixing solutions		
b. Rinse and stop baths		
c. Reducing solutions		
d. Intensifiers		
e. Toning solutions		
f. Tray cleaner		
g. Review list of chemicals used in Photography		
36. Color Photography - Methods of Reproduction.	1	TM 1-219, "Natural Color Photography" by Flesch, "Complete Photographer" by Morgan
a. Additive method		
b. Subtractive method		
c. The Kodachrome process		
d. Color Printing		
37. Illumination.	1	TM 1-219, "Complete Photographer" by Morgan
a. Flash		
(1) Indoors		
(2) Outdoors		

VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
b. Artificial light		
c. Color Temperature of lamps		
d. Daylight illumination factors		
38. Exposure and development.	1	TM 1-219, "Natural Color Photography" by Flesch
a. Separation negatives		
(1) Lenses		
(2) Filters		
b. Development		
(1) Chemical used		
(2) Procedure		
(3) Poison precautions		
c. Application of color photography		
(1) Ground photography		
(2) Aerial photography		
39. Motion Picture Photography.	1	TO 10-10-16, 10-10-19, 10-10AA-4
a. Types, characteristics and use		
(1) B-1 camera		
(2) A-3 camera		
(3) A-4 camera		
b. Cycle of operations and maintenance		
(1) B-1 camera		
(2) A-3 camera		
(3) A-4 camera		
40. Projectors.	1	TO 10-20-25, 10-20-17, 10-20-7, 10-20-13, 10-20-29
a. Types, characteristics and use		
(1) B-2 projector		

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VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
(2) C-2 projector		
(3) 16mm motion picture projector		
b. Cycle of operations and maintenance		
(1) B-2 projector		
(2) C-2 Projector		
(3) 16mm motion picture projector		
41. Technical publications and Supply Procedure.	1	TO 00-1-1, 00-5-1 and supplements
a. AF Technical publications		
(1) Purpose, scope and use		
(2) System of indexing TO's		
(3) Practical use of TO's		
b. Supply procedure		
(1) Purpose, scope and use		
(2) AF Forms		
(a) Form 446		
(b) Form 447		
(c) Misc supply forms		
42. Polar, Tropical and Seawater Processing.	1	TO 10-1-96, 10-5-7, 10-5-1, 10-5-14, "Notes on Tropical Photography" - Eastman Kodak Co.
a. Polar		
(1) Method		
(2) Chemicals used		
(3) Difficulties and their remedy		
b Tropical effects		
(1) Method		
(2) Chemicals used		

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VARTU Photo Flts, 3rd Year (Cont'd)	Hrs	References
(3) Difficulties and their remedy		
c. Seawater		
(1) Method		
(2) Developers suitable for		
(3) Permanence		
43. Gun Cameras - N6 and AN-N6.	1	TO 10-10C-7, 10-10CB-8
a. Detailed description		
b. Mounting the cameras		
c. Principles of operation		
d. Operating instructions		
e. Inspection and maintenance		
f. Service troubles and remedies		
g. N-6 and AN-N6 film magazines		
44. Gun Camera Boresight Type AN-1.	1	TO 10-10A-11
a. Detailed description		
b. Installation		
c. Inspection and maintenance		
45. Guided discussion of the year's work and/ or guest lecturers.	5	

REFERENCES AVAILABLE IN MOST PUBLIC LIBRARIES

A Guide to Better Photography***Berenice Abbot
New Ways in Photography (Ideas for the Amateur)***Jacob Deschin
Aerial Photographs***A. J. Eardley
Copying Technique***Frank B. Fraprie and Robert H. Morris
Complete Introduction to Photography***J. Gable
Handbook of Photography***Kieth Henney
The Photographers rule book***Larry June
Kodak reference handbook, materials, processes, techniques
The Photographic Process***Julian Ellis and Miles J. Martin
The U. S. Camera (Duell, Sloan, and Pearce by***Tom J. Maloney
This is Photography***Tom H. Miller
Grafic Graflex Photography***Lester Morgan
Applied Aerial Photography***Ashley C. McKinley
Careers in Photography***C. B. Neblette
Photography, its principles and practice***C. B. Neblette
Photography; its science and practice***Roebuck, & Stallo
Elementary Photography***Quarles, Gilford G.
Beginners book of Photography***Dobbs, Wallace E.
Chemistry for Photographers***Allen R. Greenleaf
Natural Color Process***Carlton E. Dunn
Color Photography for the Amateur***Kieth Henney
Movie-making for the beginner***Herbert C. Mckay
Color movies for the beginners***Harris B. Tuttle
Applied Photogrammerty***A. O. Anderson
The U. S. at War***Tom Maloney
Photogrammerty***Oakley Sharp
Kodachrome and Kodacolor from all angles***Fred Bond
Natural Color Process***Carlton E. Dunn
How to expose Ansco Color Film***Cars Moon
Fundamentals of Photography with experiments***Boucher, & Paul Edward
This is photography***Thomas H. Miller
1001 ways to improve your photographs***Willard D. Morgan
Flash in modern Photography***William Mortensen
Photography***Kenneth C. E. Mees
Multiple lens, Aerial Cameras in mapping***Fairchild Aerial Camera Corp.
Practical & theoretical photography***Julian M. Blair
Darkroom Handbook***Katherine Chamberlain
Photographic facts & formulas***John E. Wall
Developing***C. I. Jacobson
Enlarging***C. I. Jacobson

BIBLIOGRAPHY OF VISUAL TRAINING AIDS FOR VOL. AIR RES. TNG. UNITS

PHOTOGRAPHIC FLIGHTS

The visual training aids listed below have been selected for their applicability to this training outline. All of the training aids listed are rental free; however, it will be necessary to pay the "Railway Express Collect" fees and to return each training aid by insured mail. Where funds are available for the small costs involved it is suggested that this material be used.

INTRODUCTION TO PICTURE MAKING.

TYPE: Illustrated Lecture with 35mm slides. TIME: 15 minutes.
SOURCE: Eastman Kodak Co., Camera Club and School Service, Rochester 4, N.Y.
CHARGE: Free (Return Postage).
CONTENT: Introduction to the over-all story of general steps in making a photograph. Beginning with the placement of the subject in relation to light, a short summary covers the picture taking possibilities and briefly describes darkroom procedures.

NIGHT PHOTOGRAPHY.

TYPE: Illustrated Lecture with 47 Slides. TIME: 35 minutes.
SOURCE: Eastman Kodak Co., Camera Club & School Service, Rochester, N.Y.
CHARGE: Free (Return Postage).
CONTENT: Discussion of outdoor photography at night and indoor photography with Photo Flash and Photo Flood lighting. Examples with exposure times are given on photographs of Street Scenes, Fireworks, lighting at night as well as picture possibilities indoors with various lighting set-ups. Elementary synchronized flash photography is briefly described.

MAKING PICTURES PEOPLE LIKE.

TYPE: Illustrated Lecture with 56 Slides. TIME: 15 minutes.
SOURCE: Eastman Kodak Co., Camera Club & School Service, Rochester 4, N.Y.
CHARGE: Free (Return Postage).
CONTENT: Discussion of characteristics of various classes of Photography such as children, outdoor scenes, sports, story telling, people, tabletops, and still life in terms of what it takes to make them interesting. It shows how to make a snapshot or record picture into a photograph with appeal. In addition, a complete illustration list with exposure, filter information and other picture-taking data is given.

TNG AIDS - PHOTO FLTS (Cont'd)

THE MASTER SERIES.

TYPE: Illustrated Lecture with 10 Photographic Enlargements. TIME: 30 minutes.
SOURCE: Eastman Co., Camera Club & School Service, Rochester 4, N.Y.
CHARGE: Free (Return Postage)
COMMENT: Leading pictorialists are represented in this lecture and each one tells his or her story of how the photographs were made. These pictorialists discuss their prints in their own words, give photographic data as well as their ideas of composition and print finishing.

PHOTOGRAPHY (EF 266).

TYPE: 16mm Motion Picture. TIME: 10 minutes.
SOURCE: Department of the Army, (Signal Corps).
CHARGE: Free
COMMENT: The film covers the many and varied phases of photography, its use in industry, science, publications, and advertising. The work of a portrait and commercial photographer is outlined as well as lighting, developing, retouching and printing. News photography and motion picture photography are introduced and discussed.

FLASH PHOTOGRAPHY

TYPE: 16mm Motion Picture. TIME: 25 minutes.
SOURCE: Assistant Chief of Staff, Intelligence, Motion Picture Service Div.
CHARGE: Free.
COMMENT: The film discusses the different types of Flash lamps used for between the lens and focal plane shutters. The operation of sunchronization is discussed as well as the importance of reflectors for effective lighting. In addition the film covers special flash lamps for speed, color, daylight, and infra-red photography. Maintenance of equipment and tests for proper synchronization are discussed at the end of the film.

SYNCHRO-SUNLIGHT PHOTOGRAPHY (4th Photo Strip No. 1).
TYPE: 35mm Film Strip.
SOURCE: 4th Photo Lab Training Section, Langley Air Force Base, Virginia.
CHARGE: Free

COMMENT: The film shows the principle of Synchro-Sunlight work and gives samples of the types of photographs where it should be applied. It gives the relation between Flash Guide numbers, Film Speed, and exposure data to be used with or without an electric exposure meter.

PHOTOGRAPHY IN CRIMINAL INVESTIGATION.

TYPE: Illustrated lecture with 34 slides. TIME: 30 minutes.
SOURCE: Eastman Kodak Co.
CHARGE: Free (Return Postage).
COMMENT: Application and use of photography in criminal investigation are described. Many actual experiences are included in the text and technical details of making photography in criminal investigation are given.

THE SPEED GRAPHIC (SH-3671).

TYPE: 35mm Film Strip
SOURCE: U.S. Navy, Director of Training, Training Aids Section, Norfolk, Va.
CHARGE: Free.
COMMENT: Shows the basic components of the Speed Graphic C-3, C-4, and illustrates the preparatory procedure prior to taking pictures. Tells how to focus, set the shutter, load camera, line up shot, and make exposure etc...

PROPERTIES OF PHOTOGRAPHIC LENSES (FS 1-47)

TYPE: 35mm Slide Film.
SOURCE: Requisition on Form 104B to training aids division (AF).
CHARGE: Free.
CONTENT: The film covers basic optics in relation to function of lenses, introduction to pinhole camera, focal length of lenses and size of image. It stresses the necessity of focussing a lens and the inversion of the image.

LIGHT WAVES AND THEIR USES:(MC-1574)
TYPE: 16mm Motion Picture. TIME: 11 minutes.
SOURCE: U.S. Navy, Director of training, Training Aids Section, Norfolk, Va.
CHARGE: Free.
CONTENT: The film demonstrates some principles of reflection, refraction, shows how lenses are used to control light, touches briefly on polarization and the wave lengths of light in the spectrum.

TERMS USED IN PHOTOGRAPHIC OPTICS: (FS 1-239)

TYPE: 35mm Slide Film.
SOURCE: Requisition on Form 104B to Training Aids Division (AF).
CHARGE: Free.
CONTENT: The film explains the meaning of common optical terms used in photography. In addition, focal plane shutters, focal length, angle of field, angle of view are discussed as well as depth of field, lens speed and characteristics of lenses such as wide angle and telephoto lens.

RECONNAISSANCE MAPPING WITH TRI-METROGON PHOTOGRAPHY

TYPE: 16mm Motion Picture. TIME: 2 1/2 hours.
SOURCE: Director, Geological Survey, Department of the Interior, Washington, D.C.
CHARGE: Free (Return Postage).
CONTENT: This film is made by the Pan American Institute of Cartography and History with the cooperation of the U. S. Geological Survey and the U.S. Air Force. It gives a detailed instruction how a Mapping Section works from the time the Aerial negative is developed until the final map is printed by Photomechanical process.

TOPOGRAPHICAL MAPPING BY PHOTOGRAMMETRIC METHODS

TYPE: 16mm Color Motion Picture. TIME: 90 minutes.
SOURCE: Same as above.
CHARGE: Free (Return Postage).
CONTENT: This film, made by the Pan American Institute of Cartography and History and the U.S. Geological Survey, gives detailed instructions how to do Topographic Mapping with the application of Photogrammetry. It shows the sections at work and gives step by step instructions of how to do it.

A-2 PORTABLE PHOTOGRAPHIC LABORATORY (TF-1-847).

TYPE: 16mm Motion Picture. TIME 29 minutes.
SOURCE: Assistant Chief of Staff, Intelligence, Motion Picture Service Div.
CHARGE: Free.
CONTENT: The film explains the operation of an A-2 Portable Laboratory. It shows inspection prior to starting on a mission, selecting the site, setting up the lab and developing a reconnaissance strip. Speed and teamwork is emphasized.

PHOTOGRAPHIC INTERPRETATION TECHNIQUE: (TF-1-870)

TYPE: 16mm Motion Picture. TIME: 21 minutes.
SOURCE: Assistant Chief of Staff, Intelligence, Motion Picture Service Div.
CHARGE: Free.
CONTENT: The film shows the importance of Aerial Photography in modern warfare. It shows the methods of photo interpretation, the instruments needed, the methods of determining scales. the importance of shadow identification, the way to distinguish various features of terrain. A photo-intelligence officer interprets a complete mosaic for a parachute battalion.

FILTERS FOR PICTURE IMPROVEMENT

TYPE: Illustrated lecture with 56 slides. TIME: 30 minutes.
SOURCE: Eastman Kodak Company.
CHARGE: Free.
CONTENT: Introduction to the use of filters in Photography. The lecture is based upon the effects obtained with the K-2, G, and A Filters and Pola-screen. Sky Control and haze penetration are discussed for black and white and Color Photography.

FILTERS AND THEIR USES IN PHOTOGRAPHY.

TYPE: Illustrated lecture with 25 slides. TIME: 30 minutes.
SOURCE: Ansco, Camera Department, Binghamton, N.Y.
CHARGE: Free (Return Postage).
CONTENT: A discussion of elementary optics and the physics of light, color, and color sensitivity of films. Types of filters and their uses, i.e., compensation, or correction type filter and contrast or effect type filters are shown in relation to photographic optics.

JOURNALISM

TYPE: 16mm Motion Picture. TIME: 10 minutes.
SOURCE: Department of the Army, (Signal Corps)
COMMENT: The film describes and displays the work of a newspaper reporter in various specialized capacities. The story describes the work of great press associations as well as the various types of journalism required for special features such as magazine writing, articles of local or national interest, and trade journals.

THE CARE AND CLEANING OF PHOTOGRAPHIC LENSES (FS 1-48)

TYPE: 35mm Slide Film.
SOURCE: Requisition on Form 104B to Training Aids Division (AF).
CHARGE: Free.
COMMENT: Film emphasizes care of lenses to insure proper functioning, and eliminate photographic defects (See 4th Photo Training Bulletin No. 5). Precautions to be observed in the use of lenses are given as well as the methods of cleaning lenses.

THE A B C's OF HAND TOOLS

TYPE: 16mm Color Motion Picture. TIME: 33 minutes.
SOURCE: General Motors Corp., Film Section, Detroit 2, Mich.
CHARGE: Free (Postage).
COMMENT: An animated motion picture by Walt Disney shows how tools are used to get best results. It shows the proper ways to handle wrenches, screw drivers, saws, hammers, chisels and other modern hand tools. The film is education and instruction smoothly compounded to make the process of learning practical and entertaining.

THE PAPER NEGATIVE PROCESS

TYPE: Illustrated lecture with 10 slides and 10 exhibits. TIME: 45 minutes.
SOURCE: Eastman Kodak Company.
CHARGE: Free (Return Postage).
CONTENT: This lecture tells how to make the positive and negative and how to retouch them to eliminate details and emphasize others in making pictorial photographs. The story is effectively presented by means of actual samples of positive, negative, and final prints.

GRAININESS AND HOW TO CONTROL IT

TYPE: Illustrated lecture with 30 slides. TIME: 40 minutes.
SOURCE: Ansco Camera Club Department, Binghamton, N.Y.
CHARGE: Free (Return Postage).
CONTENT: A question and answer lecture on the problems of Graininess. In succession the statements are concerned with: The inherent characteristics of film, the influence of processing upon grain, and a detailed discussion of the characteristics of different developers.

TONE AND TONING CHARACTERISTICS OF ANSCO PAPER.

TYPE: Illustrated lecture with 12 charts. TIME: 40 minutes.
SOURCE: Ansco Camera Club Department, Binghamton, N.Y.
CHARGE: Free (Return Postage).
CONTENT: Lecture divides toning process into four groups and disdusses each in turn. These are: toning by direct development, toning by means of converting the silver image into colored metallic salt, dye toning by mordanting and dye-coupling.

TIPS ON KODACHROME AND KODACOLOR

TYPE: Illustrated lecture with 42 slides and 12 inch record. TIME: 15 minutes.
SOURCE: Eastman Kodak Company.
CHARGE: Free (Return Postage)
CONTENT: The lecture gives practical information on picture taking with Kodachrome and Kodacolor film. It stresses points of technique in making color photographs such as light quality, lighting, contrast, exposure and composition.

HISTORY AND PRINCIPLES OF COLOR PHOTOGRAPHY

TYPE: Illustrated lecture with 29 slides. TIME: 40 minutes.
SOURCE: Eastman Kodak Company.
CHARGE: Free (Return Postage).
CONTENT: The lecture discusses the present day color processes and shows the development and principles upon which all color processes are based. It gives an analysis of the color theory by discussing the properties of light and their relation to color.

ANSCO COLOR FILM AND HOW TO USE IT.

TYPE: Illustrated lecture with 50 slides. TIME: 50 minutes.
SOURCE: Ansco, Camera Club, and School Service, Binghamton, N. Y.
CHARGE: Free (Return Postage).
CONTENT: This lecture shows the proper exposure and use of Ansco Color Film. It covers such topics as film types, subject matter, lighting, color balance and filters. The lecture is not too technical for trained photographers.

SUBTRACTIVE COLOR PHOTOGRAPHY.

TYPE: Illustrated lecture with 25 slides. TIME: 60 minutes.
SOURCE: Ansco, Camera Club and School Service, Binghamton, N.Y.
CHARGE: Free, (Return Postage)
CONTENT: The lecture is a serious technical discussion of the principles of the subtractive color process. It covers the history high-lights of color photography, the early and modern color processes, and a detailed analysis of the workings of the subtractive color process.

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1 Jan 1950

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Volunteer, Air Reserve,
Training Outline
Armament Flights
1 Jan 50

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VOLUNTEER AIR RESERVE

TRAINING OUTLINE

ARMAMENT

UNCLASS

2-3416-6

— PREPARED BY —
DIRECTORATE OF OPERATIONS & TRAINING
HEADQUARTERS CONTINENTAL AIR COMMAND
MITCHEL AIR FORCE BASE, NEW YORK

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VOLUNTEER AIR RESERVE TRAINING OUTLINE FOR ARMAMENT FLIGHTS

Headquarters, Continental Air Command
Mitchel Air Force Base, New York
1 January 1950

Subject course is published for the information and guidance of all concerned.

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

Neal J O'Brien
NEAL J. O'BRIEN
Colonel, USAF
Air Adjutant General

Prepared by
Operations and Training Directorate
Headquarters, Continental Air Command
Mitchel Air Force Base, New York

2-3416-6

VOLUNTEER AIR RESERVE TRAINING OUTLINE
FOR ARMAMENT FLIGHTS

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Notes to Instructors

1. This training outline is offered as a guide to personnel responsible for the preparation of training schedules for armament flights within the Volunteer Air Reserve Training Unit program and provides a ready list of references covering the armament field. In many instances this source material may be augmented. For example, the Air Force Extension Course Catalog offers courses obtainable from the Unit Guidance Branch, Benjamin Harrison AF Base, Indiana, which are valuable aids to both units and interested qualified individuals. The completion of such courses allow for the accumulation of points creditable under the VARTU program.

2. The term armament now embrases the functions previously regarded as those of Air Force Armament, Air Chemical and Air Ordnance (less automotive) and includes atomic and radiological weapons, biological weapons, bombs: guns, ammunition, guided missiles, rockets: chemical warfare: protective armor, sighting, launching and control systems together with components, accessories, fixtures, handling, training, analyzing, and test equipment, targets, and the like, necessary to accomplish the Air Force Mission.

3. With this coverage the family of military occupational specialties to be included must be correspondingly broad. Officer and enlisted specialties, any or all of which may be included in armament training flights, have been listed in this guide. It will be noted that due to armament technical development and action to stabilize the armament career field, both officer and enlisted specialties are being converted to reflect modernization efforts. Such conversions as have been published are also listed.

4. This outline includes sufficient material to provide armament flights with four (4) hours' training per month for a period of three (3) years and is

arranged in a normal development sequence with basic material listed early in the outline and specialized material offered in later periods. However, there is no objection to any rearrangement or substitution of material to meet the requirements of a specific armament flight provided that training schedules are approved by the appropriate numbered air force prior to implementation as required by paragraph 7c of AF Regulation 45-23. It is realized that considerably more than one hundred forty-four (144) hours would be required to thoroughly cover the material offered, therefore, the hour figure listed at each subject is only a suggested time derived from an attempt to balance the outline and gives weight to each subject in accordance with its scope and/or significance.

5. A number of methods may be applied by the instructor for the purpose of achieving effective learning. A brief summary of these includes the lecture method, the discussion or seminar method, and the panel method. Everyone is familiar with the lecture method. It should be used sparingly, since it achieves the poorest results. The discussion or seminar method encompasses the active participation of the entire group under the leadership of one or more members. It is an excellent method of instruction when all members of the group are well prepared. The panel method, whereby under proper guidance two or more members present the material to be covered, also offers a most productive method for learning. To apply the panel method to the outline inclosed, the instructor would assign individual hours to two or more members of the flight. The net result of this type of assignment would be an equitable distribution of the subjects to be covered among all the members of the flight without imposing an undue burden on any one or more individuals. Each panel would take for its guide the brief outline for the hour assigned and expand it for presentation in accordance with its experience and the reference materials

available. This method has the additional advantages of promoting an improving type of competitive spirit and a feeling of unity among the members as they work on the individual panels for their presentations.

6. Regardless of the method used, sufficient time must be allowed for the preparation of each period of instruction. In this connection, the instructor, or the seminar or panel leader, must have a lesson plan for a specific period of instruction. A good plan will include the following main steps:

a. Objective of instruction.

b. Teaching devices to be used.

c. The procedure or points to be covered, in their proper sequence.

d. A check-up and review to emphasize important points covered and to stimulate thinking.

e. Questions: these questions should be prepared in advance for the purpose of offering them to the group should the group not have any questions to ask during this portion of the period.

f. Comments and remarks which by their constructive nature could be utilized for future periods to improve the technique used.

7. In general, effective planning is the basis of good teaching; therefore, it is suggested that for each specific subject definite objectives be established and all material be carefully planned.

ARMAMENT CAREER FIELD

Commissioned Personnel

	Old MOS
Bombardier Radar	1030
Bombardier	1035
Bombardier Navigator	1036
Bombardier, Navigator, Radar	1037
Flexible Gunnery Officer	2554
Gunnery & Bombing Range Officer	2556
Ordnance Officer, Staff	4512
Ammunition Supply Officer	4514
Ordnance Supply Officer	4530
Aviation Ordnance Officer	4532
Fire-Control Instrument Repair Officer	4806
Armory Maintenance & Repair Officer	4807
Artillery Maintenance & Repair Officer	4808
Airplane Armament Officer	4822
Aircraft Torpedo Maintenance Officer	4824
Bombsight Maintenance Officer	4825
Aerial Mine Officer	4826
Chemical Officer	7314

Reference AF Letter 35-701

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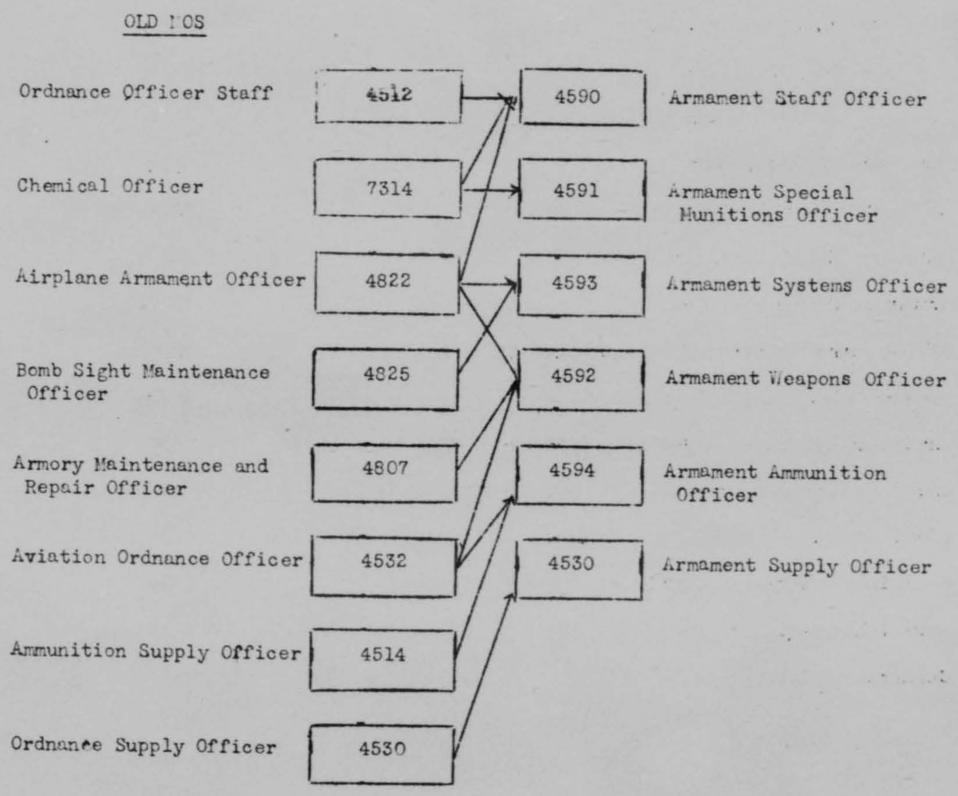
ARMAMENT OFFICERS CAREER FIELD


OLD MOS
Ordnance Officer Staff
4512
Chemical Officer
7314
Airplane Armament Officer
4822
Bomb Sight Maintenance Officer
4825
Armory Maintenance and Repair Officer
4807
Aviation Ordnance Officer
4532
Ammunition Supply Officer
4514
Ordnance Supply Officer
4530
4590
Armament Staff Officer
4591
Armament Special Munitions Officer
4593
Armament Systems Officer
4592
Armament Weapons Officer
4594
Armament Ammunition Officer
4530
Armament Supply Officer

Reference AF Letter 35-701

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ARMAMENT CAREER FIELD

AIR FORCE SPECIALTY MOS LISTING

Enlisted
Current MOS

Aircraft Armament Career Warrant	4822
Bombsight Maintenance Career Warrant	4825
Ammunition Supply Technician	505
Demolition Technician	533
Bombsight and Auto Pilot Repairman	574
Remote Control Turret Repairman	575
Remote Control Turret Mechanic-Gunner	580
Airplane Armorer-Gunner	612
Power Turret and Gunsight Mechanic	681
Bombsight Mechanic	683
Toxic Gas Handler	786
Decontaminating Equipment Operator	809
Ordnance Supply Technician	815
Radar Mechanic, Night Fighter	850
Radar Mechanic, Navigation	853
Radar Mechanic, IFF	862
Radar Mechanic, Bombardment	867
Chemical Technician	870
Munitions Worker	901
Weapons Repairman, Small Arms	903
Airplane Armorer	911
Radar Repairman, Airborne Equipment (DS)	955
Remote Control Turret Mechanic	960
Control Bomb Systems Repairman	1574

New AFS

Armament Systems Superintendent	32000
Bomb-Navigation Systems Supervisor	32110
Bomb-Navigation Systems Technician	32111
Senior Bomb-Navigation Systems Mechanic	32130
Gun-Bomb-Rocket Systems Supervisor	32210
Senior Gun-Bomb-Rocket Systems Mechanic	32230
Turret Systems Supervisor	32310
Turret Systems Technician	32311
Senior Turret Systems Mechanic	32330
Senior Turret Systems Mechanic Gunner	32331
Armament Systems Helper	32070

Reference AF Letter 35-432

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Aircraft and Armament, Types	5		
Aircraft Cannons		9	
Aircraft Machine Guns	7		
Aircraft Rockets and Launchers		2	
Ammunition General	6		
Armament Shop Practices			3
Ballistics	9		
Biological Warfare			13
Blister Gases	12		
Blood and Nerve Poison	14		
Bomb Sights		1	
Bombing Equipment		3	
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Tactical Employment of Incendiary and Fire Bombs			12
Tactical Employment of Non-Persistant Gas Bombs			10

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Tactical Employment of Smoke Bombs and Tanks			9
Tear and Vomiting Gases	15		
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Types of A-Bomb Explosions	21		
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VOLUNTEER AIR RESERVE TRAINING OUTLINE FOR ARMAMENT FLIGHTS

FIRST YEAR	Hrs	References
1. Introduction and Organization.	2	ConAC Ltr 45-13; V.A.R.T. Tng Units; ConAC Reg 5-7 (par 6) AFR's 45-3, 45-23.
a. Volunteer Air Reserve Training Program		
(1) Purpose		
(2) Scope		
(3) Responsibilities		
(4) Requirements		
(5) Flights		
b. National Military Establishment		
c. United States Air Force		AF Reg 20-1, Orgn. USAF; AF Reg 23-1, Orgn ConAC; AF Reg 20-15, Orgn. of AF Combat Wings
2. Mission.	2	
a. Overall Mission of USAF		
b. Missions and Functions of:		
(1) Strategic Air Command		AF Reg 20-20, S.A.C.
(2) Continental Air Command, including Tactical Air Command and Air Defense Command		AF Reg 23-1, ConAC; ConAC Reg 26-1, TAC; ConAC Reg 25-1, ADC
(3) Air Materiel Command, noting its supervision over United States Air Force Institute of Technology		AF Reg 20-43, AMC; AF Reg 20-36, US Inst of Technology
(4) Air Proving Ground Command		AF Reg 20-12, Air Training Command
(5) Military Air Transport Service		
(6) Air University		AF Reg 23-3, The Air University
3. The Field of Air Force Armament	1	

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VART Armt Flts, 1st Yr (Cont'd)

FIRST YEAR	Hrs	References
a. Define according to present USAF concept		AF Reg 136-4, History and Definition of Armament
b. Discuss scope of what were formerly known as		
(1) Air Chemical		
(2) Air Ordnance		
(3) Air Corps Armament		
c. Armament career field		AF Ltr 35-432, Armament Career Plan
4. USAF Publication System.	1	
a. Use of Indexes		Technical Order Index 00-1-1 to 00-1-16; List and Index of DA publications, FM 21-6; List of War Dept Films, FM 21-7; Military Trng Aids, FM 21-8; Trng Standards; AF Manuals; ConAC & AF Ltrs and Regs
b. Administrative and technical publications		
c. Responsibilities for publications		
d. Sources of supply		
5. Aircraft and Armament, Types	2	ConAC Reg 24-1, "Mission of Specific Units"; ConAC Reg 24-2, "Mission of USAF Reserve Units."
a. Conventional and jet type aircraft		
(1) Penetration fighters		
(2) Interceptors, F80, F84, F86		
(3) Reconnaissance (R prefix)		
(4) Fighter bomber		
(5) Light bombardment		
(6) Medium bombardment		
(7) Heavy bombardment		
b. Types of Armament designed for aircraft (machine guns, cannons, rockets & sights)		TM 9-1900, "Ammunition, General"; "Elementary Optics, "TM 9-2601; TO 11-30 series (Bombsights); 11-35 Series (Gunsights); 11-70B Series (Computing Sights); TM 9-

VART Armt ~~Flts, 1st Yr~~ (Cont'd)

FIRST YEAR	Hrs	References
		219, "Basic Aircraft Machine Guns, Cal 50, M3"; 9-220, "Repositioning Machines M15 For Cal .50 Cartridges"; 9-225, "Browning M/G, Cal .50 AN-M2 A/C Basic"; 9-226 "Browning M/G, Cal . 50 M2, Watercooled and Mounts"; SNL A-38, "Gun, Machine, Cal .50, Browning, AN-M2 A/C Basic"; TM 9-227, "20mm Auto Gun M1, and 20mm A/C Auto Gun AN-M2"; 9-240, "37mm Automatic Guns. AN-M4 and M10 (A/C)"; 9-311 "75mm Gun M4 & Airplane Mounts M6"; 9-312, "75mm Gun AN M5 & A/C Mount AN-M9"; 9-1227, "20mm Auto Gun M1 & 20mm A/C Auto Gun, AN-M2 9-1240, "37mm Auto Guns, M4, M10, & M9 (A/C);9-1311, "75mm Gun M4 and Airplane Mount M6";
c. Types of Munitions for Aircraft (1) Machine gun ammunition & aircraft cannon (2) Chemical Ammunition (3) Rockets and Bombs		TM 1-273, Fixed Aerial & Ground Gunnery; TM 1-270, Aerial Gunnery Practice & Record Firing; 9-1312 "75mm Gun M5 and Airplane Mount M9"; TO 11-75A Series, "Rockets & Rocket Launchers"; Ord Pamphlet 1239,5 HVAR Ord Pamphlet 1187 2.25" SCAR; TM 9-1950 A/C Rockets
6, Ammunition, General a. History and Development of Military Explosives (1) Historical Sketch (a) Pelouze in 1838 (b) Shobein in 1845 (c) Sir Frederick Abel (d) Schultze and the E. C. Powders (e) 1886, Vieille (f) Present day explosives	5	"Ammunition General," TM 9-1900 "Explosive & Demolitions," FM 5-25; "Military Explosives, "TM 9-2900; "Small Arms Ammunition TM 9-1990; "Bombs for Aircraft," TM 9-1980; "M74 Incendiary Bomb," TB 9-1980-53

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VART Armt Flts, 1st Yr (Cont'd)	Hrs	References
b. High and Low Explosives		
(1) Low Explosives		
(a) Definition		
(b) Classification		
(c) Action		
(d) Use		
(e) Composition		
(2) High Explosives		
(a) Definition		
(b) Classification		
(c) Action		
(d) Use		
(e) Composition		
c. Small Arms and Aircraft Cannon Ammunition		
(1) Small Arms Ammunition, General		
(a) Identification		
(b) Care Handling and Preservation		
(c) Surveillance		
(d) Cartridge Terminology		
(e) Classification		
d. Bombs and Fuzes for Aircraft		
(1) Bombs		
(a) Demolition		
(b) Fragmentation		
(c) Armor Piercing		

VART Armt Flts, 1st Yr (Cont'd)	Hrs	References
(d) Chemical		
(e) Incendiary		
(f) Practice		
(2) Fuzes		
(a) Nose		
(b) Tail		
(c) Hydrostatic		
(d) Mechanical Time		
7. Aircraft Machine Guns	6¼	Basic A/C M.G. Cal .50 M3, TM 9-219; Basic Maint. Manual, TM 37-250; Gun & Cannons, TO 11-10-2; Cleaning, Preserving, Sealing, Lubrication and Related Materials Issued for Ord. Material TM 9-850; Instruction Guide, Small Arms Accident Malfunctions and Their Causes, TM 9-2210
a. General Description of Cal. 50 M3 MG		
(1) Weight of Gun		
(2) Overall Length		
(3) Operation		
(4) Rate of Fire		
(5) Cooling		
b. Field Stripping		
c. Detailed stripping		
d. Nomenclature		
e. Operation		
(1) Recoil		
(2) Counter Recoil		
f. Trouble Shooting		
(1) 1st, 2nd and 3rd position Stoppages		
(2) Care, cleaning and Storage		
8. Small Arms	5	TM 9-1295 "Cal .45 Auto Pistol M1911 & M1911A1"; GTA 11843"

VART Armt Flts, 1st Yr (Cont'd) — Hrs — References

a. Pistol Cal.45 — "Cal .45 M1911A1 GTA 9-14" Nomenclature"; TM 9-1276, "Cal .30 Carbines M1, M1A1, M2 & M3; FM 23-7 "US Carbine Cal .30 M1, M1A1, M1A3 and M2"

  (1) Field Stripping and Nomenclature

    (a) Slide Group

    (b) Receiver Group

    (c) Magazine Group

  (2) Operation

  (3) Care and Cleaning

b. Carbine Cal .30

  (1) Field Stripping and Nomenclature

    (a) Trigger Housing Group

    (b) Operating Slide Assembly

    (c) Bolt Group

    (d) Front and Rear Sight Assembly

    (e) Barrel and Receiver Group

    (f) Magazine Assembly

  (2) Operation

  (3) Care and Cleaning

    (a) Shipping and Storage

    (b) Cleaning Procedure

    (c) Preservative Lubricating Oil

    (d) Rifle Bore Cleaner

    (e) Dry Cleaning Solvent

    (f) Rust Preventative Compound

9. Ballistics — 3 — TM 9-1907 "Performance of Ammunition"

a. Interior and Exterior Ballistics

  (1) Interior

VART Armt Flts, 1st Yr (Cont'd)   Hrs   References

      (a) Forces within the Weapon

   (2) Exterior

      (a) Forces after Projectile has left the Weapon

      (b) Terminal Ballistics

b. Forces Affecting Projectiles

   (1) Gravity

   (2) Wind

   (3) Air Resistance

c. Ballistic Data of Small Arms Munitions used by the Air Force

   (1) Terminal Velocities

   (2) Weight and Shape

   (3) Material Used in Projectiles

   (4) Type and Weight of Explosive Charge
   (5) Fuzing System

d. Bomb Ballistics

   (1) Range Versus Attitude of Release

   (2) Differential Effects on Range

   (3) Striking Velocity and Angle of Fall

   (4) Trail

10. Aerial Gun Sights   1½   TO 11-35 Series "Aerial Gun Sights"; TO 11-70B Series "Computing Sights"; TO-11-1-24 "Harmonization of A/C Fixed Guns & Sights"

   a. Types

      (1) Computing

      (2) Compensating

      (3) Ring and Post

   b. Harmonization

      (1) Theory

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VART Armt Flts, 1st Yr (Cont'd)	Hrs	References
(2) Application to Aircraft		
11. Introduction and History of Chemical Warfare	1	"Chemicals in War" by Prentiss, Published by McGraw-Hill Co, Inc N. Y. "Gas Warfare" by Waitt, Published by Duell, Sloan and Pierce, N.Y. "The War Gases" by Sartori, Published by Van Norstrand Co, N.Y. FM 21-40
a. Orgin and Use of Chemical Warfare Agents by the Ancients		
(1) Incendiaries		
(a) Recorded Instances of Use		
(2) Screening Smokes		
(a) Recorded Instances of Use		
b. Medieval and Prior to World War I		
(1) Incendiaries		
(2) Toxic Gases		
(3) Screening Smokes		
c. Modern		
(1) World War II		
(a) First Gas Attack		
(b) Developments		
(c) Total Casualties		
d. Chemical Warfare in International Conferences		
(1) First Hague Conference		
(2) Second Hague Conference		
(3) Washington Naval Limitation Conference		
(4) Geneva Conference		
(5) World War II		
(a) Incendiaries		
(b) Smokes		

VART Armt Flts, 1st Yr (Cont'd) Hrs References

        (c) Toxic Gases

        (d) Developments

    e. Chemical Agents to be Considered

      (1) War Gases

        (a) Casualty Producing Gases

          1. Blister Gases

          2. Choking Gases

          3. Blood and Nerve Poisons

        (b) Harassing Gases

          1. Tear Gases

          2. Vomiting Gases

      (2) Screening Smokes

      (3) Incendiaries

    f. Definitions

      (1) Chemical Agent

      (2) War Gas

      (3) Screening Smoke

      (4) Casualty Agent

      (5) Harassing Agent

    g. Methods of Classification of Chemical Agents

      (1) Tactical

      (2) Physiological

      (3) Persistency

      (4) Physical State

    h. Requisites of a Chemical Agent

VART Armt Flts, 1st Yr (Cont'd)	Hrs	References
(1) Absolute Requirements		
(2) Additional Desirable Properties		
i. Marking of Chemical Munitions		
(1) Symbols		
(2) Words		
(3) Bands		
(4) Color of Markings		
(a) Green		
(b) Red		
(c) Yellow		
(d) Purple		
12. Blister Gases	1	"The War Gases" by Sartori, Published by D. Van Nostrand Co, N.Y. "Chemicals in War by Prentiss, Published by McGraw-Hill Book Co, Inc., N.Y. "Gas Warfare" by Waitt, Published by Duell-Sloan and Peare, N.Y. FM 3-5, 3-6, 21-40 TM 3-215, 8-285 WD Cir 74, 19 Mar 48 and 79, 20 Mar 46
a. Gases to be Considered		
(1) Mustard (H)		
(2) Purified Mustard (HD)		
(3) Nitrogen Mustard (HN)		
(4) Lewisite (L)		
(5) Mustard-Lewisite Mixture (HL)		
b. General Characteristics of Blister Gases		
(1) Physical State		
(2) Color		
(3) Physiological Action		
(4) Persistency		
(5) Tactical Use		
(6) Penetrating Power		
(7) Methods of Dispersal		

(8) Insidious in Character

c. Physiological Action on Skin and Eyes (Liquid)

(1) Mustard (H)

(a) Action on Skin

(b) Action on Eyes

(2) Purified Mustard (HD)

(a) Action on Skin

(b) Action on Eyes

(3) Nitrogen Mustard (HN)

(a) Action on Skin

(b) Action on Eyes

(4) Lewisite (L)

(a) Action on Skin

(b) Action on Eyes

(5) Mustard-Lewisite Mixture (HL)

(a) Action on Skin

(b) Action on Eyes

d. Action of Vesicant Gas Vapors on Eyes, Nasal and Bronchial System

(1) Mustard (H)

(a) Action on Eyes

(b) Action on Nasal Passage

(c) Action on Bronchial System

(2) Vapors of Other Vesicant Gases Generally Produce the Same Effects as Mustard (H)

e. Systemic Effects

VART Armt Flts, 1st Yr (Cont'd)	Hrs	References
(1) Nausea		
(2) Inflamation of Stomach		
(3) Vomiting		
f. First Aid for Blister Gases		
(1) Materials Used in First Aid		
(a) Soap and Water		
(b) Protective Ointment		
(c) Bleach Paste		
(d) BAL Ointment		
(e) Saline Solution		
(f) Gas Casualty First Aid Kit		
13. Choking Gases	1	Same as Above
a. Gases to be Considered		
(1) Chlorine (CL)		
(2) Phosgene (CG)		
(3) Chlorpicrin (PS)		
b. General Characteristics of Choking Gases		
(1) Usually Nonpersistent		
(2) Casualty Agents		
(3) Surpise Attacks		
c. Chlorine		
(1) Color		
(2) Odor		
(3) Nonpersistent		
(4) Vapor Density		
(5) Methods of Dispersal		

(a) 4.2 Chemical Mortar

(b) Artillery

d. Phosgene

(1) Color

(2) Odor

(3) Persistency

(4) Vapor Density

(5) Methods of Dispersal

(a) 4.2 Chemical Mortar

(b) Artillery

(c) Aerial Bombs

1. Choice of Targets

2. Surprise Effect

3. Higher Concentration

e. Chlorpicrin (PS)

(1) Color

(2) Odor

(3) Persistency

(4) Vapor Density

f. Physiological Action of Choking Gases

(1) Chlorine (CL)

(a) Nasal Tract

(b) Lungs

(2) Phosgene

(a) General

1. Reacts with Moisture in Lungs

VART Armt Flt~~s, 1st Yr~~ (Cont'd) Hrs References

2. Fluid from Blood is Absorbed

3. Oxygen in Blood Stopped

4. Shock

(b) Initial Symptoms

1. Coughing

2. Choking

3. Vomiting

4. Spasmodic Breathing

(c) Later Stages

1. Blue Stage

2. Gray Stage

(3) Chlorpicrin

(a) Effect on Nose, Throat and Lungs

(b) Nausea and Vomiting

g. First Aid for Choking Gases

(1) Shock

(2) Quiet and Warm

(3) Use of Liquids

(4) Artificial Respiration

14. Blood and Nerve Poisons 1 Same as above

a. Gases to be considered

(1) Hydrogen Cyanide (AC)

(2) Cyanogen Chloride (CK)

(3) G-Series (GA, GB and GD)

VART Armt Flts, 1st Yr (Cont'd)	Hrs	References

b. General Characteristics of Blood and Nerve Poisons

   (1) Nonpersistent to Persistent

   (2) Casualty Producing

   (3) Surprise Attack

   (4) Physiological Reaction

c. Hydrogen Cyanide (AC)

   (1) Color

   (2) Odor

   (3) Persistency

   (4) Hydrolysis

   (5) Vapor Density

d. Cyanogen Chloride (CK)

   (1) Color

   (2) Odor

   (3) Persistency

   (4) Vapor Density

e. G-Series (GA, GB and GD)

   (1) Color

   (2) Odor

   (3) Persistency

   (4) Vapor Density

f. Physiological Action of Blood and Nerve Poisons

   (1) Hydrogen Cyanide (AC)

      (a) General

         1. Reaction in Lungs

VARF Armt Flts, 1st Yr (Cont'd)	Hrs	References

- 2. Reaction in Blood Stream
- 3. Reaction in Heart
- 4. Reaction in Nerve Centers

(b) Symptons

- 1. Increase Rate of Breathing
- 2. Convulsions
- 3. Breathing Stops
- 4. Heart Failure

(2) Cyanogen Chloride (CK)

(a) General

- 1. Breathing Rate
- 2. Light Concentrations
- 3. Initial Exposure
- 4. If Death does Not Occur

(3) G-Series (GA, GB and GD)

(a) General

- 1. Effect on Eyes
- 2. Effect on Chest
- 3. Skin Penetration
- 4. Nausea
- 5. Diarrhea
- 6. Death

g. First Aid for Blood and Nerve Poisons

(1) Hydrogen Cyanide (AC) and Cyanogen Chloride (CK)

(a) Liquid on Skin

(b) Victim Still Breathing

(c) Gas Casualty Kit

(d) Mild Cases

(e) Severe Cases

(2) G-Series (GA, GB and GD)

(a) Liquid Contamination

(b) Eyes

(c) Artificial Respiration

(d) Hospitalize

15. Tear and Vomiting Gases 1 Same as Above

a. Gases to be Considered

(1) Chloracetophenone (CN)

(2) Chloracetophenone Solution (CNS)

(3) Chloracetophenone Solution (CNB)

(4) Adamsite (DM)

(5) Dyphenylchlorasine (DA)

b. General Characteristics

(1) Tear Gases

(a) Chloracetophenone (CN)

1. No Permanent Injury

2. Harassing Agent

3. Effects of Weather

4. Insoluble in Water

5. Stable

6. Heat Effect

VART Armt Flts, 1st Yr (Cont'd) Hrs References

- 7. Odor
- 8. Methods of Dispersal

(b) Chloracetophenone Solution (CNS)

- 1. Composition
- 2. Persistency
- 3. Odor
- 4. Color
- 5. Methods of Dispersal

(2) Vomiting Gases

(a) Adamsite (DM)

- 1. Persistency
- 2. Color
- 3. Odor
- 4. Harassing Concentration
- 5. Methods of dispersion

(b) Diphenylchloraisine (DA)

- 1. Persistency
- 2. Color
- 3. Odor
- 4. Harassing
- 5. Methods of Dispersal

(c) Physiological Action of Tear and Vomiting Gases

- 1. Tear Gases
  - a. Effects eyes only
  - b. Non-casualty producers

- 2. Vomiting Gases
  - a. Nausea
  - b. Vomiting
  - c. No after Effects
  - d. First Aid for Tear and Vomiting Gases

(d) First Aid for Tear and Vomiting Gases

- 1. Tear Gases
  - a. Eyes
  - b. Skin
- 2. Vomiting Gases
  - a. Ariation of Clothing
  - b. Skin
  - c. Nose and Throat
  - d. Extreme Cases
  - e. Gas Casualty Kit

16. Screening Smokes 1 Same as Above

a. Smokes to be Considered

(1) White Phosphorous (WP)

(2) Sulphurtrioxide (FS)

(3) Titanium Tetrachloride (FM)

(4) Hexachlorethane Zinc Mixture (HC)

b. General

(1) Definition of Screening Smoke

(2) Purpose of Screening Smoke

(3) Nature of Smoke, Properties and Behavior

VART Armt Flts, 1st Yr (Cont'd) Hrs References

(4) Characteristic Properties of Smoke Materials

(5) Total Obscuring Power (TOP)

c. Characteristics

(1) White Phosphorous (WP)

- (a) Solid
- (b) Reaction with Oxygen
- (c) Uses
- (d) TOP

(2) Sulphurtrioxide (FS)

- (a) Composition
- (b) Color
- (c) Odor
- (d) Uses
- (e) Methods of Dispersal
- (f) TOP
- (g) Caution in Handling

(3) Titanium Tetrachloride (FM)

- (a) Composition
- (b) Color
- (c) Odor
- (d) Uses
- (e) Methods of Dispersal
- (f) TOP
- (g) Caution in Handling

(4) Hexachlorethane Zinc Mixture (HC)

VART Armt Flts, 1st Yr (Cont'd)	Hrs	References
(a) Composition		
(b) Color		
(c) Uses		
(d) Methods of Dispersal		
(e) TOP		
d. First Aid for Screening Smokes		
(1) White Phosphorous (WP)		
(a) Smoke-harmless		
(b) Burns		
1. Copper Sulfate		
2. Water		
3. Wiping Skin Surface		
(2) Liquid Smokes (FS & FM)		
(a) Nose and Throat		
(b) Liquid on Skin		
(3) Solid Smoke (HC)		
(a) Prolonged Exposure		
17. Incendiaries	1	Same as Above
a. Types to be Considered		
(1) Spontaneous Inflammables		
(2) Oxidzing and Combustable Materials		
(3) Flammable Materials		
b. General		
(1) Spontaneous Inflammable Materials		
(a) White Phosphorous		
1. Uses		
2. Effectiveness		
3. Psychological effect		

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(b) Sodium (NA)
  1. Use
  2. Water targets
(c) Liquid Mixtures
  1. Mixtures
  2. Desirable Qualities
  3. Advantages over solids

c. Oxidizing and Combustable Materials

(1) Thermite
  (a) Composition
  (b) Burning Temperature
  (c) Uses
  (d) Advantages and Disadvantages
  (e) Methods of Dispersal

(2) Thermate (TH-8)
  (a) Composition
  (b) Burning Temperature
  (c) Uses
  (d) Advantages and Disadvantages
  (e) Methods of Dispersal

(3) Therm 64C
  (a) Composition
  (b) Burning Temperature
  (c) Uses
  (d) Methods of Dispersal

(4) Incendiary Bullets
  (a) Composition
  (b) Uses

d. Flammable Materials

- (1) General
  - (a) Not Spontaneously Inflammable
  - (b) Incendiary Materials Without Addition of Oxidizing Agent
  - (c) Scatter Type
  - (d) Requirements
- (2) Solid Oil (PTI)
  - (a) Composition
  - (b) Uses
  - (c) Advantages and Disadvantages
  - (d) Methods of Dispersal
- (3) Napalm Type (NP)
  - (a) NP Thickener
  - (b) Uses
  - (c) Ratio of Mixture for Different Uses
  - (d) Advantages and Disadvantages
  - (e) Methods of Dispersal

e. First Aid for Incendiaries

- (1) White Phosphorous (WP)
  - (a) Water
  - (b) Copper Sulfate
  - (c) Gas Casualty Kit
- (2) Other Incendiaries
  - (a) Broken Skin
  - (b) Burns

(c) Shock

(d) Evacuate

18. Detection and Identification of War Gases 1 FM 21-40, TM 3-290 TM 3-305

a. Methods and Equipment to be Considered

(1) Sense of Smell

(2) Instructional Gas Identification Set M-1

(3) Detonation Gas Identification Set, M-1 (For Field Use)

(4) Liquid Vesicant Detector Paint, M-5

(5) Liquid Vesicant Detector Paper, M-6

(6) Liquid Vesicant Detector Grayon, M-7

(7) Liquid Vesicant Detector Crayon, M-8

(8) Chemical Agent Detector Kit, M-9

b. General Information

(1) Sense of Smell in Indentification of War Gases

(a) "Masked" odor of Gases

(b) Impurities in Mustard Gas

(c) Dulled by long Exposure

(d) Conditions Under Which Blister Gases Have No Appreciable Odor

(2) Instructional Gas Identification Set M-1

(a) Contents

(b) Use

(3) Detonation Gas Identification Set, M-1

(a) Contents

VART Armt Flts, 1st Yr (Cont'd)	Hrs	References

(b) Use

(c) Diagram of Field Set-up

(d) Instruction to Personnel as to how to Enter the Instructional Area

(e) Identification Cards

(4) Liquid Vesicant Detector Paint, M-5

(a) Development

(b) Color and Reaction of Vesicant Gas Droplets

(c) Advantages

(d) Limitations

(e) Durability

(5) Liquid Vesicant Detector Paint, M-6

(a) Description

(b) Application and Use

(c) Limitations

(6) Vesicant Detector Crayon, M-7

(a) Description

(b) Use

1. Contaminated Areas

2. Contaminated Water

3. Leaking Shells and Containers

(7) Vesicant Detector Crayon, M-8

(a) Description

(b) Use

1. Contaminated Areas

VART Armt Plts, ~~1st Yr~~ (Cont'd) Hrs References

2. Contaminated Water

3. Leaking Shells and Containers

4. In Conjuction with Vesicant Detector Crayon, M-7

(6) Chemical Agent Detector Kit

(a) Description

(b) Contents

(c) Pump Operation

(d) Principles of Operation

(e) To Test for H and HN

(f) To Test for Arsenicals (FD & MD)

(g) To Test for Phosgene (CG)

(h) To Test for Cyanogen Chloride (CK)

(i) To Test for G-Series (GA, CG and GD)

(j) To Test for Hydroloized Products of G-Series

(k) Replenishing Reagent in Bottles

(l) Uses

1. Vapors

2. Contaminated Areas

3. Contaminated Water

4. Leaky Shells and Containers

5. Difference Between H and HN

19. Defense Against Chemical Agents 2 "Gas Warfare" by Waitt,

2412

(b) Use

(c) Diagram of Field Set-up

(d) Instruction to Personnel as to how to Enter the Instructional Area

(e) Identification Cards

(4) Liquid Vesicant Detector Paint, M-5

(a) Development

(b) Color and Reaction of Vesicant Gas Droplets

(c) Advantages

(d) Limitations

(e) Durability

(5) Liquid Vesicant Detector Paint, M-6

(a) Description

(b) Application and Use

(c) Limitations

(6) Vesicant Detector Crayon, M-7

(a) Description

(b) Use

1. Contaminated Areas

2. Contaminated Water

3. Leaking Shells and Containers

(7) Vesicant Detector Crayon, M-8

(a) Description

(b) Use

1. Contaminated Areas

VART Armt Flts, 1st Yr (Cont'd) Hrs References

2. Contaminated Water

3. Leaking Shells and Containers

4. In Conjuction with Vesicant Detector Crayon, M-7

(6) Chemical Agent Detector Kit

(a) Description

(b) Contents

(c) Pump Operation

(d) Principles of Operation

(e) To Test for H and HN

(f) To Test for Arsenicals (FD & MD)

(g) To Test for Phosgene (CG)

(h) To Test for Cyanogen Chloride (CK)

(i) To Test for G-Series (GA, CG and GD)

(j) To Test for Hydroloized Products of G-Series

(k) Replenishing Reagent in Bottles

(l) Uses

1. Vapors

2. Contaminated Areas

3. Contaminated Water

4. Leaky Shells and Containers

5. Difference Between H and HN

19. Defense Against Chemical Agents 2 "Gas Warfare" by Waitt,

VART Armt Flts, 1st Yr (Cont'd) Hrs References

b. Personnel for Operation

c. Construction (Permanent)

d. Field Expedient

(1) Layout

(2) Use of PDDA

(3) Use of M1 Water Heater

e. First Aid Stations

f. Procedure

4. Tactical Protection

a. Chemical Reconnaissance

(1) Distant

(2) Close

b. Chemical Intelligence

(1) General Sources

(2) Special Sources

c. Chemical Warfare Intelligence Factors

d. Intelligence Reports

e. Counter Intelligence

f. Information Channels

g. Plans to Meet Chemical Attack

h. Troop Movements

i. Occupying Contaminated Areas

(2) Chemical Defense Plan

(a) Purpose

(b) General

(c) Administration and Personnel

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VART Armt Flts, 1st Yr (Cont'd) Hrs References

1. Responsibility
    a. Base Responsibility
    b. Unit Responsibility
    c. Individual Responsibility
    d. Qualified UGO's and UGNCO's
    e. Responsibility of Medical Officer
    f. Responsibility of Transportation Officer
    g. Responsibility of Damage Control Office
    h. Reconnaissance Squads
    i. Gas Sentries
    j. Decontamination Crews
2. Personnel Decontamination Station
    a. Warning System
        (1) General
        (2) Local
    b. Intelligence
        (1) Specific Items
        (2) Area Affected
        (3) Reports
    c. Procedure Before, During and After a Cml Attack
        (1) Protective Clothing - when issued and worn
        (2) Individual Equipment
        (3) Shoes Impregnited
        (4) Detector Boards
        (5) Decontamination Apparatus
        (6) Action Taken on General Alert

- (a) Gas Sentries
- (b) Gas Proof Shelters
- (c) Food Supply
- (d) Sleeping Personnel

(7) Action Taken on Local Alarm

- (a) Personnel Take Over
- (b) Individual Contamination and First Aid
- (c) Serious Cases of Wounded and Contaminated

(8) Action Taken on All Clear

- (a) Areas Checked
- (b) Reconnaissance
- (c) Contaminated Areas Marked
- (d) Notify CO
- (e) Decontamination Personnel Report to Proper Stations
- (f) Priority of Decontamination
- (g) Duties of Transportation Officer
- (h) Normal Duties
- (i) Alternate Locations to Move

(c) Organization

1. Organization of Facilities and Equipment
    a. Central Control Office
        (1) Chemical Officer
        (2) Damage Control Officer
        (3) CO
    b. Signal Communication

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VART Armt Flts, 1st Yr (Cont'd)	Hrs	References
(1) Warn Aircraft		
c. Alternate Location		
d. Personnel Decontamination Stations		
e. First Aid Stations - Supplies		
(d) Unit Gas Officers and Unit Gas NCO's		
1. Unit Gas Officers		
a. Responsibility		
b. Duties		
(e) Gas Sentinels		
1. Responsibility		
2. Duties		
20. Radiological Defense, History and Development of the A Bomb	2	Rad Def Manual Vol 1 AFRTC Manual 52-335-1 ConAC Manual 52-1 "Atomic Energy for Military Purposes" by Smyth, Published by Stratford Press, Inc., N.Y. "No Place to Hide" by Bradley, Published by Little & Brown & Co, Boston, Mass.
a. Discovery of the Atom		
b. Atom Composition		
c. Splitting the Atom		
d. Breaking Down the Nucleus		
e. Power from Splitting the Atom		
f. Binding Energy and Fission		
g. Starting and Maintaining a Chain Reaction		
h. Producing Materials for the A-Bomb		
i. Designing the A-Bomb		
21. Types of A-Bomb Explosions	1	Same as Above
a. Number of Bombs Dropped to Date		
b. Air Burst		
c. Surface Burst		

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VART Armt Flts. 1st Yr (Cont'd)	Hrs	References
d. Subsurface Burst		
e. Nuclear Radiations		
f. Hiroshima and Nagasaki Bursts		
g. Bikini Tests		
22. Explosion Phenomena	2	Rad Def Manual Vol 1 AFRTC Manual 52-335-1 ConAC Manual 52-1" Medical Aspects of Nuclear Energy" (AFSWP, 1949) Cml School Memo 202, 22 Nov 48; Cml School Memo 379, 1 Mar 49
a. Comparison of HE and Atomic Explosions		
b. Air Burst		
(1) Heat Effects		
(2) Radiation Effects		
(3) Blast Effects		
c. Underwater Burst		
(1) Heat Effect		
(2) Radiation Effect		
(3) Blast Effect		
d. Effects on Hiroshima		
e. Effects on Nagisaki		
f. Fallout of Radiological Particles		
(1) Effects of Wind and Altitude		
(2) Wind Displacement Plot		
(3) Radex Plot		
(a) Method of Plotting		
(4) Ground Fallout Plot		
(a) Method of Plotting		
(b) Data and Material Required		
g. Contamination		
h. Material Destruction		

VART Armt Flts, 1st Yr (Cont'd)	Hrs	References
i. Personnel Destruction		
23. Review	4	
a. Directed Discussions of subjects covered during year, and/or guest lecturers		

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VOLUNTEER AIR RESERVE TRAINING OUTLINE FOR ARMAMENT FLIGHTS

SECOND YEAR	Hrs	References
1. Bomb Sights.	3½	TO's 11-5A & 11-30 Series "Bombsights"; AFM 340-10 "High Level Prec. Bombing"; AMC Man. 340-15, "Precision Bombing Practice."

a. Theory of Bombing
- (1) Forces affecting the Bomb
- (2) Terminology
  - (a) True air speed (T.A.S.)
  - (b) Actual Time of fall (A.T.F.)
  - (c) Air Resistance
  - (d) Trail

b. Stabilization.
- (1) Auto Pilot
  - (a) Operation and Flight instructions
- (2) Gyro theory
  - (a) Gyroscopic inertia
  - (b) Gyroscopic precession
  - (c) Hand rule for determining Direction for gyro precession

c. Description and operation of the Norden bomb sight.
- (1) Description
  - (a) Stabilizer Unit
  - (b) Bombsight Unit
  - (c) Reflex Sight
- (2) Operation
  - (a) Glossary of terms

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VARTU ARMT FLTS 2ND YEAR (Cont'd)

	Hrs	References
(b) Bombing problem		
(c) Solution of Bombing Problem by M 9 Bomb Sight		
(d) Gyroscopic theory		
(e) Reflex Optics		
2. Aircraft Rockets and Launchers.	3	TM 9-1950 "Rockets"; TM 9-1900 "Ammunition, General"; TO 11-75A Series, "Rocket Launchers"
a. History and development of Rockets		
(1) Definition of Rocket Principals		
(2) Introduction to Rockets in Warfare		
b. Present Standard Types		
(1) 5"0 HVAR		
(2) 5"0 AR		
(3) 3"5 AR		
(4) 2"25 S.C.A.R.		
c. Launching Devices		
(1) A.R. Launcher Mark 4 Mod 0		
(2) Special Zero Length Launchers		
(3) Gruman Type Zero Length Launchers		
(4) Universal Zero Length Launchers Mark 5		
d. Handling and Inspection Procedure		
(1) Preparation for Loading the Ammunition		

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VARTU ARMT FLTS 2ND YEAR (Cont'd)

	Hrs	References
(2) Safety Officer and Crew		
(3) Equipment Utilized		
e. Maintenance and Storage		
3. Bombing Equipment	2½	Bomb Racks, Tow Target Equip, and Flare Racks, TM 1-500; Bombing Equip & Accessories, TO 11-5, C, D, & E series
a. Racks and Shackles		
(1) Bomber & Fighter		
(a) S1, S2, S3, S4, elect Racks		
(b) B7, B11, D4, D6, D7, Shackles		
(c) U1 Bomb Racks		
(d) R1, R2, R3 Frag Racks		
b. Hoist		
(1) Types		
(a) C3, Manual		
(b) C6, Electrical		
(c) AN-MK7, Manual		
c. Controls		
(1) Releases		
(a) A2 Elect		
(b) A4 Elect		
(2) Intervalometer		
(a) B2A		
(b) ANB3		
d. Handling Procedures		

VARTU ARMT FLTS 2ND YEAR (Cont'd)

	Hrs	References
(1) Precautions to be observed		
(2) Transportation & Storage of Fuges		
4. Ranges	3½	Fixed Aerial & Ground Gunnery, TM 1-273; Aerial Gunnery Practice & Record Firing, TM 1-270; Safety Distances & Altitudes for Use of Live Ord & Amm., ConAC Reg 55-1; Precision Bombing Practice, AMC Manual 340-15; Range Procedures Practice Fire & Record Fire for Fighter Gunnery, Rocketry & Bombing, AAF Man 335-30; High Level Precision Bombing, AF Manual 340-10
a. Size		
(1) Bombing		
(2) Gunnery		
b. Targets		
(1) Bombing		
(2) Gunnery		
(3) Rocketry		
c. Scoring and qualification		
(1) Bombing		
(a) High Level		
(b) Dive		
(c) Skip		
(2) Gunnery		
(a) Air to Ground		
(b) Air to Air		
(3) Rocketry		
d. Policing of Ranges		
5. Supply Procedures	4	USAF Supply Manual 67-1; TM 38-410 "AAF Bases Supply Procedure."
a. Requisitions		
(1) Procedure		
(2) Use of Form No. 104B		

VARTU ARMT FLTS 2ND YEAR (Cont'd) Hrs References

(3) Use of Form No. 104C

(4) Replenishment Requisitions

(5) Special Requisitions

b. Memorandum Receipt Account

(1) Memorandum Receipt Transactions

(2) Jacket Files

(3) Consolidated Memo Receipt

(4) Issue Slips

(5) Turn-in Slips

c. Local Purchase

(1) Authorization (condition)

(2) Use of DA-AGO Form 14-115

(3) Invoices

d. Salvage

(1) Responsibilities

(2) Receipt & Handling

(3) Disposition

(4) Contracts

6. Ordnance Publications 3

a. Standard Nomenclature List

(1) Groups A & B

(a) Weapons

(b) Mounts

(2) Group S

(a) Bombs

(3) Group T

VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
(a) Small Arms Ammunition		
(4) Group K		
(a) Cleaning Equipment		
(b) Lubricants		
b. Ordnance Field Service Bulletins		
(1) Supply Bulletin 9-9, current O.F.S.B.		
c. FM 9-5 Ordnance Field Manual		
d. Ordnance Field Service Circular		
e. Ordnance Safety Manual		
7. Tow Target Equipment	2	TM 1-500 "Bomb Racks, Tow Target Equip and Flare Racks"; TO 11-40 Series "Tow Target Equipment"; WDTF 1-238 "Tow Targets -- Launching."
a. Reels		
(1) C4A and C5 Windlasses		
(a) Motor		
(b) Clutch		
(c) Level wind assembly		
(d) Brake		
(e) Drum		
b. Release Methods		
(1) Launching Release Assembly		
(2) Procedure in Case of failure		
c. Handling Procedures		
(1) Equipment to be carried		
(a) Spare Targets		
(b) Release Assemblies		
(c) Safety Wire & Pliers		
(d) Cable Cutters		

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VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
8. Demolition.	2	AGT 5-5 "Explosives & Demolition"; AGT 5-14 "Demolition Card, Use & Effectiveness of Various Types of Explosives; TM 9-2900 "Military Explosives"; WDTF 5-598 "Explosive & Demolition Cutting by Explosives."
a. Bulk Explosives and their Characteristics		
(1) Military Explosives		
(2) Bulk Explosives		
(3) Velocity of Detonation		
(4) Intensity of Poisonous Fumes		
(5) Effectiveness		
(6) Smallest Cap Required for Detonation		
b. Fuses		
(1) Time Fuze		
(2) Delay Fuze		
(3) Mine & Booby Trap Fuzes		
(4) Fuze Lighters		
c. Procedures		
(1) Preparation of Charges		
(2) Handling Misfires		
(3) Placement of Charges		
d. Safety Precautions		
(1) Designated Responsibility for preparation, placement, and firing of charges		
(2) Proper Storage		
(3) Safety distances to be observed		
9. Aircraft Cannon	5½	TM 9-1227 "20mm A/C Auto Gun An-M2 (Maint); 9-227 "20mm Auto Gun M1 and 20mm A/C Auto Gun AN-M2"; WDTF 9-1120
a. Description and capabilities of 20mm cannon		

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VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
(1) Blow back and gas operation (2) Method of feeding (3) Rate of fire (4) General Data		"The 20mm Auto Gun M2 (operation)"; WDTF 9-2038 "The 20mm Auto Gun M2 (Malfunctions)"; SNL K-1 "Cleaning, Preserving & Lubricating Materials"; SNL A-47 "Gun Auto, 20mm, M1 and AN-M2."

b. Disassembly and nomenclature

  (1) Muzzle brake assembly

  (2) Tube assembly

  (3) Ejector assembly

  (4) Breechlock Pen

  (5) Sear Cover Insert

c. Operation

  (1) Recoil & Counter recoil

    (a) Positions of groups

    (b) Timing

d. Magazines and feeding

  (1) description of Drums

  (2) Procedure for loading

  (3) Feeding by belted Ammunition

e. Malfunctions and care, cleaning & storage

  (1) Malfunctions

    (a) Misfire

    (b) Failure to feed

    (c) Failure to extract

    (d) Failure to eject

    (e) Run-away Gun

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VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
(2) Cleaning		
(a) Use of proper solvents & lubricants		
(b) Care preparatory to firing		
(c) Care after firing		
(3) Storage		
(a) Preparation for storage		
10. The Gas Mask	1	"Gas Warfare" by Waitt, Published by Duell, Sloan and Pearce, N.Y.
a. History and Development		
b. Nomenclature and Functioning		
c. Capabilities		
d. Limitations		
e. Adjustment		
f. Care and Storage		
11. Protective Clothing and Equipment	1	FM 21-40 TM 3-290
a. Special Protective Clothing		
(1) Description		
(2) Issue		
(3) Storage and Maintenance		
b. Permeable Protective Clothing		
(1) Description		
(2) Use		
(3) Items of Issue		
(4) Fitting		
(5) Shoe Impregnite		

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VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
(6) Issue for Women		
(7) Inspection		
c. Impermeable Protective Clothing		
(1) Description		
(2) Use		
(3) Items of Issue		
(4) Fitting		
(5) Inspection		
12. Miscellaneous Protective Equipment	1	
a. Field Impregnating Set		
b. Kit for Testing Impregnite in Clothing		
c. Individual Protective Covers		
d. Gas-Resistant Apron		
e. Gas-Resistant Sack		
f. Eyeshields		
g. Protective Ointments		
h. BAl Eye Ointment		
i. Shoe Impregnite, M-1		
j. Gas Casualty First Aid Kit		
13. Decontaminating Methods, Equipment & Material	2	FM 21-40, TM 3-220, 3-221, 3-223, 3-228
a. Methods		
(1) Decontamination Techniques		
(2) Types of Decontamination		
(3) Metals and Glass		
(4) Building Materials		

(5) Fabrics

(6) Leather and Rubber

(7) Plastics

(8) Painted and Varnished Surfaces

(9) Terrain

b. Equipment and Materiel

(1) Bleach

(2) DANC

(3) Earth

(4) Soap and Water

(5) Solvents

(6) Three (3) gallon Decontaminating Apparatus, M-1

(a) Description

(b) Use

(c) Operation

(7) One and one-half ($1\frac{1}{2}$) quart Decontaminating Apparatus, M-2

(a) Description

(b) Use

(c) Operation

(8) PDDA

(a) Description

(b) Use

(c) Operation

(9) Miscellaneous Equipment

(a) Tools

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VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
14. Decontamination of Clothing and Equipment	1	FM 21-40, TM 3-220, 3-221, 3-223, 3-228
a. Responsibility		
b. Methods		
(1) Soap and Water		
(2) Steaming		
(3) Airing		
c. Field Expedients		
d. Disposal of Water		
e. After Decontamination		
(1) Vesicant Odors		
(2) Re-impregnation		
15. Decontamination of Vehicles, Airplane, Shell Holes, Areas and Buildings	2	FM 21-40, TM 3-220, 3-221, 3-223, 3-228, FM 17-59
a. First, Second and Third Echelon Decontamination of Motor Vehicles		
b. Airplane Decontamination		
(1) Sequence of Decontamination		
(2) PDDA		
(3) Soap and Water		
(4) Solvents		
c. Shell Holes		
(1) Size		
(2) Location		
(3) Agent Used		
(4) Materials		
(a) Bleach		

VARTU ARMT FLTS 2ND YEAR (Cont'd) Hrs Reference

(b) Slurry

(c) Bleach-earth Mixture

(5) Testing

(6) Signs

(7) Reports

d. Areas

(1) Size of Area

(2) Location (Runways, Troop Areas, etc)

(3) Wind Direction

(4) Degree of Contamination

(5) Reconnaissance

(6) Agent Used

(7) Materials and Equipment

(a) PDDA

(b) Bleach (slurry)

(c) Bleach and Earth Mixture

(8) Testing

(9) Signs and Marking

(10) Evacuation

(11) Reports

e. Buildings

(1) Type and Use

(2) Location

(3) Degree of Contamination

(4) Materials Used

VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	Reference
(a) PDDA		
(b) Slurry		
(c) Solvents		
(5) Testing		
(6) Evacuation		
(7) Signs		
(8) Reports		
16. Personnel Decontamination Stations	1	FM 21-40, TM 3-290, 3-350, 3-228
a. Types		
(1) Permanent		
(a) Construction		
(b) Location		
(c) Personnel for Operation		
1. Guards		
a. Duties		
2. Attendants		
a. Duties		
3. Medical Personnel		
a. Duties		
(2) Field Expedient		
(a) Size and Capacity		
(b) Personnel		
1. Medical Attendants		
2. Truck Drivers		
3. PDDA Operators		

VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
4. Utility Personnel		
(c) Operating Procedure		
(3) Material and Equipment		
(a) Decontaminating Material		
(b) Medical Supplies		
(c) QM Supplies		
(d) PDDA		
(e) Portable Water Heaters		
(4) Disposition		
(a) Grossly Contaminated Personnel		
(b) Wounded Personnel		
(c) Contaminated Clothing and Equipment		
17. Combating Incendiaries	1	FM 21-40, TM 3-222, 3-223, 5-316
a. Types of Incendiaries		
b. Incendiary Defense Organization		
c. Methods of Combating		
(1) Fire Department		
(2) Fire Extinguishers		
(3) Stirrup Pump		
(4) PDDA with Auxiliary Equipment		
(5) Smothering		
(a) Sand and Dirt		
(b) Wet Burlap		
(6) Precautions		
(a) Use of Sand Bags		

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VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
(b) Use of Sand Walls		
(c) Effect of Explosive Incendiary		
18. Medical Aspects of the A-Bomb Explosion	2	AFRTC Manual 32-355-1, ConAC Manual 52-1 Medical Aspects of Nuclear Energy (AFSWP 1949) Cml C School Memo 202, 22 Nov 1948
a. Categories of Medical Effects		
(1) Trauma		
(2) Burns		
(3) Radiation Injury		
b. Blast Effect		
(1) Primary		
(2) Secondary		
(3) Hiroshima		
(4) Nagisaki		
c. Burns		
(1) Flash Burns		
(2) Radiant Energy		
(a) Ultraviolet rays		
(b) Visible Light		
(c) Infra red rays		
(3) Effects		
(4) Hiroshima		
(5) Nagisaki		
d. Radiation Injury		
(1) Skin		
(2) Oral and Gastro-intestional Tissues		

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VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
(3) Reproductive Organs		
(a) Male		
(b) Female		
(4) Blood System		
(5) Hemorrhagic Aspects		
(a) Platelet Factor		
(b) Dietary Factor		
(c) Infection Factor		
(d) Capillary Fragility Factor		
(6) Characteristics of Hemorrhagic Phenomena		
(7) Clinical Syndrome		
(a) Patients Dying Within First Two Weeks		
(b) Patients Dying After Two Weeks or Surviving Severe Symptoms		
(8) Delayed Symptoms		
19. Radiation Detection Devices	2	AFRTC Man 52-355-1, ConAC Man 52- Medical Aspects of Nuclear Energy, AFSWP 1949, RAD. Def Man. Vol 2 Cml Corp Sch Memo 204 1 Sep 48, Cml Corp Sch Memo 203 Apr 1949.
a. Instruments		
(1) Electricity in Gases		
(2) Time Constants		
(3) Ionization Chamber Instruments		
(4) Geiger-Mueller Detectors		
(5) Electronic Circuits used with		
(6) Radiation Detectors		

VARTU ARMT FLTS 2ND YEAR (Cont'd) Hrs References

    (7) Photographic Dosimetry

    (8) Calibration and Use of Radiation Detecting Instruments

b. Electron Tubes & Amplifiers for Rad. Def. Field Instruments

    (1) Electron Tubes

        (a) Types

        (b) Tube Characteristics

        (c) Amplification Factor

        (d) Plate Resistance

        (e) Transconductance

        (f) Interelectrode Capacitance

        (g) Electrometer Tubes

        (h) Gas Filled Electron Tubes

        (i) Photomultiplicer Tubes

c. Amplification Circuits

    (1) Amplification

    (2) Equivalent Circuit of a Triode

    (3) Triode with load

    (4) Methods of coupling stages

    (5) The Multivibrator

    (6) Ionization Chamber Type Survey Meter

    (7) Geigler-Mueller type Survey Meters

d. Power Supplies for Portable Field Survey Meters

VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
(1) Dry Batteries		
20. Protection and Defense Against the Effects of the A-Bomb Explosions	2	
a. Protection against		
(1) Blast or Shock Wave		
(2) Visible and near-Visible Light		
(3) Nuclear Radiation		
(4) Psychological Effects		
b. Shielding		
(1) Blast or Shock Wave		
(2) Visible and near-Visible Light		
(3) Nuclear Radiation		
(a) Alpha		
(b) Beta		
(c) Gamma		
c. Materials for Protection		
(1) Clothing		
(2) Steel		
(3) Concrete		
(4) Wood		
(5) Earth		
(6) Collective Protectors		
(7) Gas Mask		
(8) Parrafin		
(9) Water		

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VARTU ARMT FLTS 2ND YEAR (Cont'd) Hrs References

d. Defense Against

  (1) Personnel

    (a) Education and Training

    (b) Distance

    (c) Shelters

    (d) Personal Equipment

  (2) Collective

    (a) Education and Training

    (b) Survey Teams

    (c) Fire-fighting teams

    (d) Decontaminating teams

    (e) Rad. Def. Officer

    (f) Shelters

    (g) Evacuation

e. Defense Plans

  (1) Annex to General Plan

  (2) Duties of Rad. Def. Officer

  (3) Duties of Survey Personnel

  (4) Duties of Monitors

  (5) Duties of Medical Personnel

  (6) Command Center

  (7) Communications (Warning Systems, etc.)

  (8) Methods of Reporting

  (9) Marking of decontaminated areas

VARTU ARMT FLTS 2ND YEAR (Cont'd) Hrs References

(10) Evacuation of contaminated personnel
(11) Evacuation of Personnel and Equipment

21. Decontamination 1

- a. Principles
  - (1) Areas
    - (a) Degree of Contamination
    - (b) Use of Power Equipment
    - (c) Evacuation
  - (2) Buildings and Materiel
    - (a) Paint
    - (b) Sandblast
    - (c) Water
    - (d) Use of acid solutions
    - (e) Paint Remover
  - (3) Equipment
    - (a) Clothing
    - (b) Canvas and Fabrics
    - (c) Metal
    - (d) Leather
- b. Personnel
  - (1) Personnel Decontaminating Centers
    - (a) Typical layout
    - (b) Operating Personnel
      - (1) Monitors and duties
      - (2) Supply and duties

VARTU ARMT FLTS 2ND YEAR (Cont'd)	Hrs	References
(3) Medical and duties		
(c) Showers		
(d) Disposal of contaminated clothing, etc.		
22. Guest Lecturers	2	

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VOLUNTEER AIR RESERVE TRAINING OUTLINE FOR ARMAMENT FLIGHTS

THIRD YEAR	Hrs	References
1. Central Station Fire Control	9	TO 01-40AJ-2 "Erection & Maint Inst. B26"; TM 1-490 "Electrical Armament Controls"; TO 11-45 Series "Turrets & Accessories"; TO 11-70A Series "Remote Control Turret Sys"

a. Review elementary electricity
   (1) The Electron Theory
   (2) Electromagnetism
   (3) Direct & Alternating Current
   (4) Inductance
   (5) Motors
   (6) Generators
b. Test Instruments
   (1) Voltmeter
   (2) Ohm-meter
   (3) Continuity Testers
c. Turrets
   (1) Drive Motors
      (a) Stator Assembly
      (b) Rotor Assembly
      (c) Brush Rigging Assembly
      (d) Fan
      (e) Connector Assembly
d. Selsyn System
   (1) Selsyn Generator
      (a) Wound-Stator Assembly
      (b) Wound-Rotor Assembly

VARTU ARMT FLTS 3RD YEAR (Cont'd)	Hrs	References
(2) Selsyn control transformer		
(a) Stator coils		
e. Servo amplifier		
(1) Structure		
(2) Circuit		
(3) Operation		
f. Sighting station		
(1) Upper Azimuth-bearing Unit		
(2) Lower Azimuth-bearing Unit		
(3) Azimuth Unit		
(4) Elevation Unit		
(5) Optics		
(6) Wiring System		
(7) Desicating System		
g. Maintenance		
(1) Replacement of Brushes		
(2) Compressor		
(3) Booster		
(4) Lubrication		
(5) Trouble Shooting		
2. Identification and Storage of Ammunition.	2	SB 9-AMM5 "Identification Code"; SB 9-AMM1 "Amm. General"; FM 9-6, "Ammunition Supply"; TM 9-1900, "Ammunition General"; TM 9-1990, "Small Arms Ammunition."
a. Grading		
(1) Restricted use of grade 3		
(a) Establishment of Grades by Chief of Ordnance		

VARTU ARMT FLTS 3RD YEAR (Cont'd) Hrs References

(b) Restriction on use of ammunition designated for Training use only

b. Handling Precautions

(1) Change in Markings of containers when Ammunition is transferred from boxes

(2) Necessity in keeping ammunition clean

(3) Danger of Exposure to direct heat rays

(4) Danger in use of oil on cartridges

c. Handling Equipment

(1) Trucks Bomb Service M6 & MK 7

(2) Bomb Trailer M5

(3) Hoists, C3, C6, AN MK 7

(4) Bomb Dollies

(5) Bomb Cradles

(6) Bomb Slings

3. Armament Shop Practices $2\frac{1}{2}$

a. Layout

(1) Provisions for Securing Weapons and Lighting

(2) Adequate Ventilation and Lighting of Shop

(3) Proper number and location of fire extinguishers

(4) Prescribed provisions for storage of cleaning materials

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VARTU ARMT FLTS 3RD YEAR (Cont'd)	Hrs	References
b. Tools and Equipment		
(1) Applicable Mock Up Assemblies		
(2) Armorers Tool Kits		
(3) Special Tools		
(4) Authorized Spare Parts & Equipment		
c. Records		
(1) Inspection forms		
(2) Ammunition Expenditure form		
(3) Armament Status Chart		
4. Military Training	5	FM 21-5 "Military Training"; FM 21-20 "Physical Training"; FM 21-8 "Military Training Aids"; FM 22-5 "Leadership, Courtesy & Drill."
a. Individual Training		
(1) Recruit Training		
(2) Training in Leadership		
(3) Training of N.C.O.'s		
(4) Officer Training		
(5) Staff Training		
b. Unit Training		
(1) Team Work		
(2) Tactical Proficiency		
(3) Combined Training		
(4) Progressive training in Field Exercises		
c. Training Methods		
(1) Demonstration		
(2) Lectures		
(3) Conferences		

VARTU ARMT FLTS 3RD YEAR (Cont'd)	Hrs.	References
d. Training Aids		
(1) Charts		
(2) Maps		
(3) Films		
5. Military Justice	7½	Manual on Courts Martial; TM 27-255 "Military Justice Procedure."
a. Courts Martial		
(1) Classification and composition		
(2) Jurisdiction		
(3) Members		
(4) Procedures		
b. Articles of War		
(1) General		
(2) Punitive articles		
c. Punishments		
6. Security	2½	ConAC Reg; 205 Series; AF Reg 205 Series; AF Ltrs, 205 Series; AF Manuals 205 Series
a. Handling of classified material or correspondence		
b. Grading		
(1) Restricted		
(2) Confidential		
(3) Secret		
(4) Top Secret		
c. Individual responsibility		
7. The Fire Bomb	1	FM 3-6, WDTBCW 3-300-5
a. Development		
b. Types of Aircraft used		
c. Igniters		

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VARTU ARMT FLTS 3RD YEAR (Cont'd)	Hrs	References
(1) Installation		
(2) Wiring		
d. Filling		
(1) Proper Mix		
(2) Mixing		
(3) Transferring		
e. Installation on Aircraft		
f. Safety Precautions		
(1) Fire Hazard		
8. Smoke Bombs and Tanks	1	FM 3-6, TM 1-282, TM 9-1980 WDTBCW 3-255A-1, WDTBCW 3-255B-1
a. Smoke Bombs		
(1) M77 Smoke Bomb		
(a) Construction		
(b) Fuse		
(c) Operation		
(d) Tactical Use		
(e) Safety Precautions		
(2) M 47A2 Smoke Bomb		
(a) Component Parts		
1. Casing		
2. Fuse		
3. Burster		
4. Filling		
(b) Operation		
(c) Tactical Use		
(3) M87 Smoke Bomb		
(a) Component Parts		
1. Casing		

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2. Fuze
3. Filling

(b) Operation

(c) Tactical Use

(4) CHEMI Sky Marker Bomb (T8 Smoke Bomb)

(a) Component Parts
1. Casing
2. Closure Plates
3. Detonators
4. T-7 Friction Switch
5. Filling

(b) Operation

(c) Tactical Use

b. Smoke Tanks

(1) M10 APST

(a) Capacities and Measurements

(b) Tank Body Assembly

(c) Air Inlet Assembly

(d) Discharge Line Assembly

(e) Insulating Cover

(f) MI carrying stand

(g) Accessories

(h) Filling Operations

(i) Precautions in handling and filling

(2) M33A1 APST

(a) Capacities and Measurements

(b) Tank Body Assembly

VARTU ARMT FLTS 3RD YEAR (Cont'd) Hrs References

- (c) Vent and Discharge Closure Assembly
- (d) Discharge Pipe Assemblies
- (e) Insulating Cover
- (f) M6 or M6A1 APST Platform Stand
- (g) Accessories
- (h) Filling Operations
- (i) Precaution in handling and filling

(3) Handling and Filling Equipment

- (a) M1 Chemical Service Truck
- (b) M2 Chemical Handling Trailer
- (c) M3 Filling Line
- (d) M2 APST Pump

9. Tactical Employment of Smoke Bombs and Tanks 2 FM 3-6, TM 9-1980, TM 1-282

- a. Objectives
- b. Targets
- c. Missions
- d. Methods of Use
- e. Choice of Munitions
- f. Coverage
- g. Field Behavior
- h. Effect of Weather & Terrain
- i. Munition Requirement for
  - (1) Smoke Bombs

VARTU ARMT-FLTS - 3RD YEAR (Cont'd)	Hrs	References
(a) M77		
(b) M47A2		
(c) M87		
(d) CHBMI (T8 Smoke Bomb)		
(e) M10 APST		
(f) M33A1 APST		
10. Tactical Employment of Non-Persistent Gas Bombs	2	FM 3-6
a. Objectives		
b. Targets		
c. Missions		
d. Cannister Penetration		
e. Choice of Munitions		
f. Coverage		
g. Field Behavior		
h. Effects of Weather & Terrain		
i. Munition Requirements for		
(1) ANM 78, 500 lb. Bomb		
(2) ANM 79, 1000 lb. Bomb		
11. Tactical Employment of Persistent Gas Bombs	2	FM 3-6
a. Objectives		
b. Targets		
c. Missions		
d. Choice of Munitions		
e. Coverage		

VARTU ARMT FLTS 3RD YEAR (Cont'd) Hrs References

f. Field Behavior

g. Effects of Weather & Terrain

h. Munitions Requirements for

(1) M47A3C 100 lbs.

(2) M70, 115 lbs.

(3) M10 APST

(4) M33A1 APST

12. Tactical Employment of Incendiary and Fire Bombs 2 FM 3-6

a. Objectives

b. Targets

c. Mission

d. Fire Divisions

e. Enemy Fire Defense

f. Choice of Munitions

g. Coverage

h. Field Behavior

i. Effects of Weather & Terrain

j. Munition requirements for

(1) Small incendiary Bombs

(a) AN-M50A2 Bomb

1. AN-M6 100 lb. Quick Opening Cluster

2. M7 500 lb. Quick Opening Cluster

3. M17A1 500 lb. Aimable

VARTU ARMT FLTS 3RD YEAR (Cont'd)	Hrs	References
(b) AN-M69 Bomb		
1. AN-M12 100 lb. Quick Opening Cluster		
2. AN-M13 500 lb. Quick Opening Cluster		
3. M19 500 lb. Aimable Cluster		
(c) M74 Bomb		
1. E48 500 lb. Aimable Cluster		
(2) Large Incendiary Bombs		
(a) AN-M47A2, AN-M47A3, AN-M47A4 100 lb Bomb		
(b) AN-M76 500 lb. Bomb		
(3) The Fire Bomb		
(a) 165 gal. Fire Bomb		
(b) 110 gal. Fire Bomb		
13. Biological Warfare	5	FM 3-25, 3-70, 21-10, 21-40, TM 3-215, 3-220, 3-290, 3-350, 8-227, 8-285; "Text Book of Bacteriology" by Zinser & Bayne-Jones, Printed by D. Appleton-Century Co. N.Y.; "Elements of Plant Pathology" by Melhus & Kent. Printed by the MacMillan Co.,N.Y.,"Principles and Practices of Bacteriology" by Bryan and Bryan, Printed by Barnes & Noble,Inc.,NY,"Experimental Airborne Infection" by Rosebury Printed by William & Wilkin Co. Baltimore, Md. "The Advance of the Fungi" by Large, printed by Henry Holt & Co.,N.Y.
a. General Nature and Occurrence of Micro-organisms		
(1) Characteristics		
(2) Kinds of micro-organisms		
(3) Distribution in nature		
b. Morphology and Reproduction		
(1) Miscroscopic appearances		
(2) Growth of micro-organisms		
(3) Methods of reproduction		

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VARTU ARMT FLTS 3RD YEAR (Cont'd)	Hrs	References
c. Inhibition and Destruction		
(1) Physical		
(2) Chemical		
(3) Biological		
d. Detection and Identification		
e. Infection and Immunity		
f. Possible Agents of Biological Warfare		
g. Comparison of Possible Biological and Chemical Agents		
(1) Physical State		
(2) Stability		
(3) Dissemination		
h. Possible Munitions		
(1) Principles of Dispersion		
(2) Factors in Choice of Munitions		
(3) Possible Enemy Means of Dissemination		
i. Potential Tactics and Techniques of Biological Warfare		
(1) Objectives		
(2) Strategic Application		
(3) Tactical Application		
j. Possible Defenses Against Biological Attack		
14. Guided Discussion of subjects covered during year and/or guest lectures.	4½	

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Conac Training Standard 10-12
(Tentative)
Fighter-Bomber Unit
17 March 1950

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ConAC TRAINING STANDARD)
10-12 (Tentative))

HEADQUARTERS CONTINENTAL AIR COMMAND
Mitchel Air Force Base, N.Y., 17 March 1950

FIGHTER-BOMBER UNIT

(F-51-D AIRCRAFT)
(T/O&E 1-27R, 1-12R)

1. Unit Mission. The mission of a Fighter-Bomber unit is to achieve and maintain a level of operational effectiveness which will enable the unit to:

a. Destroy enemy air and surface targets.

b. Destroy enemy air and surface targets in cooperation with friendly surface forces.

c. Provide protective cover for offensive air operations.

2. Training Objective. a. The general training objective of a Fighter-Bomber unit is to attain and maintain that state of technical, tactical and administrative proficiency which will enable the unit to perform its mission.

b. The purpose of this training standard is:

(1) To establish the specific standards of proficiency that must be attained in order to qualify Fighter-Bomber units for the accomplishment of the assigned mission.

(2) To insure that the activities of all individuals and sections comprising the unit will be so directed that the unit will function efficiently as a unit.

(3) To provide guidance for the development of unit training programs which will emphasize the development of effective tactics and techniques for offensive and defensive air-to-air and air-to-ground operations in cooperation with friendly surface forces.

3. General Individual Training. Each officer and airman will maintain the basic qualifications for his military occupational specialty as described in AF Manual 35-1 in accordance with the intent of the AF Individual Training Standards contained in AF Manual 50-6. Further general training will establish a knowledge of the following basic military subjects: unit mission, leadership, customs and courtesies of the service,

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*This Training Standard supersedes ConAC Training Standard 10-12 (Tentative), 6 December 1949.

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close order drill, Articles of War, ground safety, special weapons, security intelligence, medical training and basic weapons.

4. Unit Training. a. Administrative. All personnel and sections performing administrative functions within the unit will be at that level of training necessary to give complete administrative support to the unit in the accomplishment of its assigned mission.

b. Technical. The efforts of each of the technical sections must be directed toward the attainment of a common objective. This objective is to maintain the maximum possible number of assigned aircraft in a constant state of combat readiness and to provide the required flying hours necessary for the accomplishment of the unit mission. The minimum acceptable daily in-commission rate which the technical sections must provide is 70% of the assigned aircraft. The number of flying hours that the efforts of the technical sections must provide is an average of 21 hours a month for each assigned aircraft. In-commission as herein used is defined as that state of readiness which enables an aircraft, without additional maintenance, to fly safely and participate in the combat mission of the unit.

c. Tactical. To attain the operational proficiency desired of the unit as a whole, the following requirements must be met:

(1) The development of an aggressive spirit in all personnel to accomplish the mission.

(2) The ability to collect, collate, evaluate, and disseminate military information in accordance with the standing operating procedures.

(3) The ability to conduct efficient combat crew briefings and interrogations.

(4) The knowledge, understanding, and ability to execute the unit defense plan by all personnel.

(5) The ability to reservice one flight (4 aircraft) participating in "turn-around" mission with fuel, oil, coolant, oxygen, film, ammunition, rockets and/or bombs, napalm, or chemical spray in 30 minutes from time first aircraft stops engine until last aircraft starts engine.

(6) The ability to service 12 aircraft participating in "turn-around" mission, with fuel, oil, coolant, oxygen, film, ammunition, rockets and/or bombs, napalm or chemical spray in 45 minutes from time first aircraft stops engine until last aircraft starts engine.

(7) The unit will be capable of commencing an airlift movement of a combat team within four hours of receipt of movement order. For the purpose of this directive, a combat team is defined as 16 aircraft with sufficient personnel, supplies, and equipment to insure 15 days operations (field maintenance excluded).

(8) Ability of squadron to ascend and descend through an overcast by approved tactics and techniques.

(9) Ability to maintain the integrity of a 4-aircraft formation while ascending and descending through an overcast.

(10) Squadron will be capable of operating during the hours of darkness within the scope of night operations required by day fighters to include take-off in elements of 2 aircraft and landing under conditions of minimum lighting.

(11) The ability to locate and identify specific targets from gridded maps and aerial photographs.

(12) The ability to effectively attack enemy front line troops and installations which are in close proximity to friendly troops (under the direction of a forward controller and other units of the Tactical Control System).

(13) The ability to rendezvous with other formations at a predesignated point, altitude, and time.

(14) The ability to escort and protect formations of friendly aircraft in accordance with approved tactics and techniques.

(15) Squadrons, flights, and elements will be capable of immediate response and precise execution of verbal directions from the ground controller for changes in vectors and altitudes in accordance with RT procedures outlined in JANP-142.

(16) Upon making visual contact with the target, the unit will be capable of moving into position for the "kill" in accordance with established tactics and techniques.

5. Combat Crew Training. Pilot (MOS 1054). The pilot will be trained to a degree which will enable him to handle his aircraft with skill and confidence. The pilot will meet and maintain the following requirements:

a. Proficiency in:

(1) Instrument flying to the extent that he qualify under the provisions of AF Regulation 60-4 for the instrument card for which his experience and service qualify him.

(2) Taking off by day or night within the provisions of weather minimums established in current technical orders and USAF Regulations for holders of Form 8 (White) instrument card and within the limitations of the particular aircraft.

(3) The use of all aids to navigation which are capable of being employed with the equipment in the F-51D type aircraft.

(4) Planning and accomplishing maximum range navigational flights at high and medium altitudes during periods of daylight and darkness and be capable of making good the ETA within 5% of the estimated total flight time at altitudes of 15,000 feet and below.

(5) Air-to-air gunnery to the extent that he will be capable of scoring 30% hits at 10,000 feet, 20% hits at 20,000 feet, and 10% hits at 25,000 feet on the A-6A type tow target.

(6) Air-to-ground gunnery to the extent that he will be capable of scoring 50% hits on standard type ground targets.

(7) Rocket firing to the extent that he will be capable of scoring 50% hits on rocket targets.

(8) Dive bombing to the extent that he will be capable of scoring 80% hits within a 50-foot radius.

(9) Skip bombing to the extent that he will be capable of scoring 75% hits.

(10) Napalm (fire bombing) to the extent that he will be capable of scoring 90% hits.

(11) Conduct offensive chemical spray mission, employing smoke or toxic-spray with knowledge of wind drift and type of atmosphere.

(12) Low altitude navigation and in the approved techniques of low altitude approach attack and withdrawal.

(13) Employ effective techniques and tactics in air-to-air combat.

(14) The execution of normal and emergency procedures necessary for the operation of the aircraft.

(15) Servicing and rearming the aircraft and performing the prescribed preflight and daily inspections, and have a general knowledge of maintenance procedures and practices as well as of all systems of the aircraft and their characteristics and performance.

(16) The application of cruise control principles and procedures in the planning and execution of long range flights.

(17) The use of emergency RT procedures as outlined in JANP-107.

(18) Performing air acrobatics within the technical limitations of the type aircraft.

(19) Recognizing and identifying friendly aircraft and surface equipment.

b. Knowledge of:

(1) The methods of abandoning aircraft over land and water, crash-landing techniques, dinghy use, survival kits, and other life saving equipment with which provided.

(2) The operation, use, capabilities, and limitations of all communications equipment with which aircraft is equipped.

(3) The purpose and application of world-wide recognition systems as outlined in JANP-150.

(4) The problems of high speed and high altitude flying, the physiological effects of high altitude, anoxia, and vertigo, and be capable of properly using oxygen equipment.

(5) The capabilities of enemy anti-aircraft artillery and radar, and methods of evasion.

(6) The characteristics of potentially hostile aircraft and missiles and of the approved and/or locally devised tactics and techniques to accomplish their destruction.

(7) The capabilities, limitations, and procedures of tactical air control equipment.

(8) Meterology to include interpretation of weather symbols in weather reports, effect of ice on aircraft, danger in thunder storms, and frontal activity.

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(9) AF Regulation 60-16, general flying regulations, and air traffic rules, including all pertinent regulations of flight service, radio range procedures, and the use of radio facility and instrument let-down charts.

(10) All current flying safety regulations and principles and procedures applicable to the safe operation of the assigned aircraft.

(11) The use and preparation of USAF Forms 1, 1a, 15, 23, 23a, 41b, G-File, and other data carried in the aircraft.

(12) The relations of speed and altitude to compressibility.

BY COMMAND OF LIEUTENANT GENERAL WHITEHEAD:

CHARLES T. MYERS
Major General, USAF
Vice Commander

OFFICIAL:

Neal J O'Brien
NEAL J. O'BRIEN
Colonel, USAF
Air Adjutant General

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